**Annex to the Call for Applications as of August 31, 2021**

**“Helmholtz Sustainability Challenge”: 1st Call – Core Projects**

**Template for the full proposal (cover page and project proposal)**

Please add a cover page (one page) to the full proposal. The layout and content should correspond to the specifications under section A (cf. infra). Please follow the structure given in section B for your proposal. Applications have to be submitted in English.

1. **Cover page template**

|  |  |
| --- | --- |
| **Project Title** *(long)* **& “ACRONYM”** |  |
| **Sub-Projects** *(including list of Instruments, Research School)* |  |
| **Up to 15 Keywords** |  |
| **Helmholtz Center(s) and Project Partner Institutions** |  |
| **Scientific Spokesperson / Coordinator** *with Phone / Email Contact* |  |
| ***Coordinator(s) of the Research School*** *with Phone / Email Contact* |  |
| **Administrative Spokesperson/ Coordinator** *with Phone/ Email Contact* |  |
| **Planned Start of Funding**  **Planned Duration of Funding** | *[dd/mm/yyyy]*  *[in years]* |
| **Requested Funding from INF - Initiative and Networking Fund**  **Total Budget** (incl. matching) | *[in EUR]*  *[in EUR]* |

**Executive Summary in English**

*Max. ½ page*

**Zusammenfassung auf Deutsch**

*Max. ½ page*

1. **Proposal structure with guiding questions**

The proposal must not exceed 70 pages, including a maximum of 20 pages for the research school; excluding 5.3.total budget and resource planning and the annex (list of participating PIs/CVs, proposals of ten potential reviewers (equal proportions of male, female and/or diverse gender), letters of support of centers and transfer offices, schedule and financial planning). Please use font type Arial 10pt and adhere to the following structure, including headings and numbering. The sections include guiding questions to reflect on in the proposal.

**Proposals not following these specifications cannot be considered in the selection process (exclusion criterion).**

1. **Research concept and collaboration strategy**
   1. **Define the challenge**: Explanation of the central research question and its societal relevance.

* Summarize the scientific question: What major challenge in line with the UN Sustainable Development Goals does the project address *en route* to sustainable value chains and a circular economy?
* Clarify the originality of the scientific question: how does the proposal's topic differ from or complement existing research activities in the programs, centers, or ongoing initiatives?
* Point out who else apart from your consortium is working on this question in the international research environment: how do you position your consortium in this respect?
  1. **Define the approach**: Description of the research approach.
* Explain the approach and methods to address the research question/challenge and elaborate on the transdisciplinary research design: how is the project exploiting skills and competencies from different research fields, programs, centers and scientific communities?
* Explain the breakdown of the research question into sub-aspects: how do the sub-projects correspond to the central research question?
* Elaborate on the sustainability assessment along economic, social and ecological criteria: how does the project assess a reduction in resources and/or energy use? How does the project utilize and stimulate ecosystem services and biodiversity? How is the project supporting a transformation through social innovation?
* Reflect on diversity-related aspects: Do your research questions, theory concepts, methods of data collection or analysis entail gender- or diversity-specific aspects? Are different groups affected differently by your expected results or potential use cases?
  1. **Define the required competencies**: Presentation of the core project partners and their preparatory work.
* Introduce the consortium partners and their competencies: what are the partners’ specific contributions to the research question? What preparatory work and research conditions (e.g. research infrastructures, data, etc.) enable your consortium to engage with the research question?
* Illustrate how the project relates to your regular research activities in terms of preliminary work and planned perspectives for basic funding of the Helmholtz Center(s).
  1. **Define the network**: Information about external partners and their planned involvement

Present a collaboration strategy deciphering the expected contributions of the involved groups and stakeholders and underlining the added value of the network compared to the sum of individual elements.

Identify associated partners who are not part of the consortium applying for funding.

Name stakeholders from economy, politics and society for whom your research and/or transfer-oriented solution(s) are relevant.

## Transfer by design

* 1. **Define the transfer strategy**: Presentation of a comprehensive concept for the promotion of technology and knowledge transfer.
* Refer to the above-described challenge in the context of sustainable value networks: what problem(s) does the consortium address? What applications and use cases do you envision?
* Define potential target groups from the list of stakeholders (see above, 1.4.), i.e. scientific and non-scientific stakeholders such as suppliers, users and customers, trade and startup associations, GOs and NGOs that you wish to involve in the project: How do you envision the process of co-creation? How are they involved in the project at the different project stages? How do you promote the fitness for purpose, usability and market-fit?
* Explain how you plan to integrate external expertise (of associated partners, not funded): What additional expertise do you need to make your transfer vision become reality and how do you plan to acquire it?
* Formulate one or more concrete goals: what tangible result and impact do you anticipate within 5 years?
* How does the consortium contribute to the [Pakt für Forschung und Innovation IV](https://www.gwk-bonn.de/fileadmin/Redaktion/Dokumente/Papers/PFI-IV-2021-2030.pdf) and the transfer strategies of the participating centers? How do you involve the centers’ transfer offices?

## Talent promotion and diversity

* 1. **Concept for talent promotion and diversity**: Description of your approach to support talent recruitment and particularly early career researchers.
* Explain the concept for promoting talents and early career researchers, in line with the Helmholtz Doctoral Guidelines and the Helmholtz Guidelines for the Postdoctoral Phase. Which concepts and measures at the facilities do you intend to draw on when implementing talent promotion?
* Outline your recruiting strategy: How do you intend to set up and foster a diverse research team, which benefits from the different perspectives and backgrounds of its members? Which concepts and measures at the facilities do you intend to draw on when implementing diversity aspects?
  1. **Provide the cover page template for the Helmholtz Research School.**

|  |  |
| --- | --- |
| **Name of the Helmholtz Research School** |  |
| **Up to 5 keywords** |  |
| **Abstract auf Deutsch  (max. 100 Wörter)** |  |
| **Abstract in English  (max. 100 words)** |  |
| **Participating Helmholtz Center(s)** |  |
| **Partner Institution(s)** (University, Non-university, Company/ country) |  |
| **Additional Partner(s)**  if applicable (associated institutions without funding) |  |
| **Spokesperson / Coordinator with Phone / Email Contact** |  |
| **PI´s in charge** *(up to 5)* |  |
| No. PhD´s (Heads in total) |  |
| **Planned Start of Funding**  **Planned Duration of Funding** | *[dd/mm/yyyy]*  *[in years]* |
| **Requested Funding from INF**  **Total Budget** (incl. matching) | *[in EUR]*  *[in EUR]* |

* 1. **Define the scientific concept of the Research School.**
* Explain how the scientific program fits into the overall scientific program of the project: how does the consortium establish a link between the research school and the key areas of focus of the Helmholtz Center(s), university partner(s) and any other partners? How does the design of the Research School reflect transdisciplinary thinking?
* Outline how the institutions complement each other in terms of doctoral training: What number of doctoral researchers are you planning for to guarantee a critical mass for the research activities? Who contributes the scientific expertise exist for scientific training and supervision in the respective topics?
* Provide a curriculum describing the courses and training opportunities offered by the research school’s partners, e.g. colloquia, symposia, work placement, lecture series: how does the curriculum foster exchange and cooperation between doctoral researchers, including research stays at the partner institutions? Does the consortium strive for cooperation with the Helmholtz Information and Data Science Academy (HIDA)?
* Describe how the cooperation could be continued after the funding is over: what is the potential and strategy for developing long-term interactions between the participating institutions? Which possibilities do early career researchers have to shape the project as a whole?
  1. **Define the concept for supervision of the Research School.**
* Elaborate on the planned research activities of doctoral researchers: how does the research school link thematic or methodological questions to provide outstanding thesis questions? How do doctoral researchers acquire the methodologic skills necessary for the successful completion of their doctoral research project?
* Describe the interaction with doctoral researchers within the research school: In accordance with the Helmholtz Doctoral Guidelines, what are the responsibilities of the doctoral researchers, their supervisors, the research school and the participating institutions?
* Name the measures for the training of supervisors and for the establishment of common standards of supervision within the research school (e.g. establishment of thesis advisory committees or comparable bodies).
* Describe measures for fostering the participants’ practical competence: how does the research school nurture a transfer culture, e.g. by supporting interaction with relevant actors within and beyond the consortium or by offering training such as Entrepreneurship Education?
* Describe how the research school supports doctoral researchers with planning their career development, e.g. as a post-doctoral researcher or in following alternative career paths after the completion of the doctorate.
  1. **Define the recruitment concept of the Research School.**
* Outline your recruiting strategy: How do you intend to set up and foster a diverse research team, which benefits from the different perspectives and backgrounds of its members? Which concepts and measures at the facilities do you intend to draw on when implementing diversity aspects? (see above, 3.1.)
* Provide a description of a joint selection procedure of the doctoral researchers with common selection standards and relevant criteria of excellence (Please note that internal doctoral candidates already researching at the partner institutions are permitted to participate but face the same competition.)
* Describe the orientation and onboarding’ process for doctoral researchers, including the presentation of essential support offered (technology transfer offices, ombudspersons in the event of conflict etc.).
  1. **Define the structure of the Research School.**
* Describe the planned management and organizational structure: Who will serve as speakers and coordinators? How do you plan to divide the work between the partners, i. e. their respective scientific, organizational, administrative, infrastructural and other tasks and the communication structures planned? What is the link between the backbone project of the core project and the Research School?
  1. **Define the budget of the Research School.**

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| --- | --- | --- | --- | --- | --- | --- |
| **Per activity and time / in k EUR** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Total** |
| Activity a) |  |  |  |  |  |  |
| Personnel | *No annual specification with application required* | | | | |  |
| Materials and supplies | *No annual specification with application required* | | | | |  |
| Investments/Depreciation | *No annual specification with application required* | | | | |  |
| Activity b) |  |  |  |  |  |  |
| **Requested budget of the Initiative and Networking Fund** |  |  |  |  |  |  |

1. **Open Science**
   1. **Define the concept for Open science.**

* Explain how the project is committed to the principles of Open Science by referring to the Helmholtz Open Access Policy (<https://os.helmholtz.de>): how does the consortium provide open access to scientific textual publications, Open and FAIR research data and research software (wherever possible and appropriate)?
* Optional: Indicate whether the project uses Citizen Science methodology in individual sub-projects and how it contributes to the core project.

1. **Project structure and resource planning**
   1. **Define the structure and function of the sub-projects.**

* Give an overview on the project structure (in a chart): how does it divide into sub-projects? How does the project design support collaboration and coherence of the overall project? What dependencies and synergies exist between the sub-projects? How does the project structure foster networking with other stakeholders (as defined above)?
* Describe the overall function of the sub-projects: what sub-projects address instruments / field of action i.e. transfer, the promotion of early career researchers or open science?
* Describe the role of the backbone project: how is the backbone project supporting coordination activities? Who is in charge of the project management to reflect on the further scientific development during the project’s lifetime and/or promotion of instruments / field of action i.e. transfer, young talent promotion? Does the backbone project include communication of research results and reach-out activities to potential users?
  1. **Sub-project XYZ:**

*Please describe each sub project as follows:*

|  |  |
| --- | --- |
| **Sub-project XYZ** | Title |
| **Up to 5 keywords** |  |
| **Abstract**  **(max. 100 Words)** |  |
| **Participating Helmholtz Center(s)** |  |
| **Partner Institution(s)** (University, Non-university, Company/ country) |  |
| **Associated Partner(s)** if applicable (institutions without funding) |  |
| **Spokesperson / Coordinator** |  |
| **No. Scientists** (planned FTE in total) |  |
| **No. PostDocs** (planned FTE in total) |  |
| **No. PhD´s** (planned FTE in total) |  |
| **Funding Requested** (INF)  **Share of transfer budget thereof** | *[in EUR]*  *[in EUR]* |
| **Total budget** (incl. matching) | *[in EUR]* |

* Describe the contribution to the research question (see above, 1.1.), the scientific approach and required competencies: how does the research in the sub-project differ from or complement existing research activities in the programs, centers, or ongoing initiatives?
* Describe the work packages, major tasks and involved partners (coordinating PI, centers/partners).
* Name which achievements you wish to accomplish by the end of the sub-project, and what are your milestones and deliverables on a quarterly basis (please use a Gantt chart)?
* What actual and target values are set for selected performance indicators (actual values for 2022 and target values for completion of the core project)?
* Explain the type of resources (personnel, materials and supplies; if applicable, investments) needed for the sub-project and indicate the amount of own contributions (matching funds) of the consortium partners (Note that matching funds can be provided in kind and in cash. Please indicate what is applicable here.)
* Outline work packages dedicated to transfer activities undertaken within the sub-project: Which quantitative and qualitative performance indicators (including those from the centers’ pool as defined in their respective transfer strategies) are you setting that relate to the sub-project (e.g. projected Technology Readiness Level ([[1]](#footnote-2)TRL) increase or similar)? What fraction of the budget is dedicated to transfer-related activities? (Note that 40% of the INF budget for the core project must be devoted to transfer activities.
* Resource planning (Sub-project XYZ)

*Note: The consortia should provide a preliminary budget and resource plan here. Once proposals are selected for funding, a final (updated) budget and resource plan will be required.*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Per subproject and time / in k EUR** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Total** |
| Personnel |  |  |  |  |  |  |
| Materials and supplies |  |  |  |  |  |  |
| Investments/Depreciation |  |  |  |  |  |  |
| Thereof for transfer activities. |  |  |  |  |  |  |
| **Requested budget of the Initiative and Networking Fund** |  |  |  |  |  |  |

* 1. **Total budget and resource planning:**

*Note: The consortia should provide a preliminary budget and resource plan here. Once proposals are selected for funding, a final (updated) budget and resource plan will be required.*

* Budget of the core project over the entire funding period:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **In thousand EUR** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **IVF** | **Matching** | **Total** |
| Sub-project X |  |  |  |  |  |  |  |  |
| Sub-project Y |  |  |  |  |  |  |  |  |
| Sub-project Z |  |  |  |  |  |  |  |  |
| Research school |  |  |  |  |  |  |  |  |
| Backbone |  |  |  |  |  |  |  |  |
| **Transfer budget share [approx. planned for each year]** |  |  |  |  |  | *[≥40% of IVF request]* |  |  |
| **Requested budget of the Initiative and Networking Fund** |  |  |  |  |  |  |  |  |

* Budget of the core project with centers’ and partners’ contributions

|  |  |  |  |
| --- | --- | --- | --- |
| **Per Helmholtz Center/partner / in k EUR** | **Own contribution (matching funds)** | **Initiative and networking fund** | **Total** |
| Please list contributions of all Helmholtz Centers/partner contribution |  |  |  |
| Helmholtz Center 1 |  |  |  |
| Helmholtz Center 2 |  |  |  |
| Helmholtz Center 2 |  |  |  |
| Partner 1 |  |  |  |
| Partner 2 |  |  |  |
| **Total budget** |  |  |  |

1. **Annex**
   1. Participating principal investigators:

* Standardized résumés of the principal investigators (up to 25 PIs) of 1 page with the following information: Name, Affiliation, Current Position, Research Expertise, h-index (Google Scholar, Web of Science), Publications/ research output (5 most important). Please also indicate the parts of the proposal to which the PI contributes (including a matrix, who contributes to which sub-project/profile element and respective work package/activity).
  1. Reviewer proposals
* Proposals of ten potential reviewers (these could be the same or additional reviewers as listed in the draft proposal). Please make sure that there is not conflict of interests and that five of them are women scientists and list up to eight key words on their expertise. Please also assign them to the corresponding profile element(s), whenever possible.
  1. Letters of support by the participating institutions (mandatory for members of the consortium)
* Signed confirmation letters of the management of each participating institution of the consortium, stating that the contribution outlined in the proposal will be provided. (no specific format required)
* Letters of support by the respective transfer offices of each participating Helmholtz center containing a brief assessment of the transfer potential of the relevant sub-projects. (no specific format required)

1. TRL references: [A brief refresher on Technology Readiness Levels (TRL) | CloudWATCH (cloudwatchhub.eu)](https://www.cloudwatchhub.eu/exploitation/brief-refresher-technology-readiness-levels-trl) / <https://ec.europa.eu/research/participants/data/ref/h2020/wp/2014_2015/annexes/h2020-wp1415-annex-g-trl_en.pdf> [↑](#footnote-ref-2)