

WORKSHOP ON CRAFTING A IMPACTFUL GRANT PROPOSAL

18th July 2025

Michela Bertero, PhD
Strategy Director, IDIBAPS
bertero@recerca.clinic.cat

Participants' introduction and expectations

Join at menti.com | Use vote code **5863 3253**

A brief introduction about myself

UNIVERSITY OF BRITISH COLUMBIA

Postdoc
Natalie Strynadka's lab
2001-2004

CORNELL
UNIVERSITY
Visiting fellow
John Hellman's lab
1999

CENTER FOR GENOMIC
REGULATION
Science manager / Head
International and Scientific Affairs
2006-2021

IDIBAPS
Strategy Director
2021-present

PASTEUR INSTITUTE

Erasmus fellow
Antoine Danchin's lab
1996

GENE CENTER, LMU
Postdoc
Patrick Cramer's lab
2005-2006

UNIVERSITY OF PAVIA
Undergraduate
1992-1997
PhD student
Alessandro Galizzi's lab
1997-2000

CURIE INSTITUTE
Visiting fellow
2015

Countries hopping

I like grant writing!

...experience in failures and some successes

- Individual grants to support my research
- Collaborative grants – open science, education, gender equality
- Institutional grants



Expected learning outcomes

1. Develop your “grant strategy”
2. Write for your audience – the reviewer
3. Craft and write the different sections of a grant proposal
4. Exchange “tips and tricks”

“There is no grantsmanship
that will turn a bad idea into
a good one, but there are
many ways to disguise a
good idea”

Norm Braverman, NIH











GRANT STRATEGY

Establishing your strategy



1. Identify your **research niche**

- *Gaps in established fields*
- *Important new questions to answer that excites you*
- *New ideas, technologies, approaches*



2. Identify and understand your **funding niche/s**

3. Build your **network** and seek opportunities for collaboration

4. Get help from experienced **peers/collaborators** and grant/research managers



5. Get to know **previous grantees** in your own field and panel evaluators



INTERNATIONAL
COLLABORATIVE GRANTS

INDIVIDUAL GRANTS

POSTDOC FELLOWSHIPS

PhD FELLOWSHIPS

EXCHANGE FELLOWSHIPS



GRANTS FOR SUMMER SCHOOLS

FELLOWSHIPS FOR SHORT TERM VISITS

FINDING A GRANT OPPORTUNITY



THE WORLD ACADEMY OF SCIENCES
for the advancement of science in developing countries



THE GLOBAL
HEALTH
NETWORK
AFRICA



Chan
Zuckerberg
Initiative

Ask ChatGTP or any other generative AI tool...

Summer Schools

- **Imbizo** (Cape Town) Jan 12–Feb 2 2026 Computational + Machine Learning Quantitative MSc/PhD/adv undergrad
- **CaMinA** (Zambia) Jul 7–23 CompNeuro & M African MSc/UG/PhD
- **TReND** (various) ~3 weeks Insect/Drosophila neurogenetics African undergrad/postgrad



Champalimaud
Foundation

- **Sensory Neuroscience – NeuroBridge** (Pisa, Italy) Sep 3–9, 2025 – 3 ECTS, no tuition fee, travel grants available. Focus on multisensory integration, fMRI bootcamp, psychophysics, hands-on labs
- **Introduction to Experimental Neuroscience** (Bordeaux, France). Jul 21–Aug 2, 2025 – €1,800, project-based modules in imaging, electrophysiology, optogenetics, behavior, etc. Bordeaux Neurocampus
- **Transylvanian Experimental Neuroscience Summer School** (TENSS). Jun 1–19, 2025 – Intensive training in optical & electrophys methods, open-source tools for systems neuroscience
- **Neuro AI Cajal Course.** <https://cajal-training.org/on-site/neuro-ai/>
- **BAMB: Barcelona Advanced Modelling Behavior summer course,** <https://www.bamschool.org/>
- **Computational and Cognitive Neuroscience**, Suzhou, China <https://www.csh-asia.org/?content/2621>
- **Computational Neuroscience Course**, Cold Spring Harbour Laboratories (CSHL), Massachusetts, US <https://meetings.cshl.edu/courses.aspx?course=C-NEUDATA>

Short-term Exchange fellowships

INTERNATIONAL BRAIN
IBRO
RESEARCH ORGANIZATION

About Get Involved Resources Search the IBRO site

Grants Training Journals IBRO World Congress Engagement News & Events

Home > Grants > Exchange Fellowships

IBRO EXCHANGE FELLOWSHIPS

- PhD neuroscience students, early-career researchers
- International exchanges, within or outside Africa
- Travel and local expenses

In partnership with

ARUA African Research Universities Alliance Carnegie Corporation of New York Mastercard foundation

ARUA EARLY-CAREER RESEARCH FELLOWSHIPS 2025

Fellowship Start: 1 July 2025



- Early-career researchers at African universities
- 6-month fellowship
- Collaborations with highly experienced and distinguished researchers at ARUA Centres of Excellence

Short-term Exchange fellowships

Women for Africa Foundation

- Promote African women's leadership in science and technology
- 6-month post-doctoral fellowship
- Over 150 talented women supported
- New call in September 2025

Applications now open

 science by women

Programme For Women, Science, Technology and Innovation in Africa

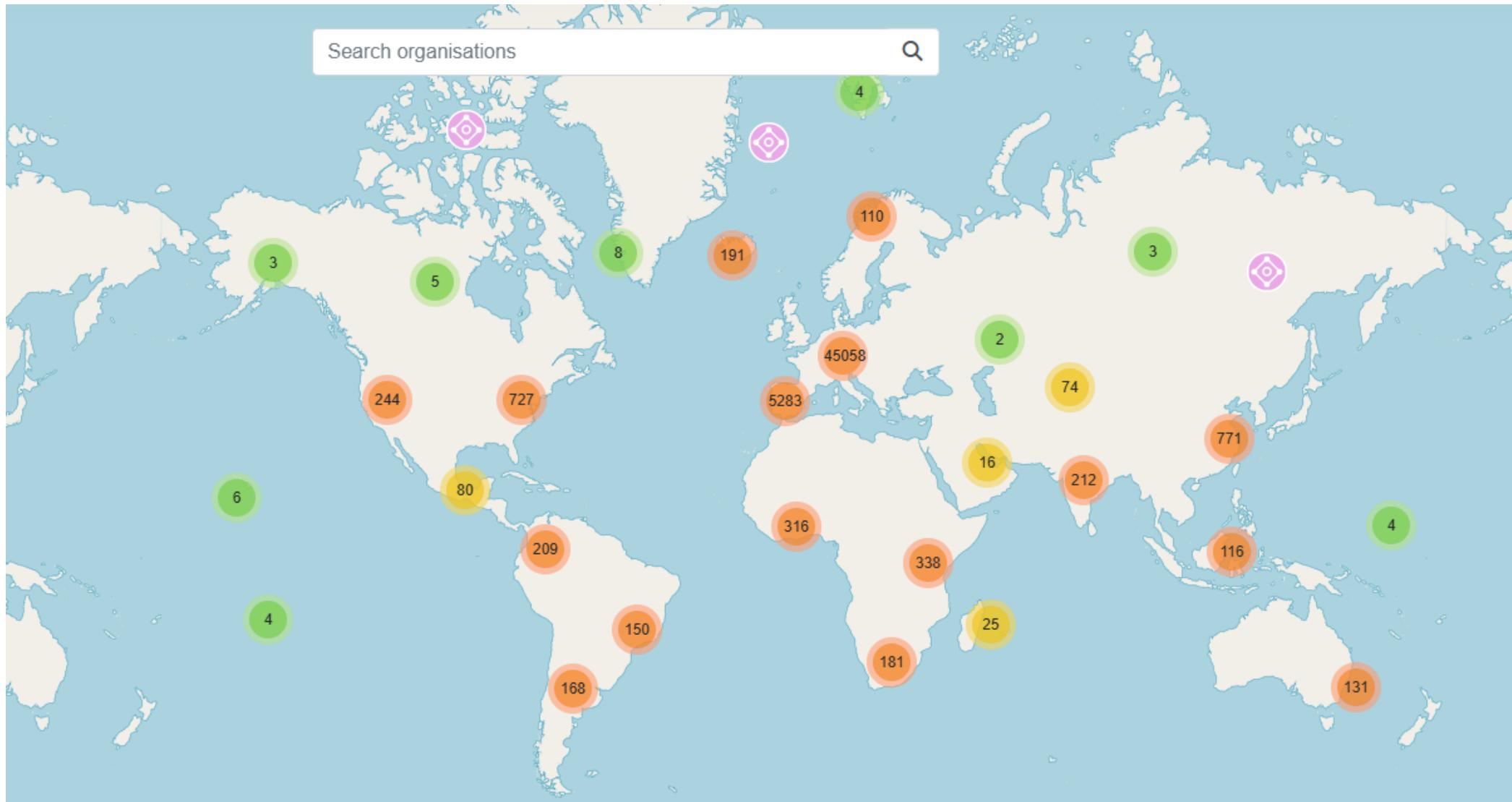
10th Edition



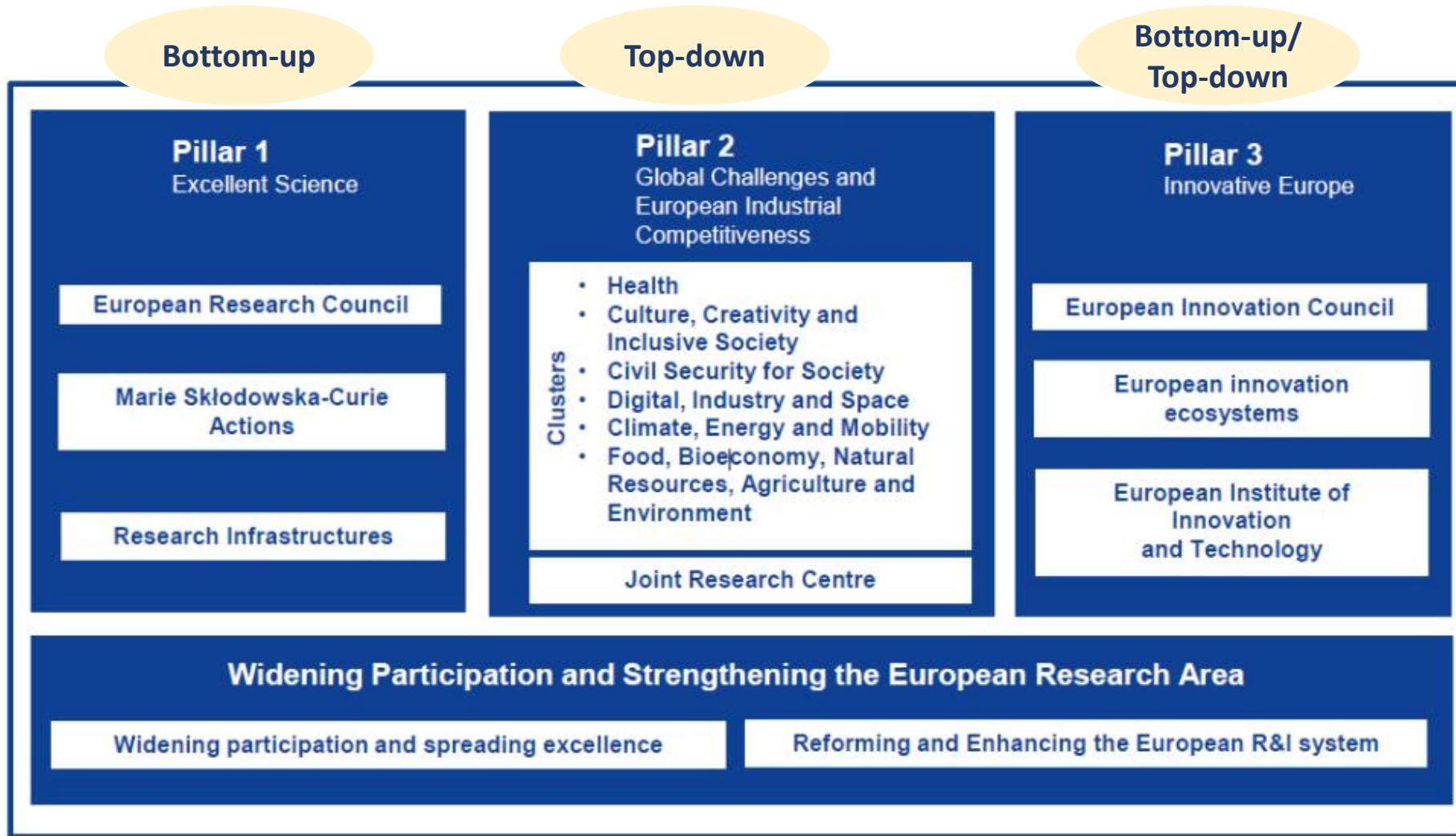
<https://mujeresparafrica.es/en/>



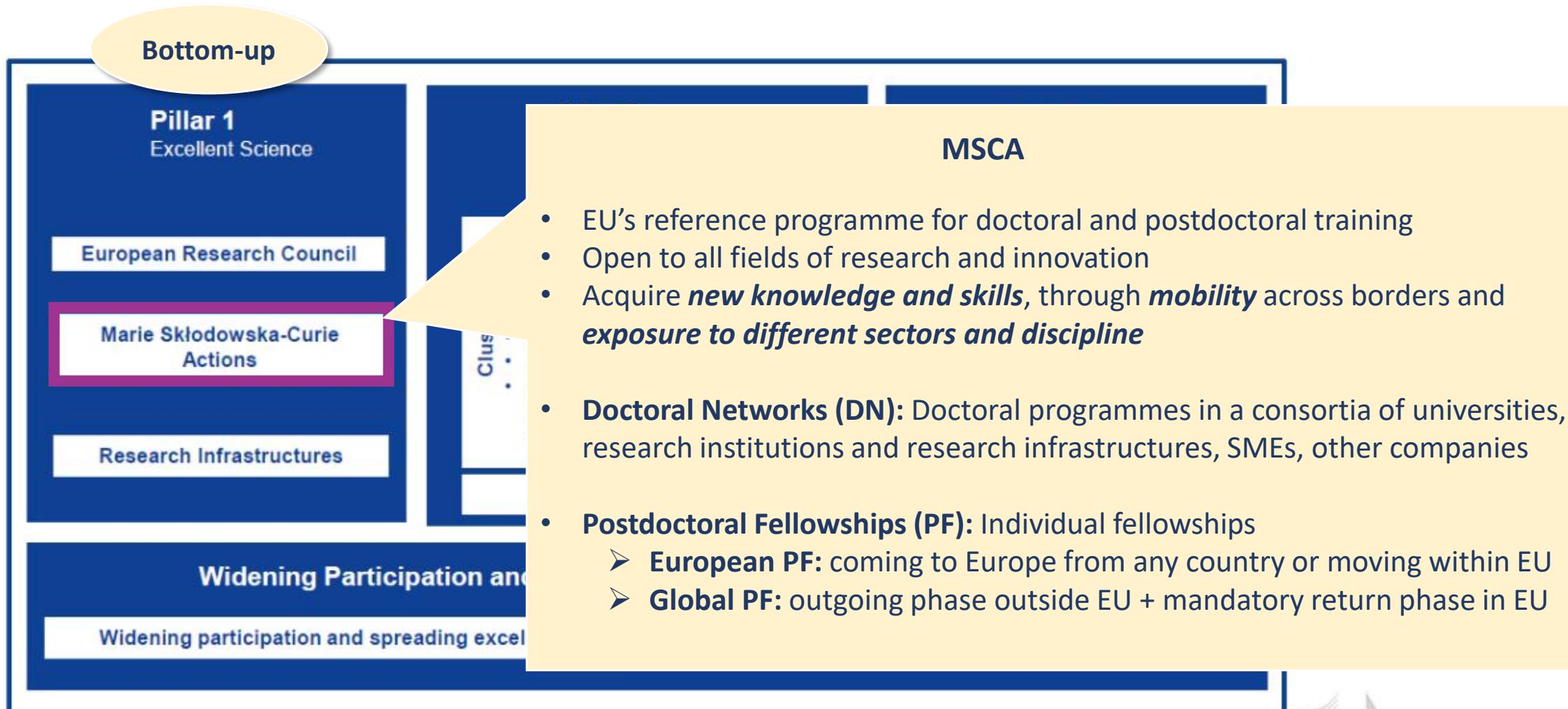
Horizon Europe as an opportunity



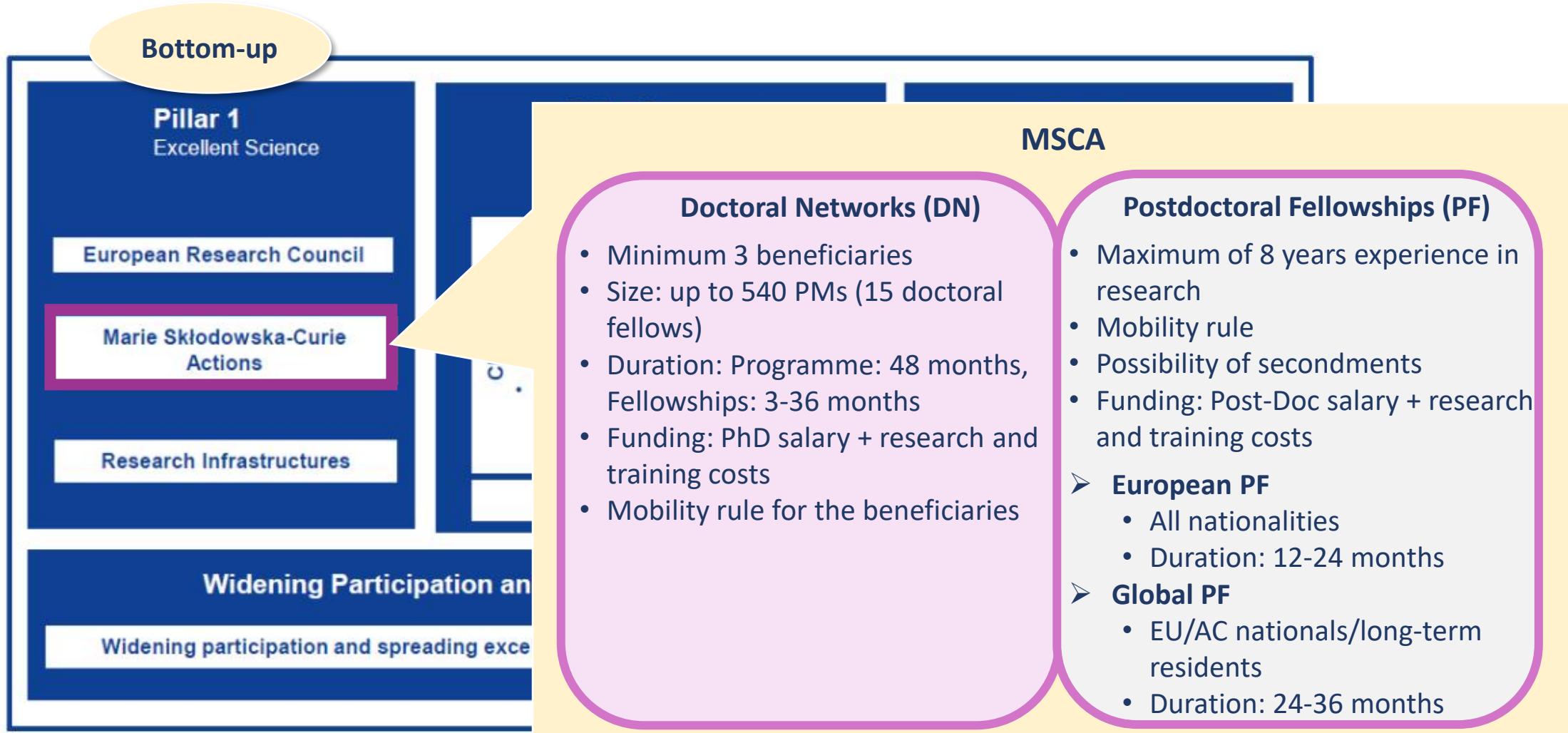
Horizon Europe as an opportunity



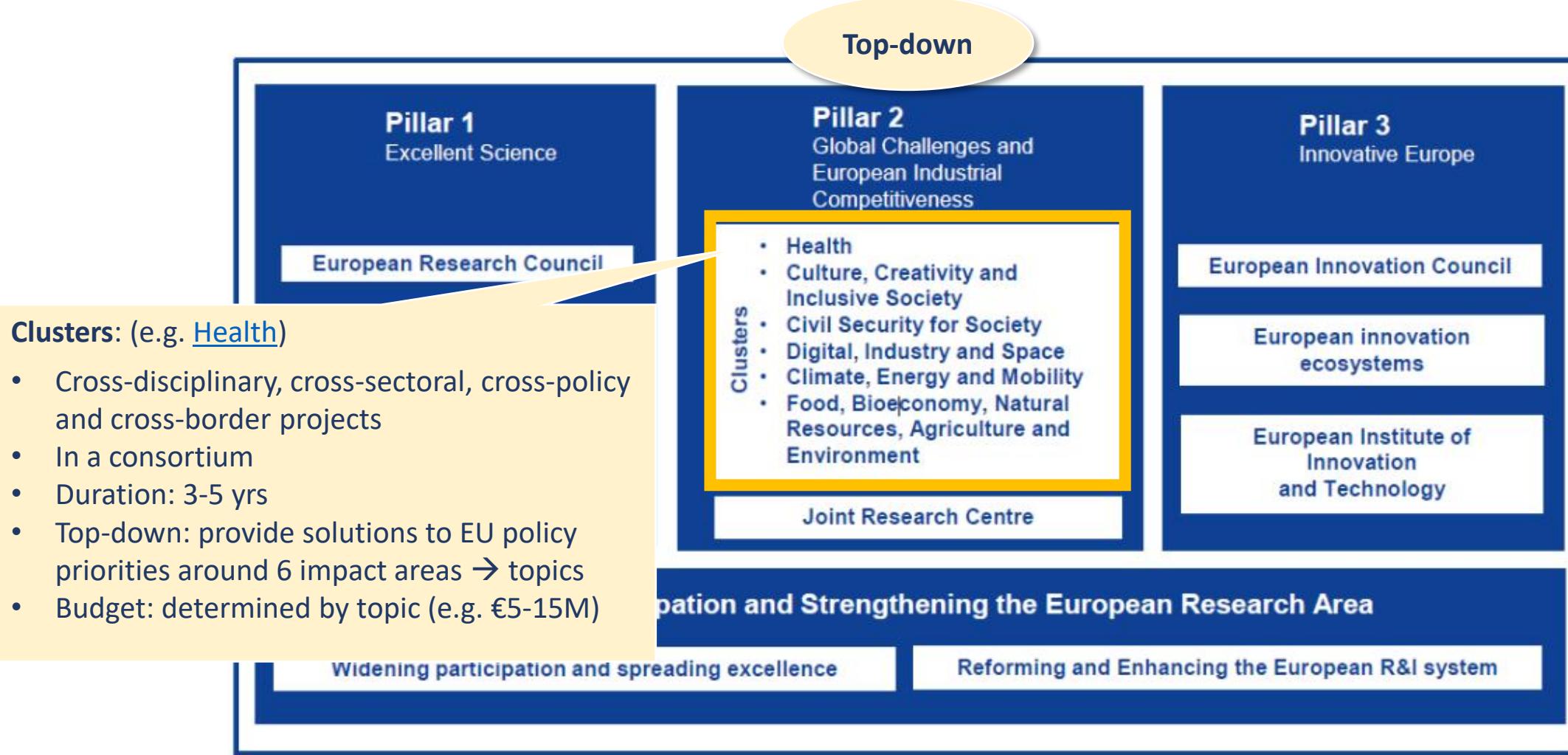
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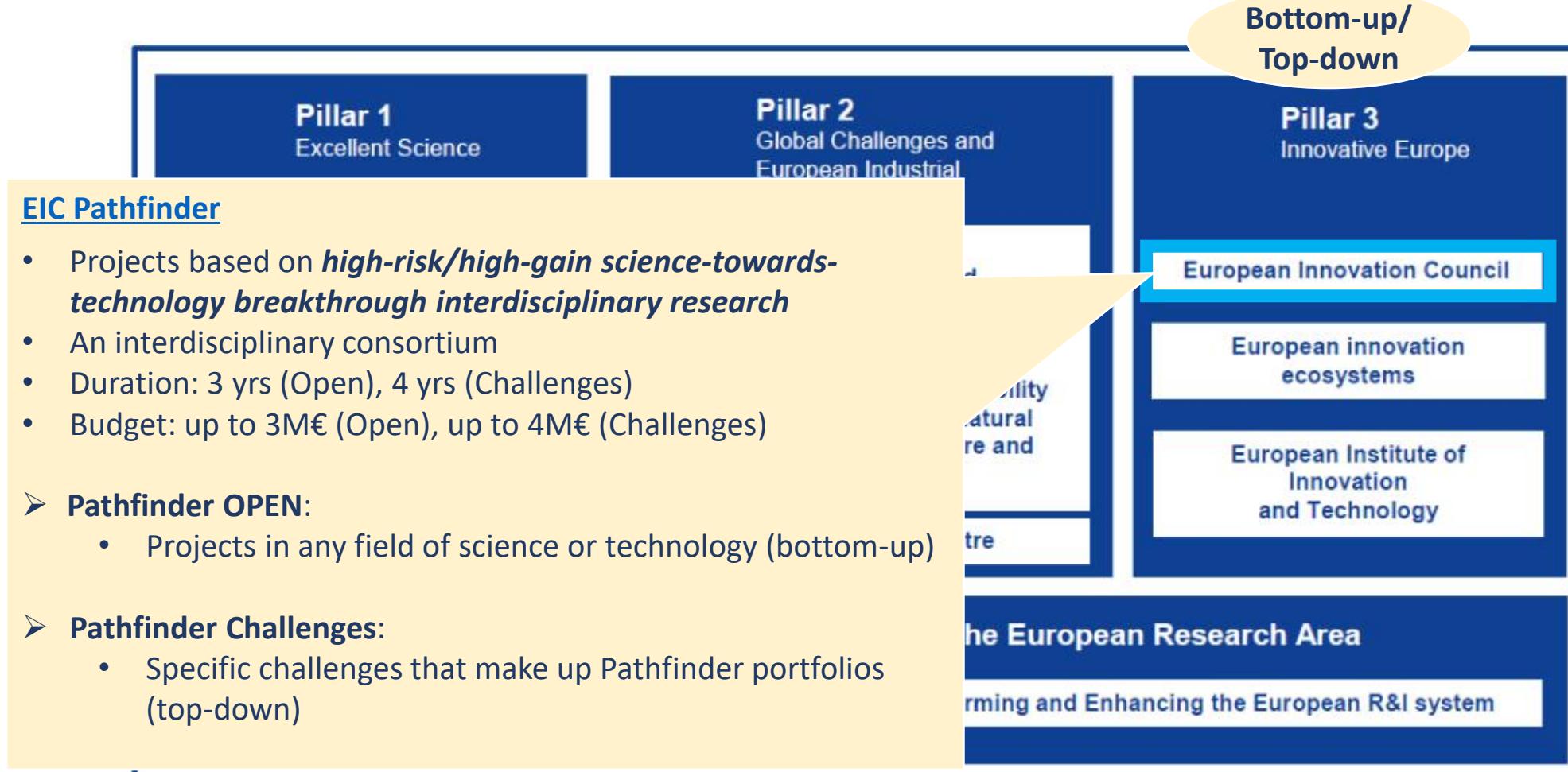
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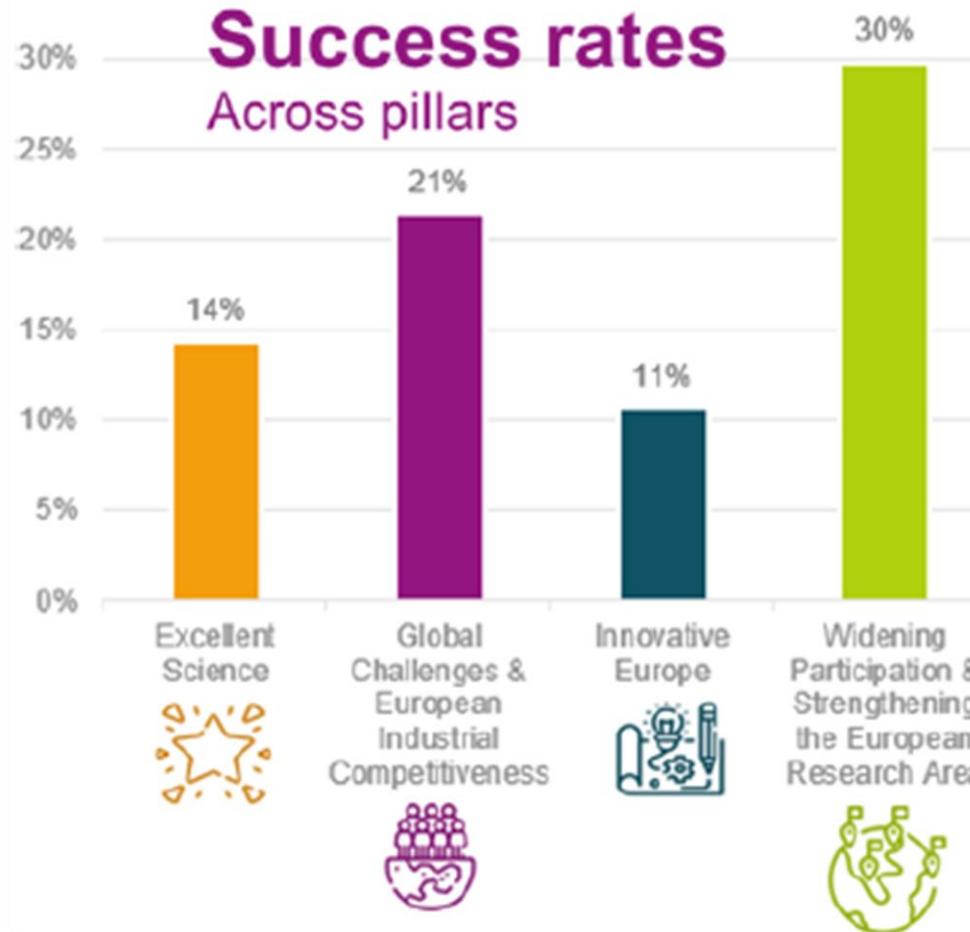
Horizon Europe as an opportunity



Horizon Europe as an opportunity



Horizon Europe as an opportunity



Horizon Europe (HORIZON)

Programme Guide

https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/programme-guide_horizon_en.pdf





TIP - Perfect matching...

- Understanding the goals of the funders (motivation, vision, policy background)
- Understanding the call's requirements
- Aligning your proposed research with the call's objectives of the funding agency
- Read other submitted grants

Open Grants

- [Home](#)
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- [Grants by Program](#)
- [Data and License](#)
- [GitHub project](#)

- [Funding from the Institute of Museum and Library Services and Moore Foundation](#)

Planning for Open Grants

Each year, researchers and practitioners across disciplines submit thousands of proposals for grants and fellowships. Each proposal represents hours of labor and contains details about research plans, collaborators, bibliographies, and past work. To make the funding process more transparent and to share the valuable contents of these proposals, an increasing number of researchers are sharing their grant proposals openly. An open repository of funding proposals will elevate their recognition as scholarly products, improve access for the public and other grant seekers, and bring transparency to this facet of the research process. This site documents efforts toward this goal, including documentation of current planning activities and a prototype database.

News and Updates

2023-07-12 – Call for Grant proposals written in English and/or Portuguese

[see details](#)

2023-04-06 – Call for Community Feedback Experts

[see details](#)

2022-09-21 – Call for Interviewees

[see details](#)

2022-09-14 – Report on the Advisory Group Meeting

[see details](#)

Evaluation: process and criteria

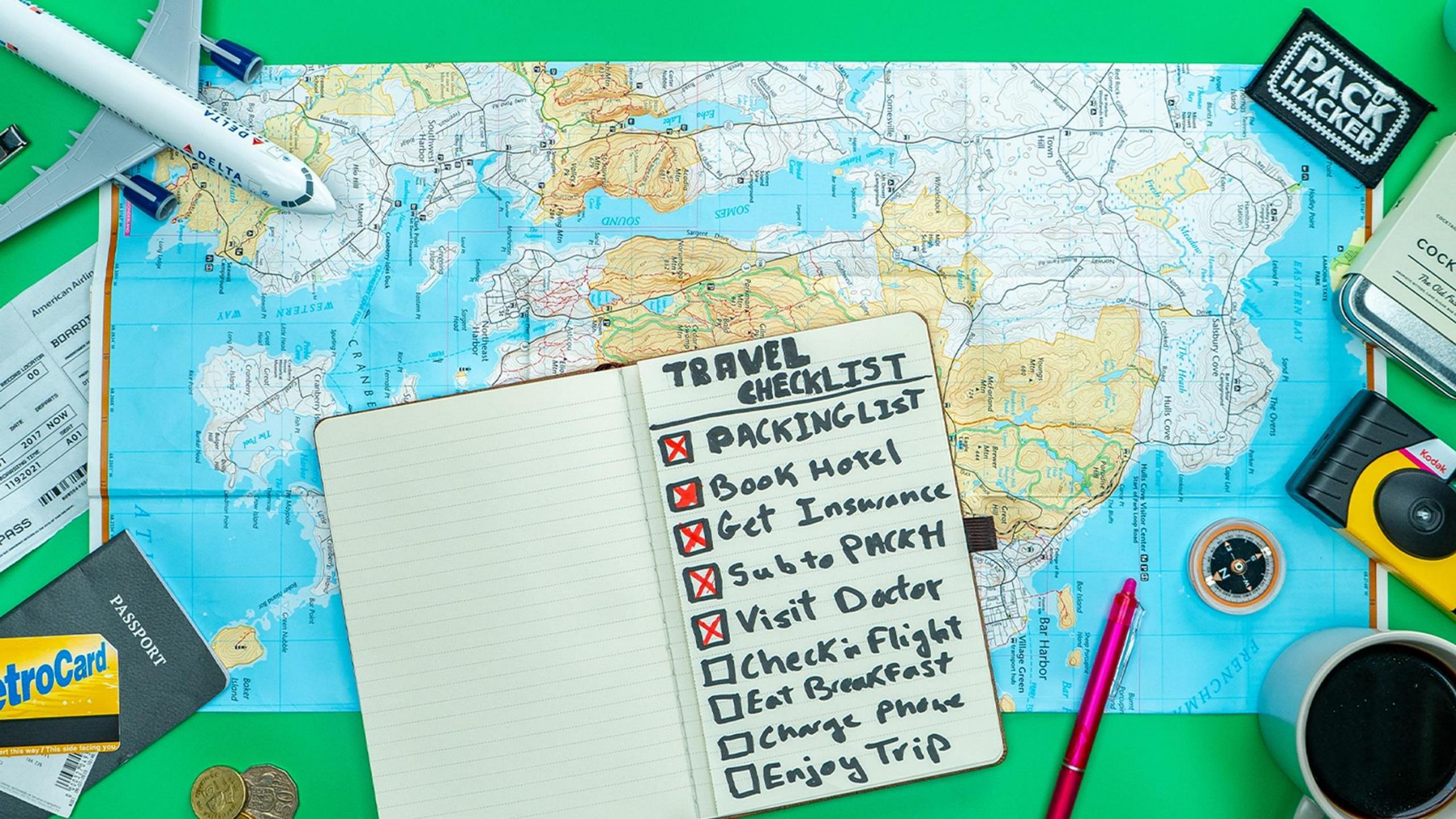


Quote from Dr. Juan Valcarcel

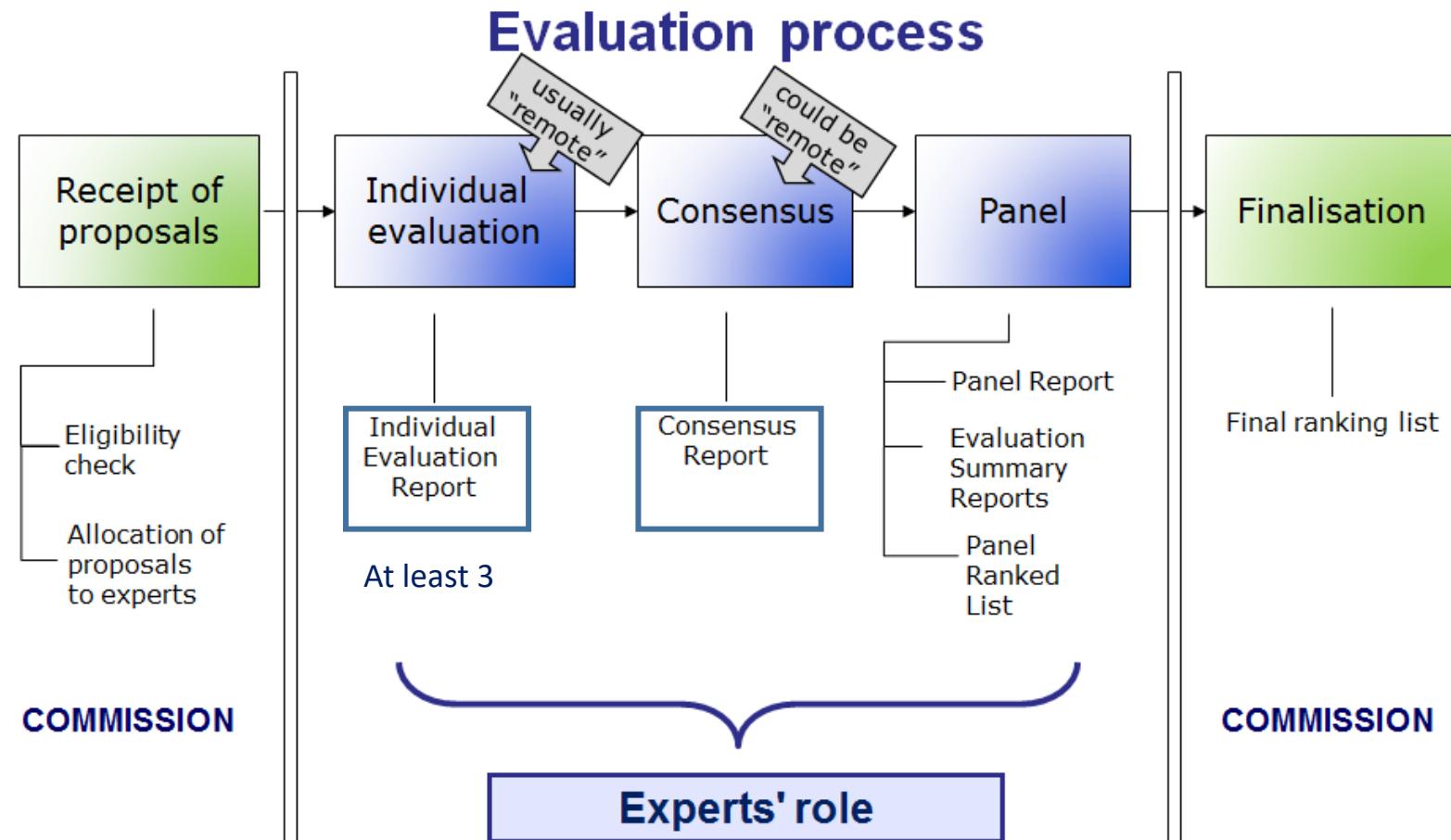


TRAVEL CHECKLIST

- PACKING LIST**
- Book Hotel
- Get Insurance
- Sub to PACKH
- Visit Doctor
- Check in Flight
- Eat Breakfast
- Charge Phone
- Enjoy Trip



Example of evaluation process



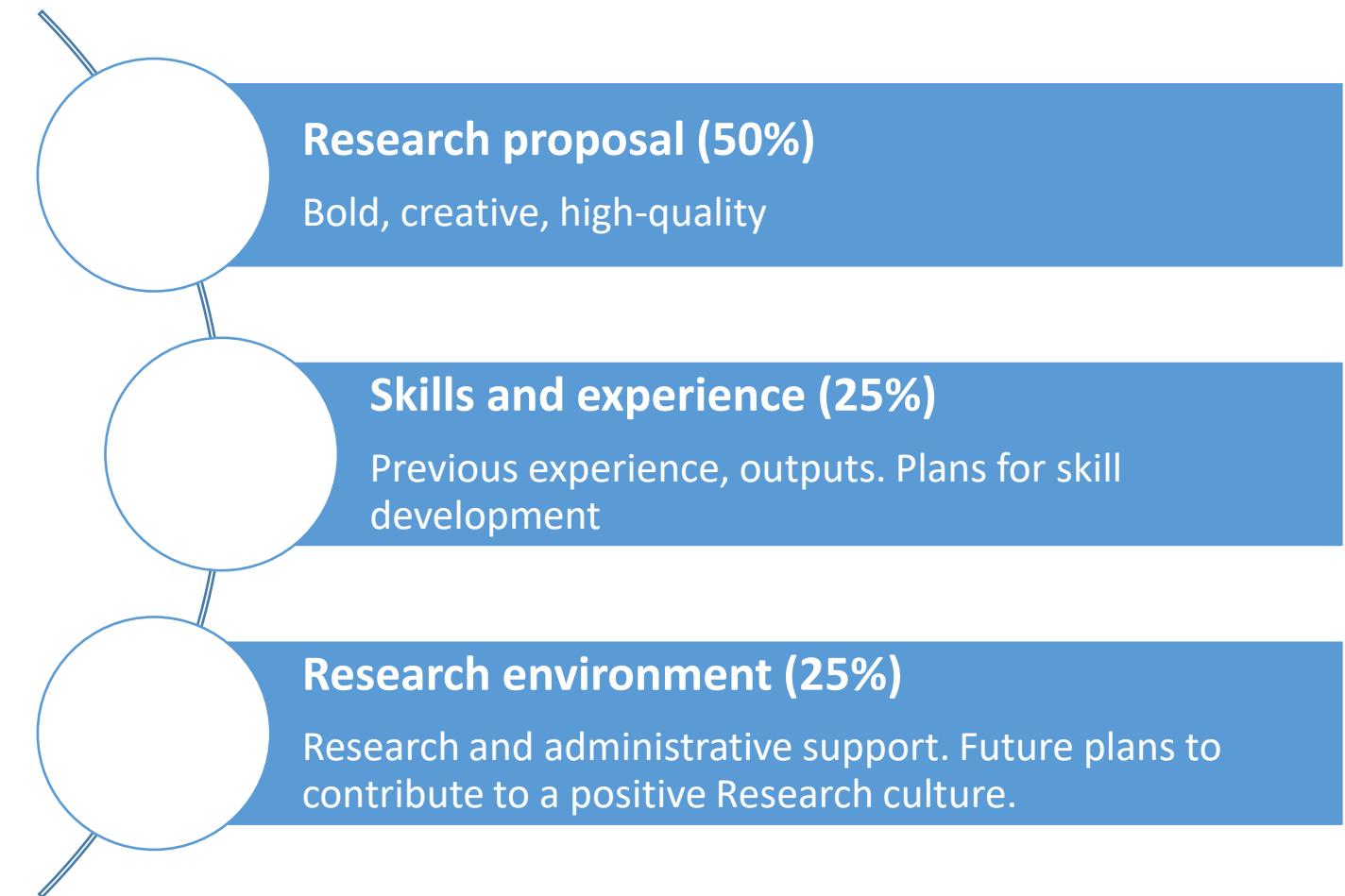
Example of evaluation criteria – IBRO exchange

- 1. Scientific Credentials:** academic and publication record, relevant work experience
- 2. Quality of Research Proposal:** high standard of work in a significant research area, with clear aims, objectives, and a structured plan.
- 3. Quality and Commitment of Host Lab:** good reputation in the applicant's research area(s), strong commitment to support the proposed research, and matching research funds.
- 4. Letters of Reference**
- 5. Benefit for the Applicant & Value to Home Lab:** justified the need for the fellowship, and the value it brings to their home lab (through knowledge transfer, collaboration, etc.).

Example of evaluation criteria – Wellcome Early Career Award

Scope

- Early-career researchers from any discipline.
- Advance understanding in your field and/or develop methodologies, conceptual frameworks, tools or techniques that could benefit health-related research.



Example of evaluation criteria – Pathfinder

Scope

- Collaborative Early-stage, high-risk/high-gain research that explores radically new technologies.
- Support deep-tech innovation.
- Enable interdisciplinary research.
- Bridge the gap between science and innovation.

Award criterion “Impact”



- **Long-term impact:** How significant are the potential transformative positive effects that the envisioned new technology would have to our economy, environment and society?
- **Innovation potential:** To what extent does the envisioned new technology have potential for generating disruptive innovations in the future and for creating new markets? How adequate are the proposed measures for protection of results and any other exploitation measures to facilitate future translation of research results into innovations? How suitable are the proposed measures for involving and empowering key actors that have the potential to take the lead in translating research into innovations in the future?
- **Communication and Dissemination:** How suitable are the measures to maximise expected outcomes and impacts, including scientific publications, communication activities, for raising awareness about the project results' potential to establish new markets and/or address global challenges?

Award criterion “Excellence”



- **Long-term vision:** How convincing is the vision of a **radically new technology** towards which the project would contribute in the long term?
- **Science-towards-technology breakthrough:** How concrete, novel and ambitious is the proposed science-towards-technology breakthrough with respect to the state-of-the-art? What advancement does it provide towards realising the envisioned technology?
- **Objectives:** How concrete and plausible are the proposed objectives to reach the envisaged proof of principle? To what extent is the high-risk/high-gain research approach appropriate for achieving them? How sound is the proposed methodology, including the underlying concepts, models, assumptions, alternative directions and options, appropriate consideration of the gender dimension in research content, and the quality of open science practices?
- **Interdisciplinarity:** How relevant is the interdisciplinary approach from traditionally distant disciplines for achieving the proposed breakthrough?

Award criterion “Quality and efficiency of the implementation”



- **Work plan:** How coherent and effective are the work plan (work packages, tasks, deliverables, milestones, time-line, etc.) and risk mitigation measures in order to achieve the project objectives?
- **Allocation of resources:** How appropriate and effective is the allocation of resources (comprising person-months and other cost items) to work packages and consortium members?
- **Quality of the consortium:** To what extent do all the consortium members have the necessary capacity and high quality expertise for performing the project tasks?

Write your grant for the reviewer



Work as an expert evaluator for a funding agency

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Home > Work as an expert

Work as an expert

We need experts for:

- Assessing applications for EU funding (including prizes and tenders),
- Monitoring of EU funded projects and contracts,
- Giving your advice on specific issues.

Experts act in their individual capacity to assist the EU services with the implementation of EU funding & tenders managed through the Portal.

Do you have an extensive professional experience & proven domain-knowledge?

[Register as expert ↗](#)

As new expert, you will be first requested to create your EU login account and register your profile.

Registered experts can update the profile via the 'Expert profile' once signed in.

Find out more about the evaluation and monitoring objectives and scope in the [terms of reference ↗](#).

If you need further guidance, access the [key steps for experts](#).

Calls for expressions of interest for experts

 [Call for expressions of interest for experts \(2021-2027\). ↗](#)



Useful links



[Helpdesk and Support Services](#)



[FAQ for Experts](#)



[Experts dashboard ↗](#)



[List of contracted experts](#)





Tips before starting to write

1. Answer the **mission** of the funding agency
2. Write the proposal for the evaluators
3. Find the right **balance**: the proposal should be focused, original, novel.....of course feasible!
4. Aim your proposal to both at an **expert** and at a **generalist**
5. **Structure** well your proposal: hypothesis, objectives, methodology, contingency plans
6. **Ask** colleagues / mentors
7. Do not wait until the last minute and **enjoy** the process

Grant style

- Structure and organize the text
- Make the text “*a joy to read*”
- “*A picture is worth a thousand of words*”
- Keep your application to allowed number of pages and “rules”
- Check spelling and grammar



Grant style

Relevance to the European Scientific objectives

Exciting new developments and discoveries provide the unprecedented opportunity to study the molecular pathophysiology of aneuploidy. These include i) the near-completion of the nucleotide sequence of the euchromatic portion of the human genome ii) the completion of the sequence of the laboratory mouse and other species iii) the identification of the most common sequence variants (SNPs) in certain human populations iv) the development of technological platforms to detect hundreds of thousands of SNPs as well as measure genomic copy number variation (CNV) throughout the human genome v) the development of methods to assess the level of gene expression for virtually all protein-coding genes vi) the availability of bioinformatic tools for data analysis and integration, and vii) the development of methodologies for creation of model mice with engineered large-scale and fine-scale aneuploidies. This present proposal utilizes all of the above achievements to tackle the fundamental question of gene dosage imbalance. Investigators in Europe were major contributors in research topics related to aneuploidy. European laboratories: 1/ enjoyed leading positions on the sequencing efforts of the HSA21 and its chimp homologue; 2/ were leading in creating an atlas of gene expression of all HSA21 genes in the mouse; 3/ were leading in studying the functions of numerous genes sensitive to dosage imbalance; 4/ were leaders in mouse trangensis and mutagenesis; 5/ considerably contributed to the hapmap project; 6/ considerably contributed to the understanding of gene expression variation; 7/ were pioneers in recognising the functional importance of conserved non-coding regions of the mammalian genome; 8/ European laboratories and clinical investigators have described several aneuploidy syndromes; 9/ have considerably contributed to the methodology of detection of gene copy number variation; 10/ have conducted important preliminary studies to detect polymorphic copy number variation in European populations. This grant proposal builds on the existing outstanding expertise and European research infrastructure. Thus this grant proposal maintains the competitive excellence of European Science in the field of functional genome analysis and in particular of aneuploidy. This will be addressed in details in part B7. We wish to emphasize here that several members of this present consortium of partners have successfully collaborated in the past in funded European projects and produced high impact papers. This collaboration dates from the late 1980's and has created a powerful infrastructure, extensive collaborations, training and exchange of personnel. In addition, the collaborative projects have trained young investigators in the fields of genome analysis and aneuploidy and has thus (in these fields) stopped the brain drain to US laboratories. Furthermore, the collaborative funded projects provided the opportunity to attract outstanding young and more mature investigators back to European laboratories. The complexity of the biological problem of aneuploidies and gene dosage imbalance (or better yet genomic region dosage imbalance) is such that scientists from one discipline have a limited probability of making significant advances. Thus this grant proposal mobilizes the experts of diverse disciplines such as clinical phenotyping, diagnostic laboratory expertise, molecular biology, cellular biology, mouse phenotyping, mouse genomic engineering, functional genome analysis, bioinformatics, systems biology, protein biochemistry and analysis, molecular neuroscientists, behavioural neuroscientists, statisticians, and science administrators. The continuous interactions of these scientists and the integration of data acquisition and data analysis provide and added value to the project and make it bigger than a simple addition of each individual component.

The integration of the individual parts and the interrelation of the WPs make this project compatible with the European principles for scientific integration and development/maintenance of excellence in the various geographic compartments of Europe.

Relevance to the European Scientific objectives

Why now?

Exciting new developments and discoveries provide the unprecedented opportunity to study the molecular pathophysiology of aneuploidy. These include i) the near-completion of the nucleotide sequence of the euchromatic portion of the human genome ii) the completion of the sequence of the laboratory mouse and other species iii) the identification of the most common sequence variants (SNPs) in certain human populations iv) the development of technological platforms to detect hundreds of thousands of SNPs as well as measure genomic copy number variation (CNV) throughout the human genome v) the development of methods to assess the level of gene expression for virtually all protein-coding genes vi) the availability of bioinformatic tools for data analysis and integration, and vii) the development of methodologies for creation of model mice with engineered large-scale and fine-scale aneuploidies. This present proposal utilizes all of the above achievements to tackle the fundamental question of gene dosage imbalance.

Why European?

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Why this consortium?

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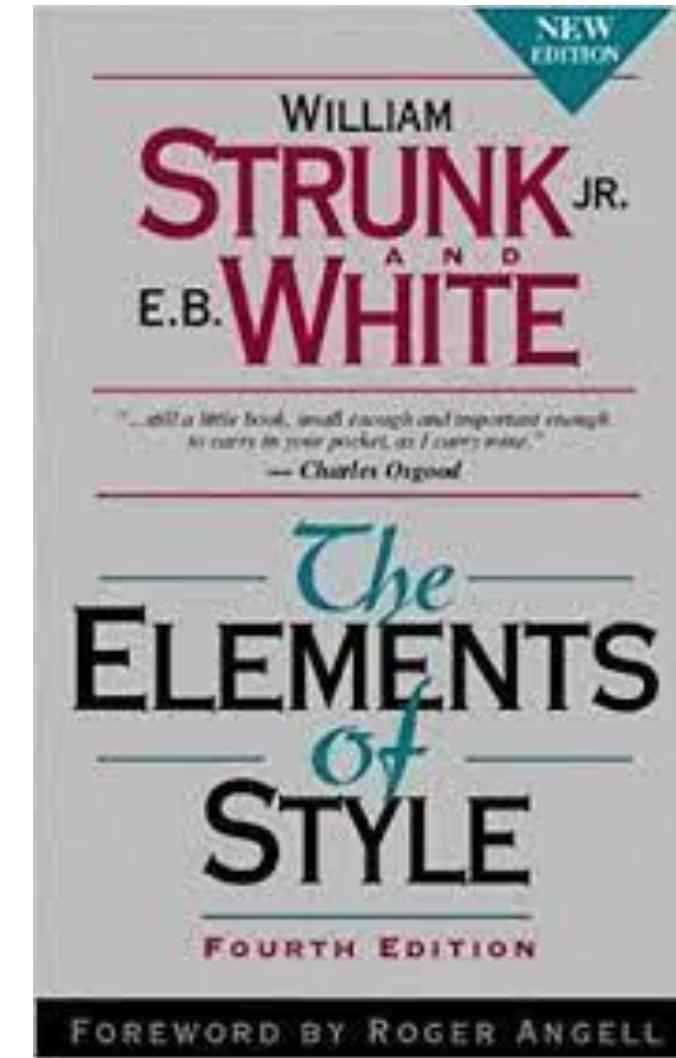
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English...



English...



ChatGPT

Using generative AI for grant writing



https://research-and-innovation.ec.europa.eu/news/all-research-and-innovation-news/guidelines-responsible-use-generative-ai-research-developed-european-research-area-forum-2024-03-20_en

The screenshot shows the Wellcome Trust website. At the top right are navigation links: "Research funding" (underlined), "Engagement and advocacy", "Our priorities", and "Articles a". Below the navigation is a breadcrumb trail: Home / Research funding / Guidance / Policies grant conditions / Use of Generative Artificial Intelligence (AI) when applying for Wellcome grant fu. The main content area features a large black "W" logo followed by the word "wellcome". To the right, the title "Use of Generative Artificial Intelligence (AI) when applying for Wellcome grant funding" is displayed in bold black text. Below the title is a link: "Use of generative AI - Funding Policy | Wellcome".

On this page

- [Definitions](#)
- [What we expect from researchers and organisations who apply to us for funding](#)
- [What we expect from our expert reviewers and committee members](#)

[Use of generative AI - Funding Policy | Wellcome](#)

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MENU ▾

[Canada.ca](#) > [Science and innovation](#) > [Science.gc.ca](#) > [Interagency research funding](#) > [Policies and Guidelines](#)
> [The use of generative artificial intelligence in the development and review of research proposals](#)

Guidance on the use of Artificial Intelligence in the development and review of research grant proposals

[Guidance on the use of Artificial Intelligence in the development and review of research grant proposals](#)

Using generative AI for grant writing

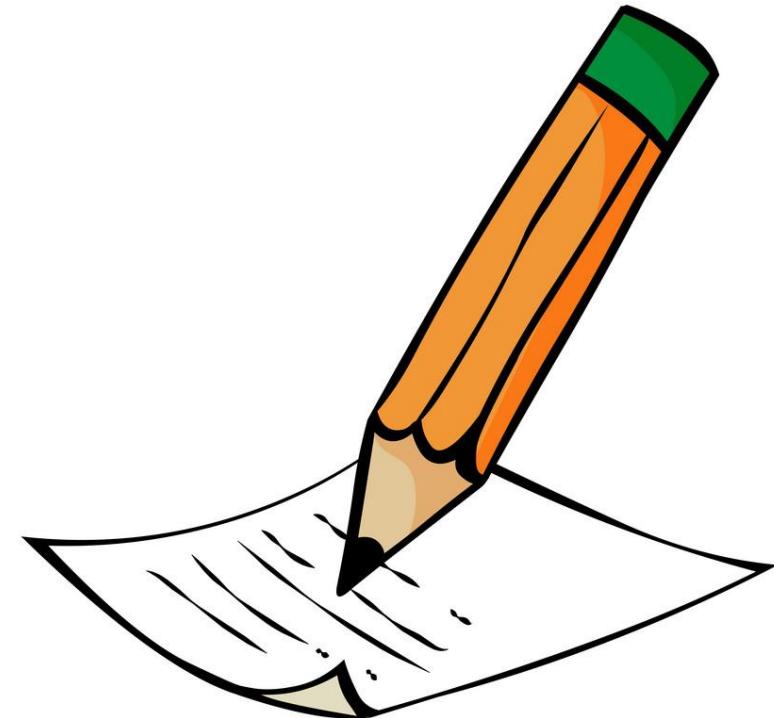
RECOMMENDATIONS FOR RESEARCHERS

1. Remain ultimately responsible for scientific output.
2. Use generative AI transparently.
3. Pay particular attention to issues related to privacy and data protection, intellectual property rights when sharing sensitive or protected information.
4. When using generative AI tools, comply with national and international legislation, as in their regular research.
5. Consider the potential risks of using generative AI tools properly to maximise their benefits, including by avoiding using generative AI tools substantially¹⁹ in sensitive activities that could impact other researchers or organisations (for example peer review, evaluation of research proposals, etc).

BE ORIGINAL, AUTHENTIC, CREATIVE

Structure of research grant application

- Abstract / Summary
- Goals and specific objectives
- State-of-the-art and rational
- Methodology / Research plan
- Expected outcomes and impact
- Team and expertise
- Budget



Abstract

1. *Why bother?*
2. *What do you want to do?*
3. *How?*
4. *What will be the impact of your project?*



TIPS - Abstract (the “killer”)

- First part to be read - first & last part to be written
- Brief summary of your project
- Aimed at an expert and a generalist
- Some reviewers might read only the abstract
- Clear & Concise & Complete – “*Less is more*”
- Double-check spelling and avoid abbreviations

ATAC aims at developing passive immunotherapy against COVID-19. Human antibodies will be obtained from blood of CoV-recovered donors from China and Italy with three independent approaches: polyclonal gamma-globulins, B cell monoclonals and phage libraries. Antibodies will be characterized by rapid experimental and computational work, optimized, produced and tested in consultation with EMA to ensure prompt embedding of regulatory aspects.

The partners have outstanding experience in all aspects of the project, collaborated previously and worked on antibody therapy for diseases including SARS and MERS-CoV. Reagents and experienced personnel are already available ensuring quick and efficient progress, with initial deliverables within 3 months.

Besides providing a lead human antibody candidate for therapy, ATAC will rapidly disseminate results to help respond to the current COVID-19 epidemic. Results of the 28 months project will also further our understanding of CoV neutralization, contributing to future vaccination and therapeutic strategies.

The team includes the Karolinska Institutet (SE, Pan-Hammarström and Hammarström, coordinators), the Institute for Research in Biomedicine (CH, Varani and Robbiani); the Joint Research Centre- European Commission (BE, Calzolai); Technische Universität Braunschweig (DE, Hust) and Policlinico San Matteo (IT, Baldanti). The partners' outstanding expertise is attested by high impact publications on antibody treatment for emerging infectious diseases.

Unbiased analyses of the molecular make up of single cells are revolutionizing our understanding of cell differentiation and cancer. Over the last years, our groups have characterized the molecular features of normal B-cell subpopulations and of pools of leukemic cells from chronic lymphocytic leukemia (CLL), the most frequent leukemia in the Western world. These analyses have revealed that CLL subtypes are related to different B-cell maturation stages, and that they can show a complex subclonal architecture. Such subclonality is dynamically modulated during the course of the disease, and has deep implications in CLL biology, clinical aggressiveness and treatment responses. In this scenario, BCLL@las aims at deciphering the origin and molecular anatomy of CLL during the entire life history of the disease by generating genetic, transcriptional and epigenetic maps of hundred-thousands of single cells across locations, time points and individuals. We plan to fulfill four major objectives: 1) To generate a comprehensive atlas of normal B-cell maturation, 2) To understand the initial steps of neoplastic transformation through the analysis of minute B-cell monoclonal proliferations in healthy individuals, 3) To decipher the cellular diversity and clonal architecture of CLL at diagnosis, and 4) To characterize the single-cell subclonal dynamics of CLL during disease evolution and treatment response. To reach these goals, BCLL@las gathers together four teams with complementary expertise in B-cell biology, clinics and pathology of CLL, genomics, transcriptomics, epigenomics, sequencing technologies, single-cell profiling and computational biology. This, together with the richness of the available CLL samples and the technical and analytical depth of BCLL@las shall lead to unprecedented insights into the origin and evolution of cancer in the precision medicine era.

Why bother?

What do you want to do?

How?

What will be the impact of your project?

Abstract

ATAC aims at developing passive immunotherapy against COVID-19. Human antibodies will be obtained from blood of CoV-recovered donors from China and Italy with three independent approaches: polyclonal gamma-globulins, B cell monoclonals and phage libraries. Antibodies will be characterized by rapid experimental and computational work, optimized, produced and tested in consultation with EMA to ensure prompt embedding of regulatory aspects.

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Goals and specific objectives

Main Goal = ultimate global purpose of the project

Specific Objectives= action steps towards the goal

Tip – Maintain the same structure of objectives throughout the whole proposal (e.g., excellence & implementation)

Goal and objectives

Example

- Goal: CLL@las aims at deciphering the origin and molecular anatomy of CLL during the entire life history of the disease by generating genetic, transcriptional and epigenetic maps of hundred-thousands of single cells across locations, time points and individuals
- Objective 1: To generate a comprehensive atlas of normal B-cell maturation
- Objective 2: To understand the initial steps of neoplastic transformation through the analysis of minute B-cell monoclonal proliferations in healthy individuals
- Objective 3: To decipher the cellular diversity and clonal architecture of CLL at diagnosis
- Objective 4: To characterize the single-cell subclonal dynamics of CLL during disease evolution and treatment response

State-of-the-art (SOA)

Structure for Clarity

- Break the SOA into short, focused sub-sections with clear sub-headings
- Ensure SOA aligns with a specific project objective
- Identify existing knowledge gaps
- State how your project advances the field beyond the SOA
- Use up-to-date references to support your claims

Showcase Your or the Team Expertise

Present preliminary data, if available

Drive Your Message Home

Bold statement or text box summarizing how your project pushes the boundaries of current research



TIPS – Beyond the state-of-the-art

- Educate the evaluator...but do not bore her/him
- What is known? What is not known? Why is it essential to find out?
- Where your proposal fits, what gaps will address
- Make sure to cite all the relevant and up to date literature
- Establish your competence and credibility – include preliminary data if available.
- Consider including a figure summarizing difficult problems, processes, etc.

Methodology – Research/work plan

Outline Your Research Plan

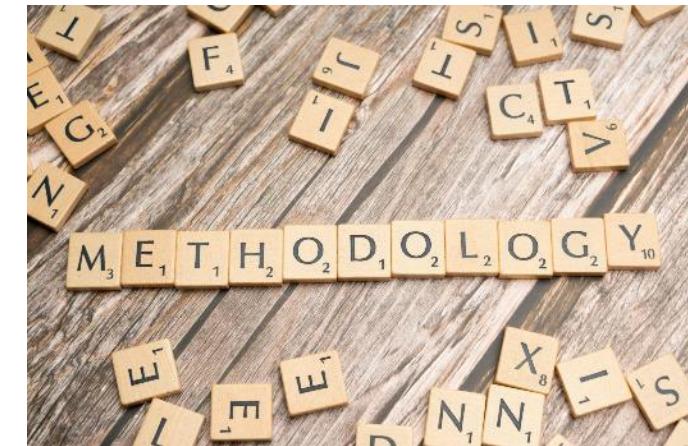
- Clearly describe how the research will be conducted.
 - Use short paragraphs, bullet points and/or graphics for clarity.

Key Components to Highlight

- Type of research & innovation activities proposed
 - Main steps & methods to achieve objectives
 - Key experiments, techniques & equipment
 - Justification for chosen methods, technologies, and techniques

Consider Consortium-wide Resources

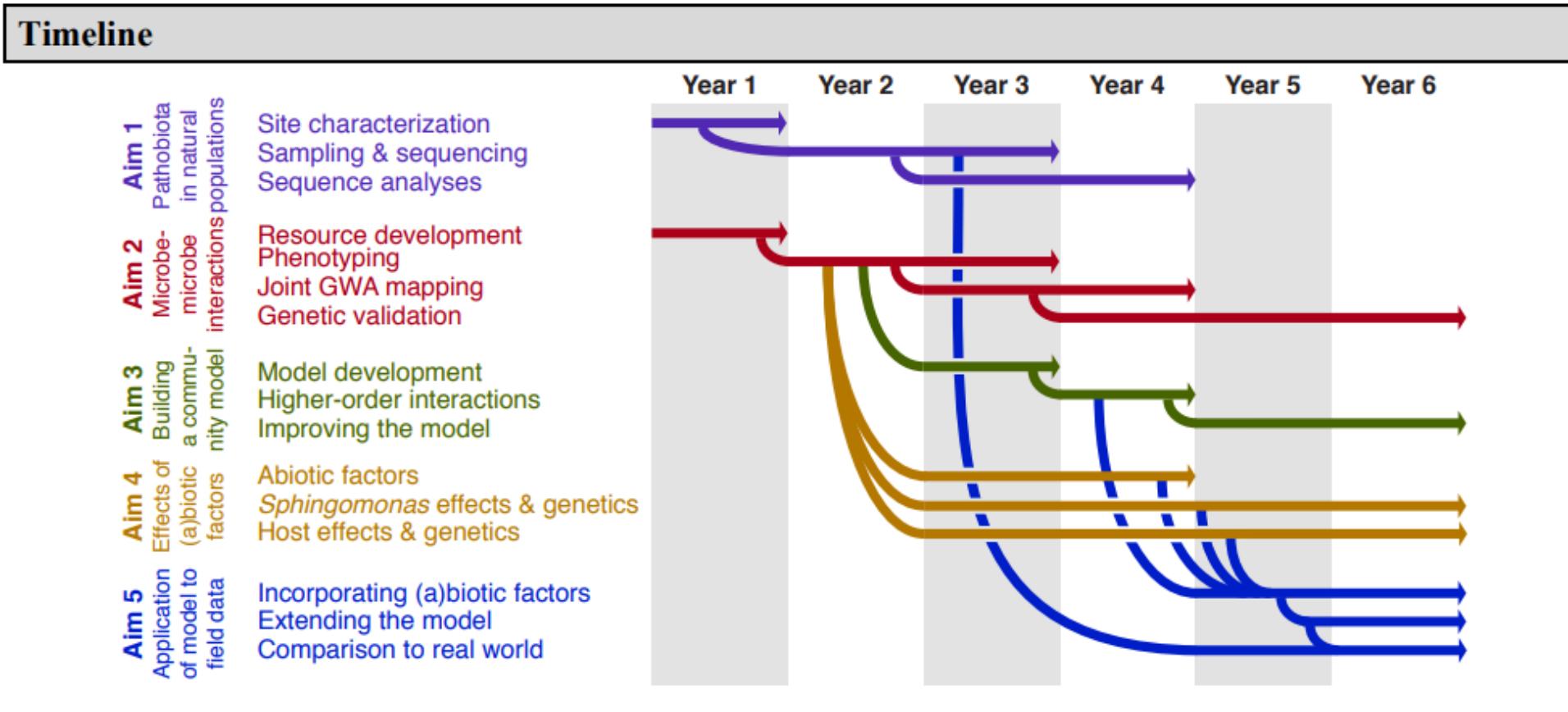
- Specialized equipment access
 - Data collection & analysis



Workplan

1. Methodology following the structure of your objectives
2. Define key expected results and the milestones
3. Graphs to illustrate relationships (“PERT”)
4. Timeline (“GANTT”)
5. Risks & contingency measures

Gantt Chart example



Risks and contingencies

- Identify risks that could potentially jeopardize the achievement of the project goals
- Describe the contingency plan for each identified risk
- Define the likelihood for each risk to occur
- Types of risks: scientific, technical, management, coordination, exploitation, conceptual

Other aspects

Sex and gender dimension in research

- Sex refers to biological characteristics and gender to social/cultural attitudes, behaviors and identities.
- Sex and gender are potentially critical factors in the experimental design in science, in multiple disciplines.



<https://www.youtube.com/watch?v=fdftL6S94hs>

Gendered Innovations in Science, Health & Medicine, Engineering, and Environment

| Home | Contributors | Links | Translations | Contact Us | Search The Site |

What is Gendered Innovations?

SEX & GENDER ANALYSIS

- General Methods
- Specific Methods
- Terms
- Checklists

CASE STUDIES

- Science
- Health & Medicine
- Engineering
- Environment

INTERSECTIONAL DESIGN

POLICY RECOMMENDATIONS

VIDEOS

Stem Cells: Analyzing Sex

ABSTRACT **FULL CASE STUDY** **FOR JOURNALISTS**

The Challenge
Biological sex is commonly studied as a variable in research with humans, but analyzing sex is rare in [animal research](#) and rarer still in cell-based research (Beery et al., 2011). This deficiency can represent a lost opportunity to understand basic and developmental biology, and to refine cell-based therapies.

Method: Analyzing Sex
Sex should be analyzed at all levels, from chromosomes and cells to whole organisms. Taking sex into account has led to novel questions about stem cells. Analyzing sex involves:

1. Designing research to use cells of both sexes in sufficient quantities to detect or rule out sex differences (not all sex differences will be significant).
2. Reporting the sex of cells used in experiments.
3. Recording, formatting, and analyzing data to allow for systematic review and meta-analysis. Reviews can identify gaps in knowledge (when, for example, experiments have involved cells of only one sex). Meta-analysis can increase statistical power and may allow sex analysis even in the absence of two-sex studies.

<https://genderedinnovations.stanford.edu/index.html>

Other aspects

Sex and gender dimension in research

- “Describe shortly how the gender dimension (i.e. sex and/or gender analysis) is taken into account in the project’s research and innovation content. If you do not consider such a gender dimension to be relevant in your project, please provide a justification. Remember 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.” (Pathfinder Open template)

Comment from ESR:

“Gender/sex data is collected and intersectionality with other features is targeted for such known biases.”

Research Data Management Plan (DMP)

- “Living document”, written before starting a Project and regularly updated. Deliverable at month 6.
- Collection and documentation: type, format and volume of the data.
- FAIR principles
- Backup and storage
- Legal and security issues: protection of personal data, GDPR, etc.
- Data sharing: what data to share? With whom? When?
- Medium and long-term preservation: persistent identifiers, repositories (Re3data)

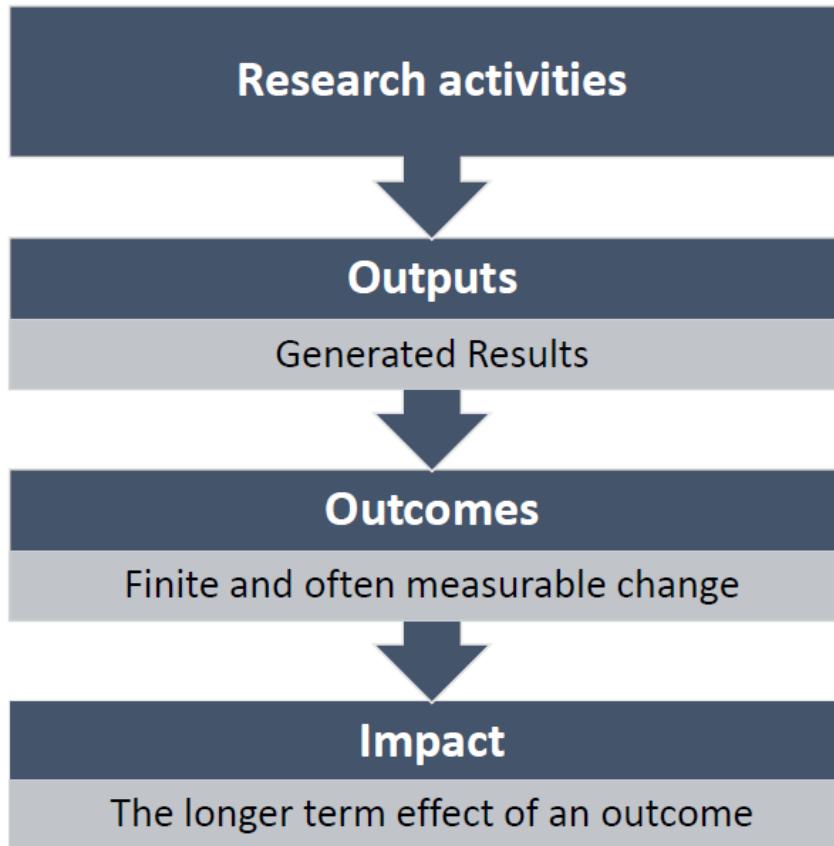




TIPS - Budget

- Understand the funder's guidelines
- Be Realistic but Conservative - Avoid both overestimating and underestimating
- Justify every item – personnel, consumable, equipment (if allowed), etc.
- Align Budget with Project Goals
- Look for institutional support - collaborate with your institution's finance or grants office

Expected results, outcomes and impact



Omics experiments

Biomarker identification of colorectal cancer through liquid biopsy

Further development of diagnostic assay usable in the clinical practice

Better disease prevention and reduction of healthcare costs

Communication



Dissemination



Exploitation



| <p>Reach out to society and show the impact and benefits of EU-funded R&I activities, e.g. by addressing and providing possible solutions to fundamental societal challenges.</p> | <p>Transfer knowledge & results with the aim to enable others to use and take up results, thus maximising the impact of EU-funded research.</p> | <p>Effectively use project results through scientific, economic, political or societal exploitation routes aiming to turn R&I actions into concrete value and impact for society.</p> |  Objective |
|--|--|--|---|
| <p>Inform about and promote the project AND its results/success.</p> | <p>Describe and ensure results available for others to USE → focus on results only!</p> | <p>Make concrete use of research results (not restricted to commercial use.)</p> |  Focus |
| <p>Multiple audiences beyond the project's own community incl. media and the broad public.</p> | <p>Audiences that may take an interest in the potential USE of the results (e.g. scientific community, industrial partner, policymakers).</p> | <p>People/organisations including project partners themselves that make concrete use of the project results, as well as user groups outside the project.</p> |  Target Audience |



TIPS – Impact

- Focus on **who** benefits and **how**
- **Quantify:** scale and significance
- Think long-term
- Align with **funder's priorities**

You and/or your team





TIPS – You and/or the team

- Why you?
- Align experience and expertise with the project goals
- Use evidence
- Show synergies and complementarity of the team

Group exercise

In 5 groups, think of a collaborative grant proposal with your colleagues and write down as bullet points:

1. Main goal and specific objectives
2. Team and expertise
3. Key outputs – outcomes – impact

30 MIN FOR PREPARATION + 20 MIN FOR DISCUSSION

Many thanks
bertero@recerca.clinic.cat



May the Force be with you...for your next grant!