

Webinar II: cómo preparar una propuesta a ERC- **Advanced Grant 2023**

Esther Guirado Luna.

Fundación Progreso y Salud.

Índice

1. Webinar I: In brief

2. Consejos para trabajar la propuesta ERC-Advanced

3. Recomendaciones para escribir la propuesta

B1

- Abstract
- Synopsys
- CV y Track Record

B2

- SoA and objectives
- Methodology

Budget

¿Qué financia?

HIGH RISK /HIGH GAIN pionering Project in any fields Of **FRONTIER** Research



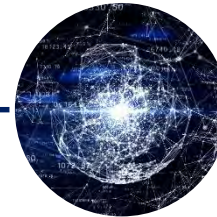
**Social Sciences
and Humanities**

(7)



Life Sciences

(9)



**Physical
Sciences &
Engineering**

(11)



ERC -Advanced Grants

Grants up to 2,5 million for 5 years
For established research leaders with a recognized 10 years track record of research achievements

ERC-2023-AdG

Open: 08-12-2022
Deadline: 23-05-2023
597 million EURO (246 grants)

ERC- Advanced Grants

1. Leader in terms of originality and significance of their research contributions.

2. Leaders with a recognised track record of research achievements

- 10 Publications as main author
- 5 Granted patents
- 10 Invited presentations
- 3 Research expeditions



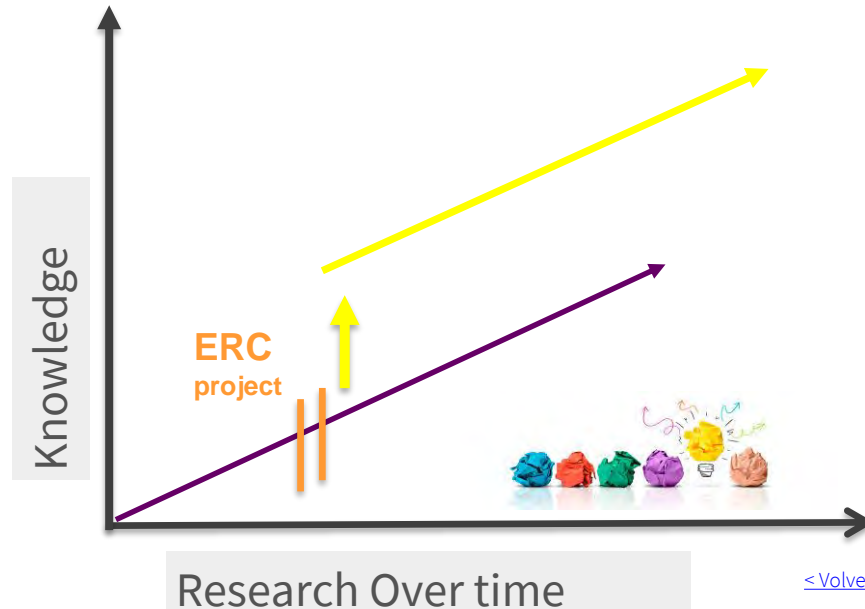
30% Work time commitment to the ERC.

50% Work time in EU /AC.

HIGH RISK /HIGH GAIN pionering Project in any fields Of FRONTIER Research

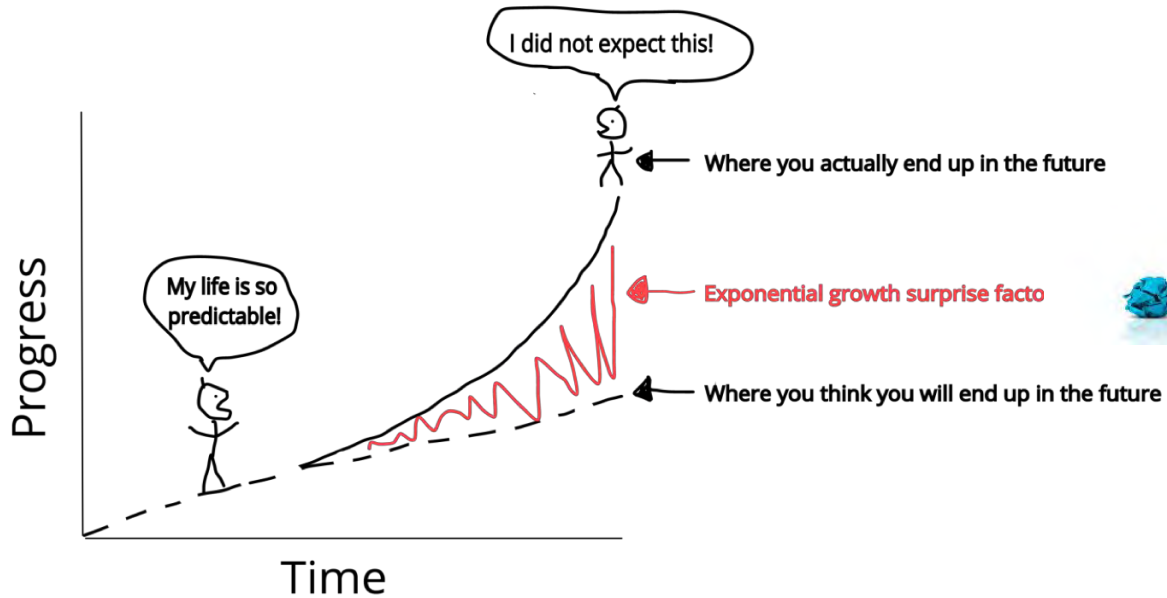
What does Frontier Research mean? BUT Not INCREMENTAL

- Goes beyond current limits of your research area
- Groundbreaking research
- Develops new horizons
- Exciting, high risk-high gain



HIGH RISK /HIGH GAIN pionering Project in any fields Of FRONTIER Research

Frontier Research but /and NOT INCREMENTAL



HIGH RISK /HIGH GAIN pionering Project in any fields Of FRONTIER Research

Frontier Research but /and NOT INCREMENTAL

INCREMENTAL

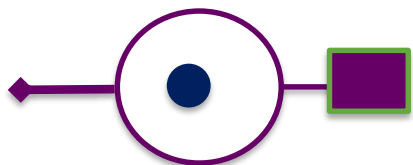
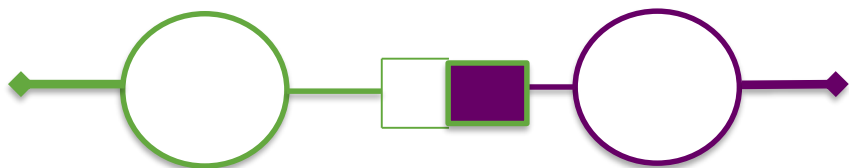


RADICAL



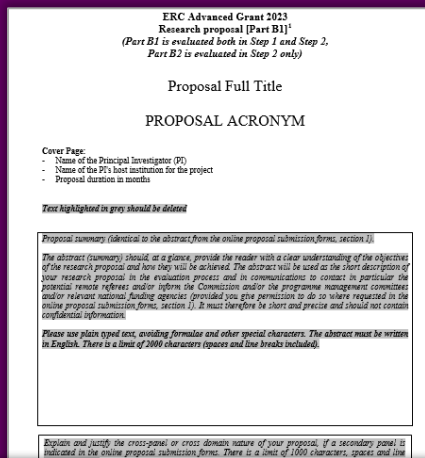
HIGH RISK /HIGH GAIN pionering Project in any fields Of FRONTIER Research

Frontier Research but /and NOT INCREMENTAL



Partes de la propuesta

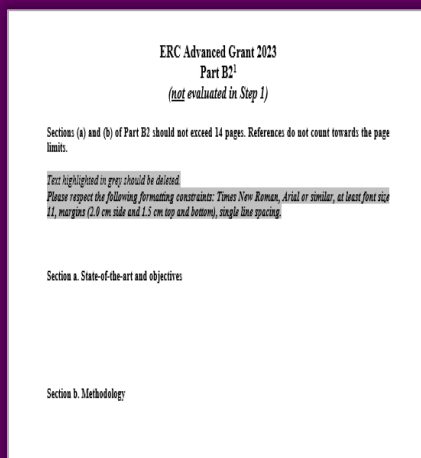
ERC = B1 +



Part B1 – documento pdf (9 Pags)

- Extended Synopsis (5pags)
- Curriculum vitae (2pags)
- Track-record (2p)

B2



Part B2 – documento pdf (14pags)

- SoA & Objectives
- Methodology

+ Parte A*

Parte A – Formularios online

A1 General Information
abstract

A2 Participants (GEP)

A3 Budget *

table + description (8000c)

A4 Ethics and security

A5 Other questions

% Time commitment*

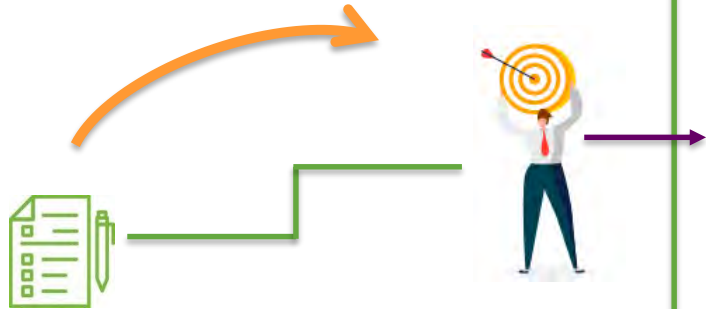
Exclusión hasta 3 evaluadores

Annexes

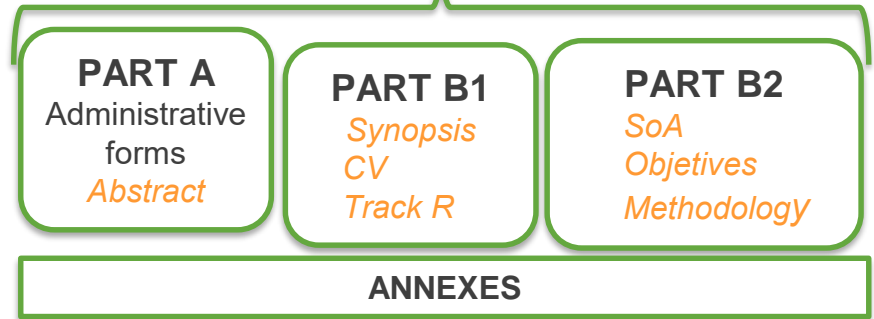
- HI support letter
- Ethics issues and security
- Eligibility window
- PhD certificate

Evaluación

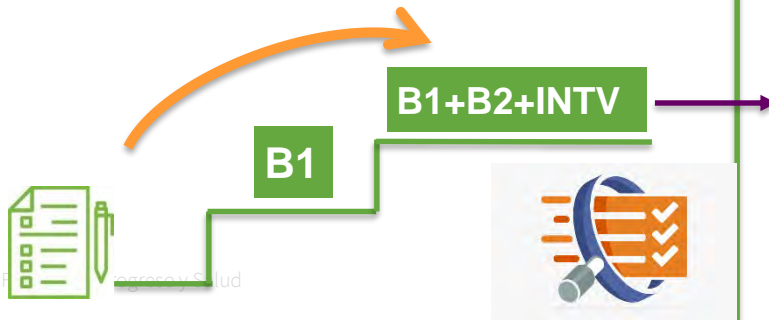
1- STEP SUBMISSION



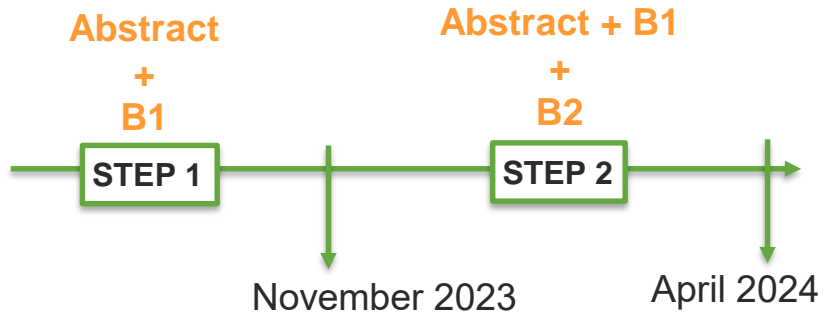
SUBMISSION-23 May-2023



2- STEP EVALUATION



EVALUATION- January- April 2024



Consejos para trabajar la propuesta ERC Advanced

Descargo de responsabilidad:

Parte de la información de esta presentación está basada en aprendizajes personales y no constituye una información directa de la CE, ni del ERC.

2. Consejos para trabajar una propuesta ERC Advanced Grant

1

Empieza a trabajar pronto, con bastante tiempo.

2

Usa las plantillas



3

Dedica el mismo tiempo a B1 y B2, pon el mismo mimo y cariño.

4

Trabaja la propuesta teniendo en mente los criterios de evaluación

2. Consejos para trabajar una propuesta ERC Advanced Grant

5

Propuesta fácil de leer y coherente

6

Formula gran pregunta de investigación*

Interesting, significant, novel, exciting

7

Define objetivos claros y realistas (3-4)

8

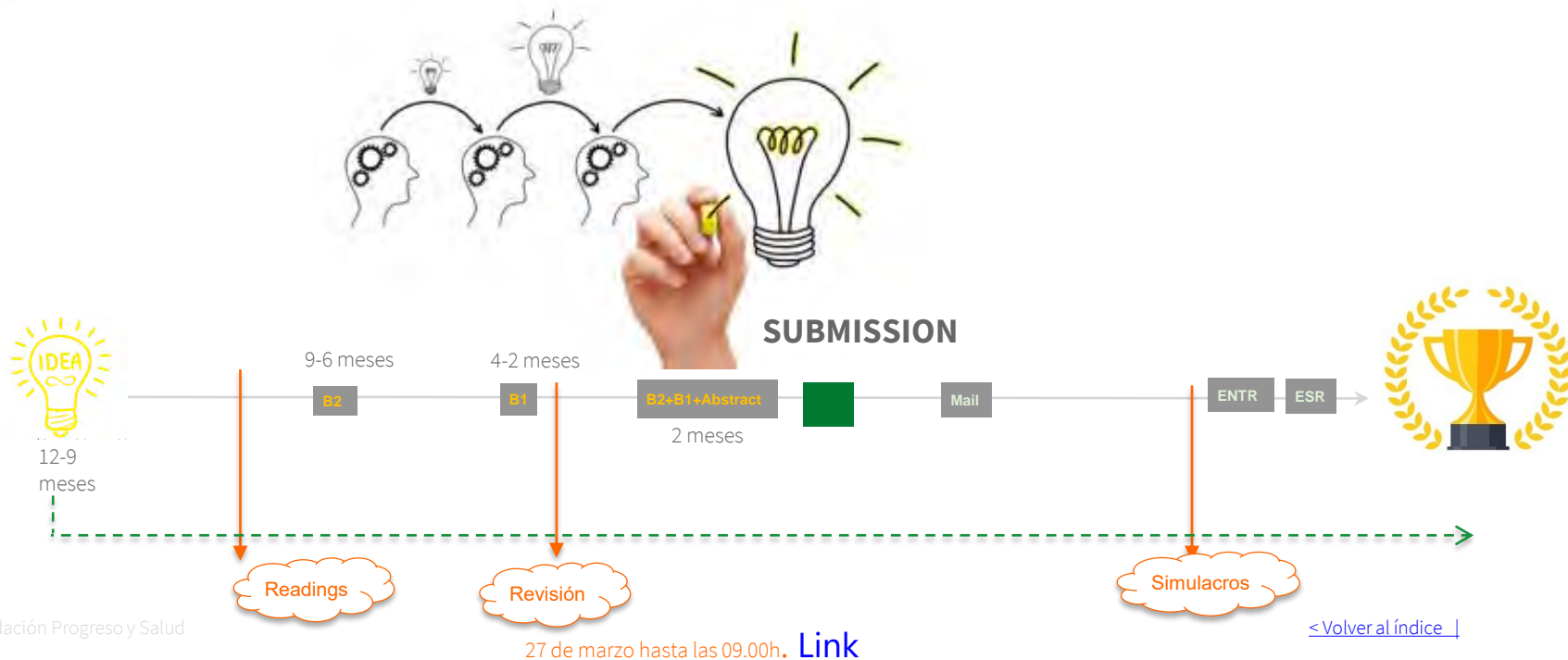
Metodología innovadora que den respuesta a los objetivos



2. Consejos para trabajar una propuesta ERC Advanced Grant

1

Empieza a trabajar pronto, con bastante tiempo.



2. Consejos para trabajar una propuesta ERC Advanced Grant

1

Empieza a trabajar pronto, con bastante tiempo.

Conocimiento



Recursos

Tiempo



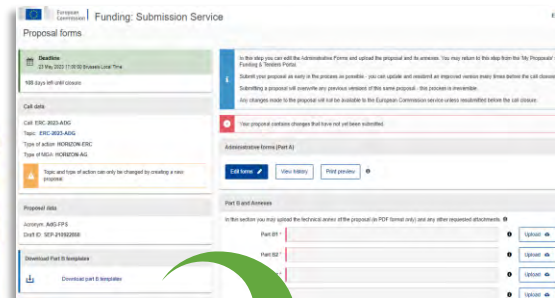
2. Consejos para trabajar una propuesta ERC Advanced Grant

2

Usa las plantillas

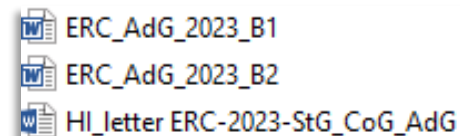
ERC 2023 Templates

Each proposal page:
Shall carry a header presenting the PI's last name, the acronym of the proposal, and the reference to the respective proposal section (Part B1 or Part B2).]



Page limits will be strictly applied!

Page Format	Font Type	Font Size	Line Spacing	Margins
A4	Times New Roman Arial or similar	At least 11	Single	2 cm side 1.5 cm top and bottom



2. Consejos para trabajar una propuesta ERC Advanced Grant

2

Usa las plantillas

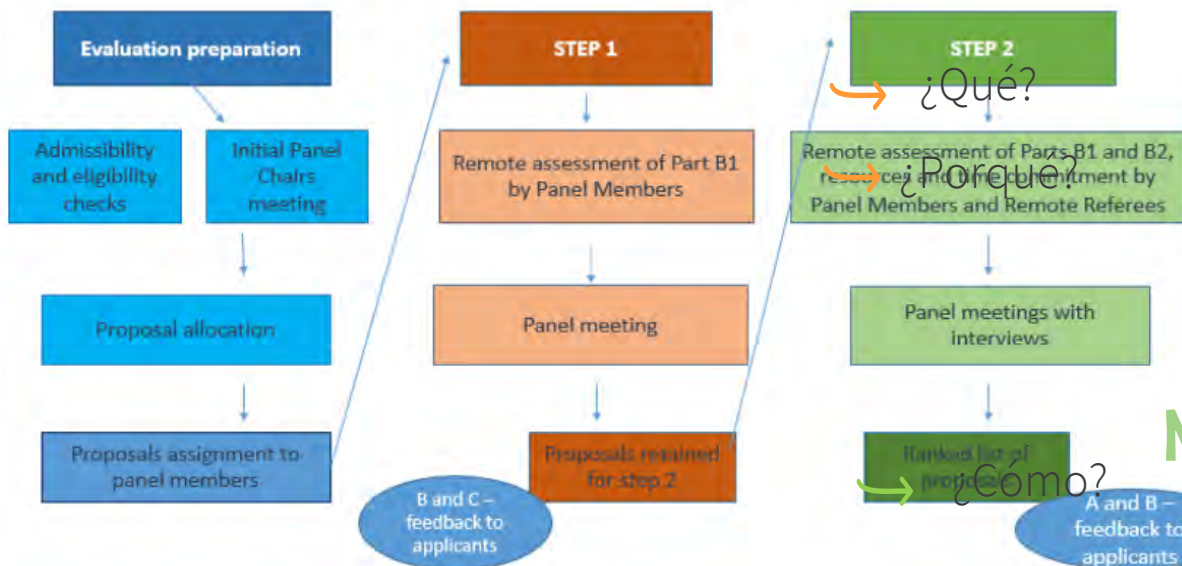


- Adaptación al campo científico
- Personaliza

2. Consejos para trabajar una propuesta ERC Advanced Grant

3

Dedica el mismo tiempo a B1 y B2, pon el mismo mimo.



Visión

Metodología

2. Consejos para trabajar una propuesta ERC Advanced Grant

3

Dedica el mismo tiempo a B1 y B2, pon el mismo mimo.



Evaluación
Generalista



→ ¿Qué?
→ ¿Porqué?

Visión



Evaluación
Exhaustiva,
detalle



→ ¿Cómo?

Metodología

2. Consejos para trabajar una propuesta ERC Advanced Grant

4

Dedica el mismo tiempo a B1 y B2, pon el mismo mimo.

Diferencias entre **orden escritura** y **orden lectura**

Proponente: Orden más habitual de escritura: **B2 > B1 > Abstract**

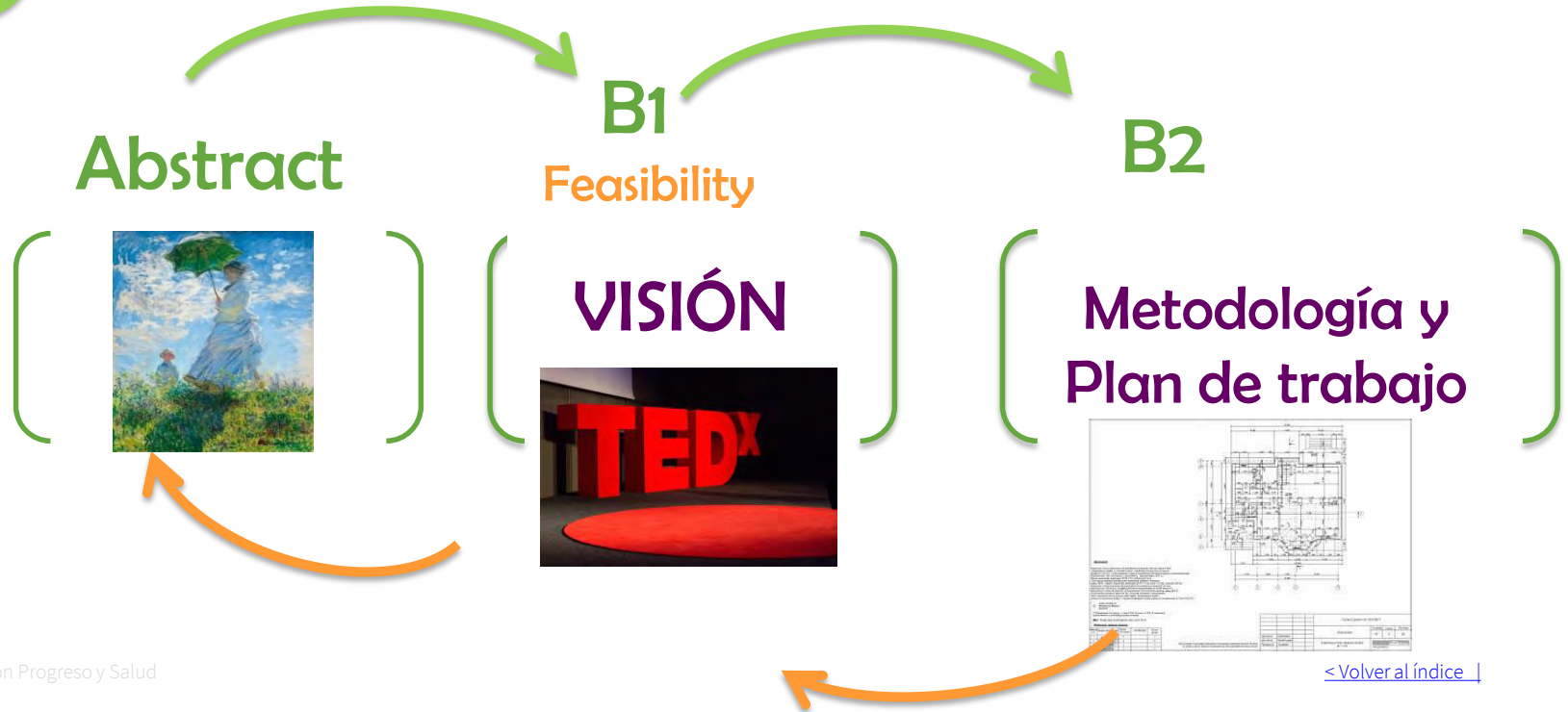
Revisor primera fase: Orden más común de lectura: **Abstract > B1**

Revisor segunda fase: Orden más común de lectura: **Abstract > (B1) > B2**

2. Consejos para trabajar una propuesta ERC Advanced Grant

4

Dedica el mismo tiempo a B1 y B2, pon el mismo mimo.



2. Pautas para trabajar una propuesta ERC Advanced Grant

4

Trabaja la propuesta teniendo en mente –Criterios Evaluación



EXCELENCIA

Principal Investigator

Intellectual capacity and creativity

Research Project

Ground-breaking nature, ambition and feasibility
Scientific Approach

2. Consejos para trabajar una propuesta ERC Advanced Grant

Criterios de Evaluación



Principal Investigator

Intellectual capacity and creativity (B1)

- demonstrated the ability to conduct ground-breaking research?
- evidence of creative independent thinking?
- required scientific expertise and capacity to successfully execute the project?
- demonstrated sound leadership in the training and advancement of young scientists?



Research Project

Ground-breaking nature, ambition and feasibility (B1+B2)

- Does the proposed research address important challenges?
- Are the objectives ambitious and beyond the state of the art?
- Are there novel concepts and approaches or development between or across disciplines?
- Is the proposed research high risk-high gain?

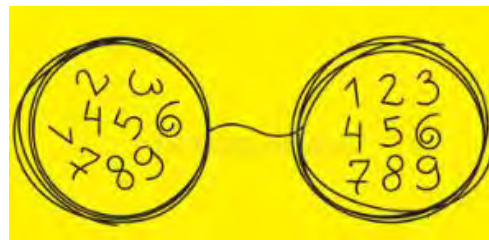
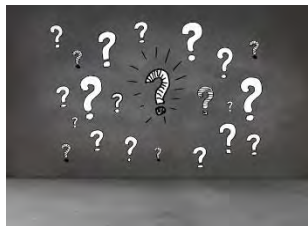
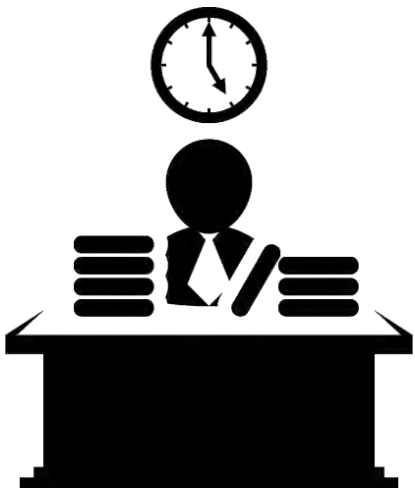
Scientific Approach

- Is the outlined scientific approach feasible...high risk/high gain? (B1)
- Are the proposed research methodology and working arrangements appropriate? (B2)
- Does the proposal involve the development of novel methodology? (B2)
- Are the proposed timescales, resources and PI commitment adequate? (B2)

2. Consejos para trabajar una propuesta ERC Advanced Grant

5

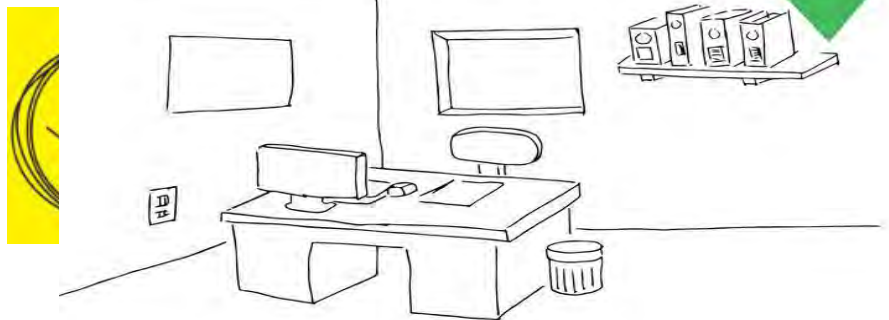
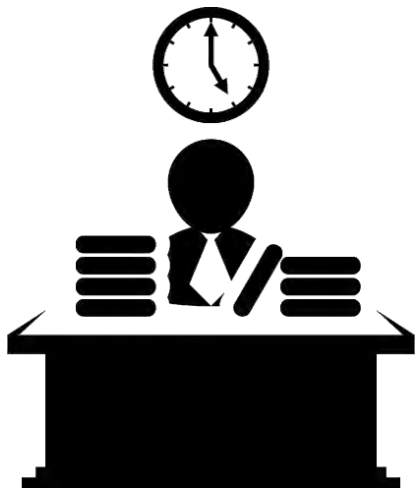
Propuesta fácil de leer y coherente



2. Consejos para trabajar una propuesta ERC Advanced Grant

5

Propuesta fácil de leer y coherente



2. Consejos para trabajar una propuesta ERC Advanced Grant

6

Formula gran pregunta de investigación*

Interesting, significant, novel, exciting

..important challenges

¿Cuál es la Gran Pregunta de Investigación?



Webinar convocatoria WP2021
Estefanía Muños y Laura Mohedano

¿Cómo afecta el entorno urbano a la salud cardiovascular de sus habitantes?



2. Consejos para trabajar una propuesta ERC Advanced Grant

6

Formula pregunta de investigación retodora

Interesting, significant, novel, exciting

¿Hacer ejercicio puede hacer que generes nuevos vasos sanguíneos?



MusEC
Katiren de Bock



Muscle angiogenesis

We study how blood vessels grow in response to exercise



2. Consejos para trabajar una propuesta ERC Advanced Grant

7

Define objetivos claros y realistas

Nuestras recomendaciones en lo relativo a los objetivos:

- **Deben aparecer muy al principio de la pro** del evaluador desde el principio. En la primera *objetives*).
- **Incluir pocos objetivos.** Dependerá del campo del proyecto y no confundir objetivos con tareas.



Entre 3-4 objetivos.



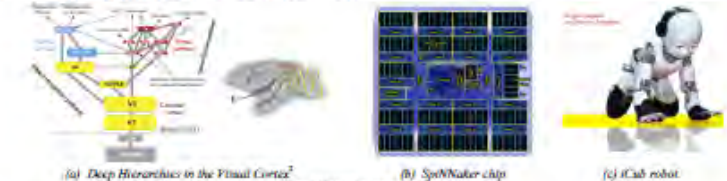
Describir la metodología a



Correlación con el plan de

Introduction

The latest achievements in artificial intelligence and neural networks, especially deep neural architecture in large-scale neuromorphic hardware implementation such as SpiNNaker¹, and in cognitive robotics and neurobotics, with the widespread use of robots such as iCub and the latest Pepper platform, provide the opportunity to significantly advance our understanding human cognition and brains and to reach human-level artificial intelligence. One of the key success factors in deep learning is its hierarchical structure inspired by biological processes in the primate visual cortex, as with convolutional deep networks able to learn rich representations. They are grounded in optimization methods with high precision for training may consume large training datasets and computational resources to learn complex tasks. That gives human level performance in static image recognition but raises adaptation issues. SpiNNaker is a neuromorphic computer architecture in massively parallel computing platform based on spiking neural networks (SNNs) in which neurons communicate by temporal code. Spike Timing Dependent Plasticity (STDP) is believed that it underlies learning and information storage in the brain. SpiNNaker is based on spiking, recurrent neural dynamics for very fast (even instantaneous) learning, online adaptability and extensibility, robustness against noise and computations with low numerical accuracy. However, it has preliminary results so far.



The simple integration is not enough to meet requirements in developmental cognitive robotics and neurobotics. We cannot rely only on the exponential increase in computing power to produce state of the art performance on a number of robotic tasks such as object/human behavior recognition and skill learning. The aim of STRoNA (Spatio-Temporal Representation on Neuromorphic Architecture) is to define the technology that will map a computational architecture onto neuromorphic computing circuits, hence to develop a cognitive model with spatio-temporal representation and learning algorithm for humanoid robots. Figure 1. shows the three factors of STRoNA.

The structural and algorithmic properties of the neocortex provide an inspiration for computational architectures such as HTM (hierarchical temporal memory²) of Jeff Hawkins and HMAX (Hierarchical Model and X³) of Tomaso Poggio. They are computational models of the ventral stream of the visual cortex using a Bayesian belief revision algorithm and neural networks, respectively. In reservoir computing (RC)^{4,5,6}, it has been reported that that the performance in a reservoir with small number of

2. Consejos para trabajar una propuesta ERC Advanced Grant

7

Define objetivos claros y realistas (3-4)

Nuestras recomendaciones en lo relativo a los objetivos:

- **Deben aparecer muy al principio de la propuesta (B1/B2).** Es importante captar la atención del evaluador desde el principio. En la primera página, lo ideal (*Main goal/overall goal, research objectives*).
- **Incluir pocos objetivos.** Dependerá del campo científico, pero se debe tener en cuenta la duración del proyecto y no confundir objetivos con tareas.



Entre 3-4 objetivos.



Describir la metodología a aplicar en el desarrollo de cada objetivo.



Correlación con el plan de trabajo.

2. Consejos para trabajar una propuesta ERC Advanced Grant

7

Define objetivos claros y realistas (3-4)

Franco Vazza

ERC Starting Grant Proposal "MAGCOW"

part B1, page 7

Extended Synopsis - SCIENTIFIC MOTIVATION

General problems. Our understanding of structure formation in the Universe requires that 90% of the baryonic and dark matter is distributed in a web-like pattern, at the densest knots of which galaxies and galaxy clusters form. While the filamentary distribution of galaxies has been observed by deep optical and infrared survey, the gas locked into filaments and making up to ~50% of the total baryonic matter in the Universe remains invisible, ("missing baryons", e.g. Cen & Ostriker 1998). X-ray, ultraviolet OVI, H&I and the H α Lyman- α line are important tracers of the low density gas with temperatures ~10⁴-10⁶ K along arbitrary directions where absorbers are (e.g. Richter et al. 2008). Yet the direct imaging of the gaseous cosmic web is missing, hampering our understanding of the cosmic gas flows between galaxies, groups and clusters.

The gas in the filamentary cosmic web affects several important questions of modern astrophysics. First, the thermodynamical properties of this very rarefied phase are largely uncertain: how is this gas kept collisional by collective plasma effects (e.g. Bykov et al. 2008)? Do filaments account for all missing baryons?

Second, the origin of extragalactic magnetic fields is unknown. Very different scenarios can account for the observations of magnetic fields in galaxy clusters and high-redshift galaxies (e.g. Widrow et al. 2012). These scenarios make very different predictions for the filamentary cosmic web, which can therefore be used as a unique probe of magnetogenesis (e.g. Vazza et al. 2014b).

Third, the cosmic web is encompassed by strong shocks, where cosmic gas gains entropy and becomes enriched with cosmic rays (Quilis et al. 1998; Mimani et al. 2000; Ryu et al. 2003). The acceleration efficiency of particles at these shocks is still unknown, and so is the back-reaction of accelerated particles onto magnetic fields (Cepnioli & Spitkovski 2014; Guo et al. 2015). Relativistic electrons and magnetic fields will offer the chance of a first imaging of the cosmic web through their synchrotron radio emission. This project will enable the next generation of radio surveys to be a unique probe of cosmic magnetism and particle acceleration in the Universe.

The objectives of MAGCOW. Even in the most optimistic scenarios, the detectable radio signal from the cosmic web will be too weak and complex to allow any simple physical interpretation. However, this gap can be solved thanks to the advanced modelling I will develop during the MAGCOW project. Thanks to cosmological simulations of high complexity, I will predict the observable radio signals implied by alternative magnetisation scenarios, to be constrained with future radio surveys. At the same time, the acceleration of radio-emitting electrons will be studied across an unprecedented range of scales, by combining cosmological and particle-in-cell simulations of collisionless shocks. This approach will allow us to relate the synchrotron emission at radio frequencies to the underlying magnetic fields. This will constrain the magnetisation history of cosmic structures better than ever. Thanks to the proposed quantitative approach, even the non-detections of radio signals in deep surveys will constrain models with an unprecedented detail.

Uniqueness of MAGCOW. I have a unique expertise in the study of the complex interplay of shocks, turbulence, cosmic ray acceleration and magnetic fields in cosmology. My research work has been recently awarded the prestigious "Energia Prize from Accademia dei Lincei" as best young Italian astrophysicist in 2014. Thanks to several successful large programs I got allotted on European supercomputers, I produced and will be analysing some of the best simulations of cosmic rays and magnetic fields in cosmology¹, representing the starting step for MAGCOW. Third, my theoretical work has become increasingly connected to X-ray and radio observations, as tools to falsify models. My latest work is focused on producing realistic radio observations of simulated universes by including the most important ingredients of radio imaging. This is unique in this field and will help me to interpret future observations in detail. I am author and co-author of successful observational proposals (with JVLA and LOFAR, respectively), aiming at a first detection of intracluster filaments, and I am also part of working groups for future radio surveys (EMU survey with ASKAP and SKA-LOW survey). I pioneered the quantitative prediction of radio imaging of the cosmic web with the SKA, with 3 contributions to the latest "SKA White Book".

Through the success of this ERC Starting Grant I will be able to turn the above unique advantage points into a strong group, focused on the exploration of the cosmic web in radio, and timely deliver groundbreaking results on the origin of magnetic fields and relativistic particles on the largest scales in the Universe.

PI: Dr. Franco Vazza, MAGCOW

Rettberg

Part B1

MACHINE VISION

Section a: Extended Synopsis of the scientific proposal

Snapchat's selfie lenses are one of many examples of everyday machine vision. Snapchat was launched in 2011, and selfie lenses were introduced less than two years ago, but have become popular with extreme speed in all probability, more than 10% of all Norwegians play with selfie lenses every single day. Selfie lenses are fun. They also normalise biometrics, a form of machine vision that is otherwise used to identify and control individuals (Rettberg 2017). When you launch the Snapchat app on your phone, it opens to the camera, showing you the image of your own face.



Figure 3. Selfie lenses on Snapchat, February 2017. Image on left shows biometric grid.

If you hold down a finger on the image of your face, a biometric grid is superimposed on your face, referencing a visual aesthetic more commonly used in

representations of identification, surveillance and control. Icons at the bottom of the screen show the different lenses you can apply, and by swiping through them, you can instantly see your face altered in a dozen ways or more. The facial recognition algorithms underlying Snapchat's selfie lens technology allow the distortions and masks to perfectly align with the user's own eyes, nose and mouth, so you can move with the lens, using for a moment what it would be like to have rabbit ears and whiskers, or divinely smooth skin, large eyes and a flower crown. Pass a phone to a child or adult and let them play with the selfie lenses: they will almost always laugh with delight.

MACHINE VISION investigates how ordinary people interact with machine vision (the registration, analysis and representation of visual information by machines and algorithms) in their everyday lives. While existing research has tended to emphasise systems-levels of machine vision, for instance in scientific imaging or surveillance, I will instead examine in detail the domestic and the playful nature of individuals' interaction with machine vision. MACHINE VISION is founded upon the assumption that art and aesthetic expression deeply engage with changes in perceptual technologies, and that the study of art, narratives and games will be a productive source for insights about our relationships with machine vision, and so my main empirical data will be digital art, games and narratives that dramatise and simulate machine vision, using digital methods and network analysis to gain an overview of a corpus, followed by close readings of a selection of works. This will be complemented by ethnographic fieldwork studying how ordinary people use machine vision apps and technologies for self-representation and communication in social media, and by a thorough survey of the history and theories of pre-digital machine vision. My overall objective is to develop a theory that explains how the algorithmic machine vision of the 21st century affects the way ordinary people see themselves and understand the world. Further objectives are specified under the individual research tasks on page 4-5.

Ground-breaking Nature of the Research: Visual technologies have undergone radical changes in the last decades and are still changing rapidly, creating a pressing need for new theories that build upon and go well beyond earlier work to understand a world where machine vision is not only ubiquitous, but where the majority of the population have access to machine vision as creators and publishers, not just consumers. Although there is a great deal of technological research and development on machine vision and computer vision in computer science, there is a large research gap on how this cultural shift to seeing with and through technology affects us as a society and as individuals. My research is unique in its focus on the personal use of machine vision, and in my three research questions I focus on shifts in agency, on the perceived objectivity of images, and on the values embedded in machine vision. This is high-risk research, because of its cross-disciplinary methodology (combining aesthetic analysis with digital methods and ethnographic research), novel object of study and innovative combination of theory and empirical analysis, but it is also extremely high-gain: 10 years from now, immaterial scholars will use MACHINE VISION's findings to analyse digital visual technologies with the precision we now only can apply to older media, and computer scientists will use its insights to develop technology that supports a democratic, ethical and just society.

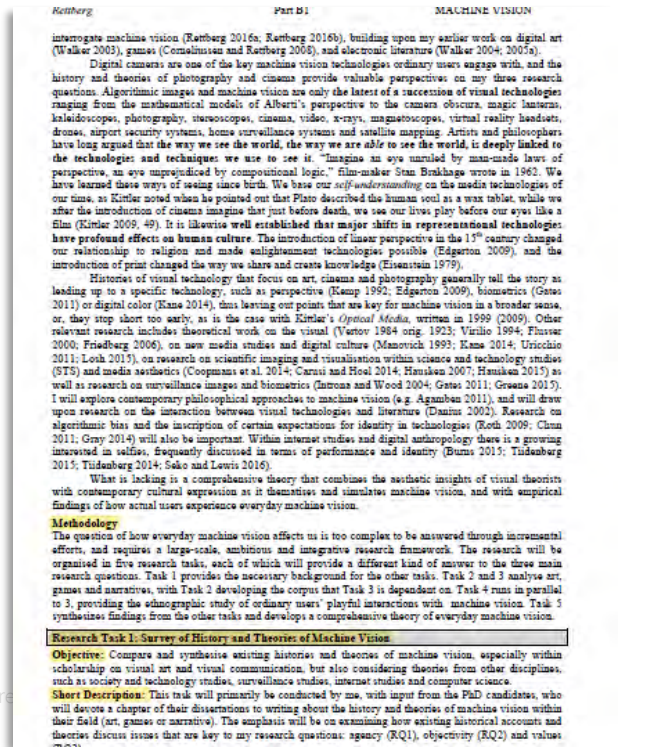
PI: Jill Walker Rettberg,
MACHINE VISION

[< Volver al índice >](#)

2. Consejos para trabajar una propuesta ERC Advanced Grant

8

Metodología innovadora que den respuesta a los objetivos



Camprubi

DEEPMED

B1

Section a: Extended Synopsis of the scientific proposal

The Mediterranean Sea is likely the world's most studied and theorized body of water. Its importance for past and present civilizations is amply recognized, as are the challenges this Sea poses today in environmental, economic, security, and humanitarian terms. In such a complex space, ideas and perceptions of the region shape attitudes and practices towards it. European policy oscillates between integration (in devising economically and environmentally sustainable futures) and division (with the building of a new maritime border). The field of Mediterranean studies has aptly discussed notions of unity and disunity as the historical co-production of culture and nature, but as historians of science and the environment show, what counts as "nature" changes historically. In the last 160 years, the Mediterranean Sea has changed in the eyes of scientists, strategists, and economic actors as humans have ventured below the surface, discovering a world to know, exploit, navigate, and conquer. The historical emergence of depth has come to define the Mediterranean Sea as a volume rather than a surface.

DEEPMED aims at unravelling the discovery of the deep Mediterranean environment. My groundbreaking hypothesis is that, from the late 19th century to the present, joint developments in science and strategy transformed perceptions of the Mediterranean retooling it into a deep three-dimensional maritime space that in turn shaped scientific and strategic approaches to the Sea. I identify three interrelated domains in which this process took shape: science and technology, strategy, and the environment. DEEPMED explores each of these through three specific objectives (SO). SO1 (Topographies): Tracking the development of volumetric notions of the Mediterranean from the late 19th century to the present; SO2 (Temporalities): Understanding the interplay between human and natural temporalities in past and present three-dimensional conceptions of the Mediterranean; and SO3 (Globalities): Analysing historical ideas about the place of the 3D Mediterranean with regards to the world oceans, global climate, and world history. Our deep history demands a novel methodology that is decisively interdisciplinary (bringing together the history of science and technology with strategic studies, environmental history, and the natural sciences), transnational (building a team with broad geographic and linguistic expertise), and digital (developing Historical GIS to understand the transformation of this marine space in scientific and strategic terms). DEEPMED bridges a major division between the views of the Mediterranean held by the natural sciences and studies of the human past, where the environment is no longer Braudel's durable structure but a fragile regime dependent on political events and decisions. As such, the project will highly impact the fields of Mediterranean Studies, maritime history, and the history of oceanography, among others. It will also inform more integrated public views of this Sea. The future of the Mediterranean depends on managing its deep environment. Knowing how it came to be opens up new possibilities about ways to face that future.

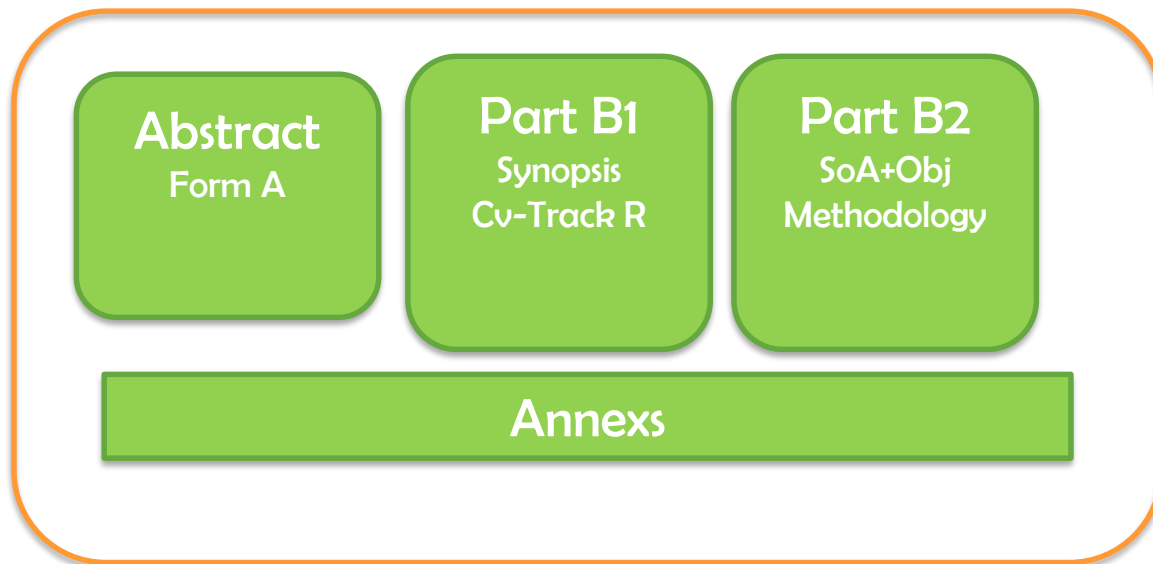
Recomendaciones para escribir la propuesta

Descargo de responsabilidad:

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3. Recomendaciones para escribir -ERC Advanced Grant

La Propuesta



3. Recomendaciones para escribir -ERC Advanced Grant

La Propuesta



3. Recomendaciones para escribir -ERC Advanced Grant

Abstract (A forms)

erc Proposal Submission Forms
European Research Council Executive Agency

Proposal ID SEP-210680754 Acronym AdG-2020

1 - General information

Topic	ERC-2020-ADG	Type of Action	ERC-ADG
Call Identifier	ERC-2020-ADG	Deadline Id	ERC-2020-ADG

Acronym

Proposal title The title should be no longer than 200 characters (with spaces) and should be understandable to the non-specialist in your field.
Note that for technical reasons, the following characters are not accepted in the Proposal Title and will be removed: < > * &

Duration in months

Primary ERC Review Panel*

Secondary ERC Review Panel (if applicable)

ERC Keyword 1* As first keyword please choose one which is linked to the Primary Review Panel.
Please select, if applicable, the ERC keyword(s) that best characterise the subject of your proposal in order of priority.

ERC Keyword 2

ERC Keyword 3

ERC Keyword 4

Free keywords In addition, please enter free text keywords that you consider best characterise the scope of your proposal. The choice of keywords should take into account any multi-disciplinary aspects of the proposal.

erc Proposal Submission Forms
European Research Council Executive Agency

Proposal ID SEP-210680754 Acronym AdG-2020

Abstract*

Short Summary

Your entry door

Remaining characters 1986

In order to best review your application, do you agree that the above non-confidential proposal title and abstract can be used, without disclosing your identity, when contacting potential reviewers?* Yes No

The abstract will be used as a short description of your research proposal in the evaluation process and in communications **to contact in particular the potential remote referees.**

<https://www.prophy.science/referee-finder/>

Experts identification tool: **Prophy** The ERCEA informed the ScC members about Prophy, the support tool for the identification of potential panel members and remote referees for the evaluation of proposals

[< Volver al índice >](#)

3. Recomendaciones para escribir -ERC Advanced Grant

Abstract (A forms)

El abstract sin datos personales es la información que se manda a los referees externos después del panel meeting de la 1ª fase de la evaluación para que intervengan evaluando durante la segunda fase de la evaluación

erc Proposal Submission Forms
European Research Council Executive Agency

Proposal ID SEP-210680754 Acronym AdG-2020

Abstract*

Short Summary

Remaining characters 1986

In order to best review your application, do you agree that the above non-confidential proposal title and abstract can be used, without disclosing your identity, when contacting potential reviewers?*

Yes No

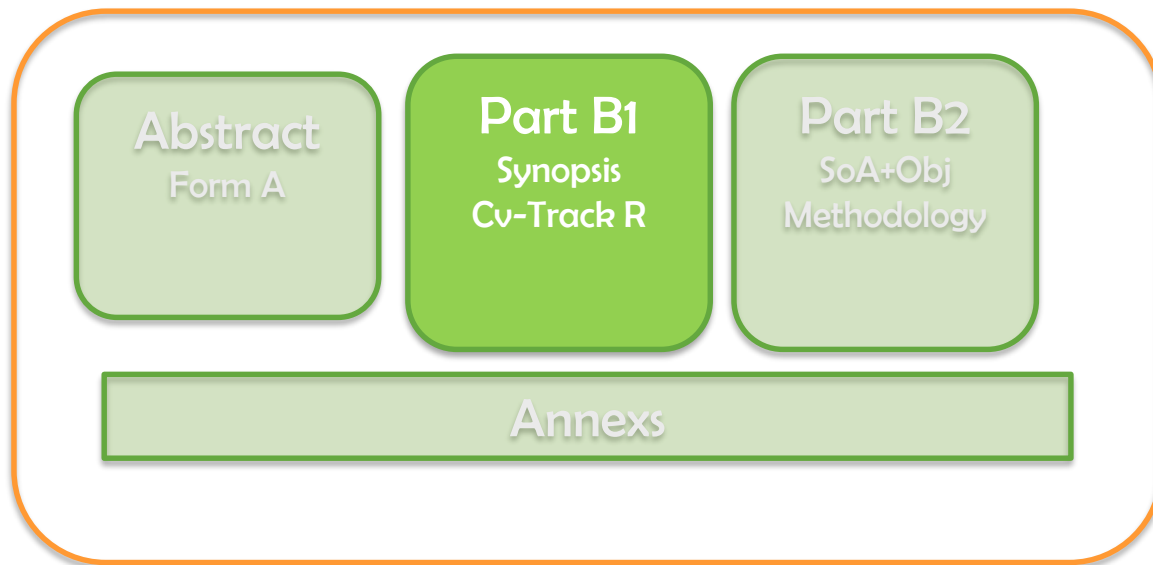
Se fijan en las **Free keywords** proporcionadas para identificar a los potenciales Referees externos

Free keywords *In addition, please enter free text keywords that you consider best characterise the scope of your proposal. The choice of keywords should take into account any multi-disciplinary aspects of the proposal.*



3. Recomendaciones para escribir -ERC Advanced Grant

La Propuesta



3. Recomendaciones para escribir -ERC Advanced Grant

Cover Page-Abstract (B1)

ERC Advanced Grant 2023
Research proposal [Part B1]¹
(Part B1 is evaluated both in Step 1 and Step 2,
Part B2 is evaluated in Step 2 only)

Proposal Full Title

Que contenga el objetivo principal del proyecto (≤200 caracteres)

PROPOSAL ACRONYM

Que sea pronunciable (≤20 caracteres)

Cover Page:

- Name of the Principal Investigator (PI)
- Name of the PI's host institution for the project
- Proposal duration in months

Text highlighted in grey should be deleted

Proposal summary (identical to the abstract from the online proposal submission forms, section 1).

The abstract (summary) should, at a glance, provide the reader with a clear understanding of the objectives of the research proposal and how they will be achieved. The abstract will be used as the short description of your research proposal in the evaluation process and in communications to contact in particular the potential remote referees and/or inform the Commission and/or the programme management committees and/or relevant national funding agencies (provided you give permission to do so where requested in the online proposal submission forms, section 1). It must therefore be short and precise and should not contain confidential information.

The abstract (summary) should, at a glance, provide the reader with a clear understanding of the objectives of the research proposal and how they will be achieved. The abstract will be used as the short description of your research proposal in the evaluation process and in communications to contact in particular the potential remote referees and/or inform the Commission and/or the programme management committees and/or relevant national funding agencies (provided you give permission to do so where requested in the online proposal submission forms, section 1). It must therefore be short and precise and should not contain confidential information

3. Recomendaciones para escribir -ERC Advanced Grant

Abstract

Possible structure

- ↘ Relevance
- ↘ Main objective
- ↘ Novelty
- ↘ Some hints of methodology
- ↘ Impact

Most common errors

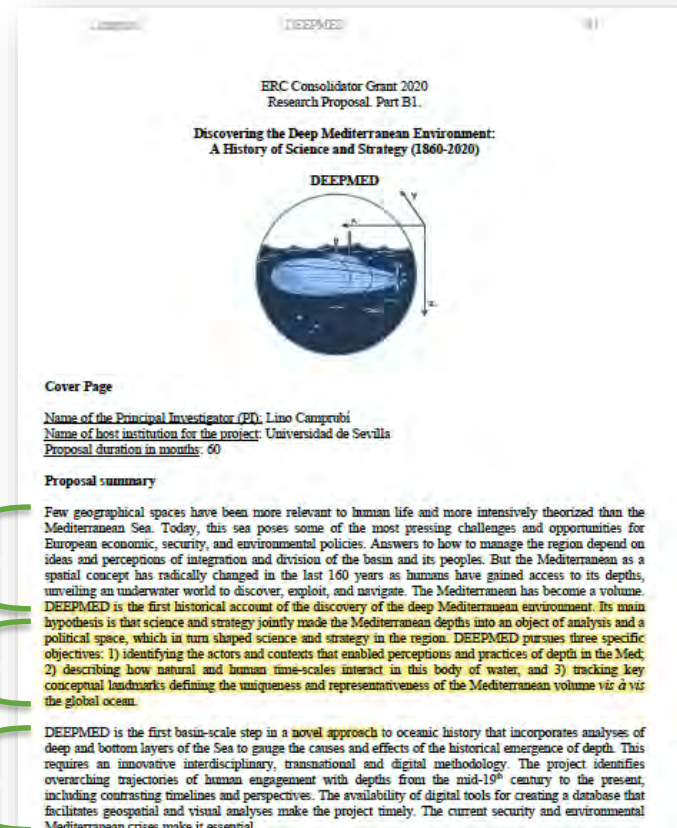
- ↘ No novelty (highlighted)
- ↘ No impact
- ↘ Too wordy
- ↘ Too many info on the state of the art and not the idea itself

3. Recomendaciones para escribir -ERC Advanced Grant

Abstract

Ejemplo

https://www.academia.edu/49122878/B1_ERC_CoG_DEEPMED_Discovering_the_Deep_Mediterranean_Environment_A_History_of_Science_and_Strategy_1860_2020_



Relevance

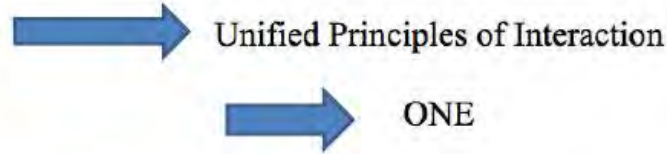
Main Goal and objectives

Novelty -approach

3. Recomendaciones para escribir -ERC Advanced Grant

Abstract

Ejemplo



Cover Page:

- Name of the Principal Investigator (PI): Michel BEAUDOUIN-LAFON
- Name of the PI's host institution for the project: Université Paris-Sud, France
- Proposal duration in months: 60 months

ERC Grant Writing WorkShop
NCP Esther Rodríguez

Main Goal and objectives

Most of today's computer interfaces are based on principles and conceptual models created in the late seventies. They are designed for a single user interacting with a closed application on a single device with a predefined set of tools to manipulate a single type of content. **But one is not enough!** We need flexible and extensible environments where multiple users can truly share content and manipulate it simultaneously, where applications can be distributed across multiple devices, where content and tools can migrate from one device to the next, and where users can freely choose, combine and even create tools to make their own digital workbench.

The goal of ONE is to fundamentally re-think the basic principles and conceptual model of interactive systems to empower users by letting them appropriate their digital environment. The project will address this challenge through three interrelated strands: **empirical studies** to better understand interaction in both the physical and digital worlds, **theoretical work** to create a conceptual model of interaction and interactive systems, and **prototype development** to test these principles and concepts in the lab and in the field. Drawing inspiration from physics, biology and psychology, the conceptual model will combine **substrates** to manage digital information at various levels of abstraction and representation, **instruments** to manipulate substrates, and **environments** to organize substrates and instruments into digital workspaces.

By identifying first principles of interaction, ONE will unify a wide variety of interaction styles and create more open and flexible interactive environments.

Impact /Gain

Ejemplo

Summary:

Extreme events often cause local-initial damage to the critical elements of building structures, followed by a cascade of further failures in the rest of the building; a phenomenon known as “progressive collapse”. Current design philosophies are based on giving buildings extensive continuity, so that when a critical element fails its load can be re-distributed among the rest of the structure. *However, in certain situations (e.g. initial failure of several columns) this extensive continuity introduces undesirable effects and actually increases the risk of progressive collapse.*

Segmenting a building into individual units connected only by means of fuses would avoid a failure in one zone propagating to others. While such fuses would provide continuity for normal loads or small local-initial failure, they would “isolate” the different parts of the building when otherwise the forces generated by the initial failure would pull down the rest of the structure. *Although fuse segmentation is probably the only alternative that can fill the gaps in the present design philosophies, so far, no studies have been carried out on the possibility of applying it to buildings.*

Endure’s overall aim is to develop a novel fuse-based segmentation design approach to limit or arrest the propagation of failures in building structures subjected to extreme events.

The project will be multidisciplinary and highly ambitious, and will achieve its overall aim by: 1) Developing a performance-based approach for the design of fuse-segmented buildings; 2) Designing, manufacturing and testing fuses for segmenting buildings; and 3) Implementing fuses in segmented realistic building prototypes and testing and validating the new fuse-based approach in these structures.

Endure will open up a new research area and design approach, and also deliver novel construction procedures. The project will lead to safer buildings, especially in the case of extreme events with severe consequences for building integrity.

[@BldgResilient](#)

Writing an [@ERC_Research](#) proposal?

Be sure that your ABSTRACT is attractive.
How we organised our abstract:

The context of the proposal
(‘what’ and ‘why’)

The aim of the proposal

How we will achieve the aim

The expected outcomes and scientific impact



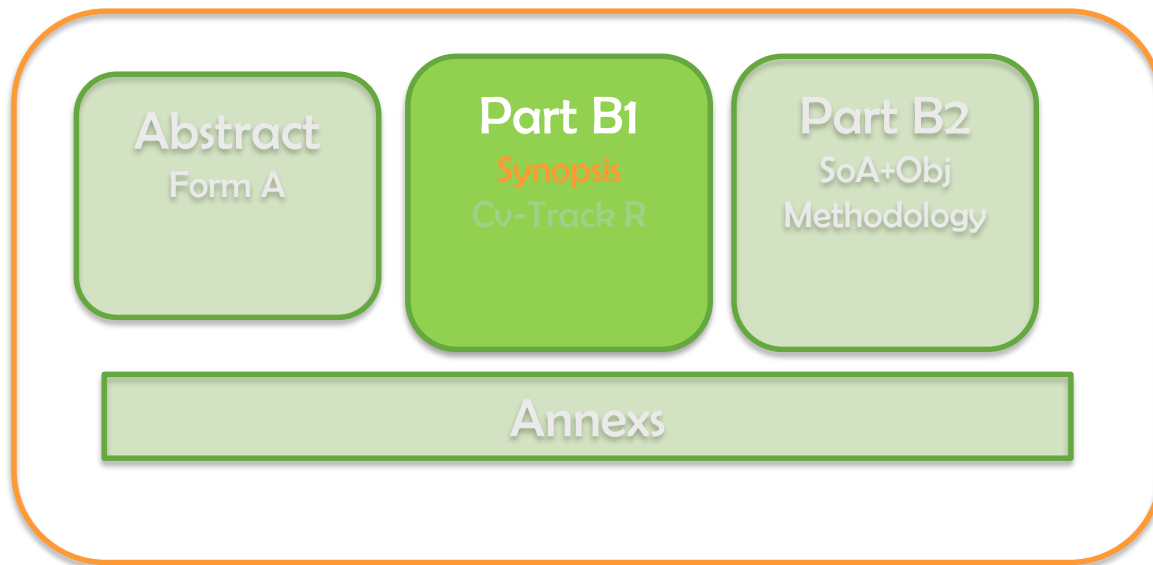
<https://twitter.com/BldgResilient/status/1432953869995319297/photo/1>

José M. Adam, [ENDURE](#)
Universitat Politècnica de València (UPV)

[< Volver al índice >](#)

3. Recomendaciones para escribir -ERC Advanced Grant

La Propuesta



3. Recomendaciones para escribir -ERC Advanced Grant

B1- SYNOPSIS

Applicant's last name


Part B1


ACRONYM


Section a: Extended Synopsis of the scientific proposal (max. 5 pages, references do not count towards the page limits)

The Extended Synopsis should give a concise presentation of the scientific proposal, with particular attention to the ground-breaking nature of the research project, which will allow evaluation panels to assess, in Step 1 of the evaluation, the feasibility of the outlined scientific approach. Describe the proposed work in the context of the state of the art of the field. References to literature should also be included. Please use a reference style that is commonly used in your discipline such as American Chemical Society (ACS) style, American Medical Association (AMA) style, Modern Language Association (MLA) style, etc. This allows the evaluators to easily retrieve each reference.

Please respect the following formatting constraints: Times New Roman, A4, 11, margins (2.0cm side and 1.5cm top and bottom), single line spacing.

 ERC_AdG_2023_B1

 ERC_AdG_2023_B2

 HI_Letter ERC-2023-StG_CoG_AdG



Part B1 (References should be included – they do not count towards the page limit)

The Part B1 cover page should list the name of the PI and HI, the title, acronym and abstract of the proposal as well as the project duration (in months). The abstract should be a maximum of 2000 characters and must be a copy/paste of the abstract from the submission form, section 1. For interdisciplinary/cross-panel proposals please indicate the additional ERC review panel(s) and explain why the proposal needs to be considered by more than one panel.

Section a: Extended Synopsis of the scientific proposal (max. 5 pages) should contain all essential information including the feasibility of the scientific proposal since at Step 1 the panel will only evaluate Part B1. References should be included (they do not count towards the page limits).

3. Recomendaciones para escribir -ERC Advanced Grant

B1- SYNOPSIS



Research Project

Ground-breaking nature, ambition and feasibility

Goal
Objectives
SoA
Novelty
Impact

- Does the proposed research address important challenges?
- Are the objectives ambitious and beyond the state of the art?
- Are there novel concepts and approaches or development between or across disciplines?
- Is the proposed research high risk-high gain?

Scientific Approach

Methodology

- is the outlined scientific approach feasible....high risk/high gain?

3. Recomendaciones para escribir -ERC Advanced Grant

B1- SYNOPSIS

Possible structure-2

Headings

Research Project

Ground-breaking nature and potential impact of the research project

- important challenges
- ambitious objectives and beyond the state of the art (*novel concepts, approaches or development between or across disciplines*)

Scientific Approach

- feasible scientific approachhigh risk/high gain?

Ground-breaking nature and potential impact of the research project

- high risk-high gain research

1-1,5 pages/5

3 pages/5

0,5-1 pages/5

3. Recomendaciones para escribir -ERC Advanced Grant

B1- SYNOPSIS

Most common errors

- ↘ Lack of clarity
- ↘ Ambiguity
- ↘ No risk analysis

3. Recomendaciones para escribir -ERC Advanced Grant

B1- SYNOPSIS

Ejemplo

@BldgResilient

Writing an [@ERC_Research](#) proposal?

First page of your proposal

The key to success

❑ How we made it attractive:

1. A figure showing what we wanted to solve
2. Clearly define the overall aim of the project
3. Objectives associated with the overall aim

Section 4: Extended Synopsis of the scientific proposal

The Mediterranean Sea is likely the world's most studied and theorized body of water. Its importance for past and present civilizations is amply recognized, as are the challenges this Sea poses today in environmental, economic, security, and humanitarian terms. In such a complex space, ideas and perceptions of the region shape attitudes and practices towards it. European policy oscillates between integration (in devising economically and environmentally sustainable futures) and division (with the building of a new maritime border). The field of Mediterranean studies has aptly discussed notions of unity and diversity as the historical co-production of culture and nature, but as historians of science and the environment show, what counts as "nature" changes historically. In the last 160 years, the Mediterranean Sea has changed in the eyes of scientists, strategists, and economic actors as humans have ventured below the surface, discovering a world to know, exploit, navigate, and conquer. The historical emergence of depth has come to define the Mediterranean Sea as a volume rather than a surface.

DEEPMED aim: at unravelling the discovery of the deep Mediterranean environment. My ground-breaking hypothesis is that, from the late 19th century to the present, joint developments in science and strategy transformed perceptions of the Mediterranean retooling it into a deep three-dimensional maritime space that in turn shaped scientific and strategic approaches to the Sea. I identify three interrelated domains in which this process took shape: science and technology, strategy, and the environment. DEEPMED explores each of these through three specific objectives (SO): SO1 (Topographies): Tracking the development of volumetric notions of the Mediterranean from the late 19th century to the present; SO2 (Temporalities): Understanding the interplay between human and natural temporalities in past and present three-dimensional conceptions of the Mediterranean; and SO3 (Globalities): Analyzing historical ideas about the place of the 3D Mediterranean with regards to the world ocean, global climate, and world history. Our deep history demands a novel methodology that is decisively interdisciplinary (bringing together the history of science and technology with strategic studies, environmental history, and the natural sciences), transnational (building a team with broad geographic and linguistic expertise), and digital (developing historical GIS to understand the transformation of this marine space in scientific and strategic terms). DEEPMED bridges a major division between the views of the Mediterranean held by the natural sciences and studies of the human past, where the environment is no longer Braudel's durable structure but a fragile regime dependent on political events and decisions. As such, the project will highly impact the Fields of Mediterranean Studies, maritime history, and the history of oceanography, among others. It will also inform more integrated public views of this Sea. The future of the Mediterranean depends on managing its deep environment. Knowing how it came to be opens up new possibilities about ways to face that future.

History of areas of the art	DEEPMED's activities	DEEPMED's impact
Mediterranean Studies: <ul style="list-style-type: none"> Gap between human sciences and natural sciences Difficulty in locating Mediterranean's modern significance 	Aim: Historical discovery of the deep Med Specific objectives: <ul style="list-style-type: none"> Topographies of deep Mediterranean Natural and human volumetric temporalities New globalities of the 3D Mediterranean Methodology: <ul style="list-style-type: none"> Interdisciplinary history science & tech, strategy, environmental hist., oceanography Transnational broad linguistic and geographical expertise: plural and non-linear Digital: Historical GIS invites space-links Durables: <ul style="list-style-type: none"> Science & Technology Strategy Environment Work Packages: <ul style="list-style-type: none"> Space Territory Change System Management 	<ul style="list-style-type: none"> Disrupts Mediterranean studies through attention to depth Contributes to oceanic history with study of entire basin Integrates disciplinary approaches from the humanities and the sciences to understand change Fosters active understandings of Mediterranean's volume by relevant audiences

State of the Art

The Mediterranean Sea is receiving increasing attention from the public and policy makers, as well as a wide variety of disciplines. Yet, not all groups concerned with the Mediterranean agree on what defines this space. The most striking differences are between the natural sciences and historical approaches. For earth and environmental scientists, the Mediterranean is a semi-enclosed volume of water covering 3,750,000 km² with depths extending up to a maximum of 5km below the surface.¹ For oceanographers, geo-chemists, and ecologists, the Mediterranean forms a connected system with sub-regions that demand specific instruments, theories, and expertise.² Meanwhile, historians focus mainly on the land-based Mediterranean region. With few exceptions, when they look at the Sea, they understand it as a surface connecting or separating human groups. This is particularly the case in the burgeoning field of Mediterranean Studies. While this field has a

3. Recomendaciones para escribir -ERC Advanced Grant

B1- SYNOPSIS

Ejemplo

Machine Vision in Everyday Life:
Playful Interactions with Visual Technologies in
Digital Art, Games, Narratives and Social Media

MACHINE VISION

Principal Investigator (PI): Jill Walker
Rettberg

-PI's host institution: University of Bergen

Section 2: Extended Synopsis of the scientific proposal

Snapchat's selfie lenses are one of many examples of everyday machine vision. Snapchat was launched in 2011, and selfie lenses were introduced less than two years ago, but have become popular with extreme speed: in all probability, more than 10% of all Norwegians play with selfie lenses every single day! Selfie lenses are fun. They also normalise biometrics, a term of machine vision that is otherwise used to identify and control individuals (Rettberg 2017). When you launch the Snapchat app on your phone, it opens to the camera, showing you the image of your own face. If you hold down a finger on the image of your face, a biometric grid is superimposed on your face, re-enacting a visual rhetoric more commonly used in representations of identification.

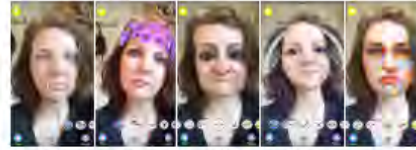


Figure 1: Selfie lenses on Snapchat, February 2017. Image on left shows biometric grid.

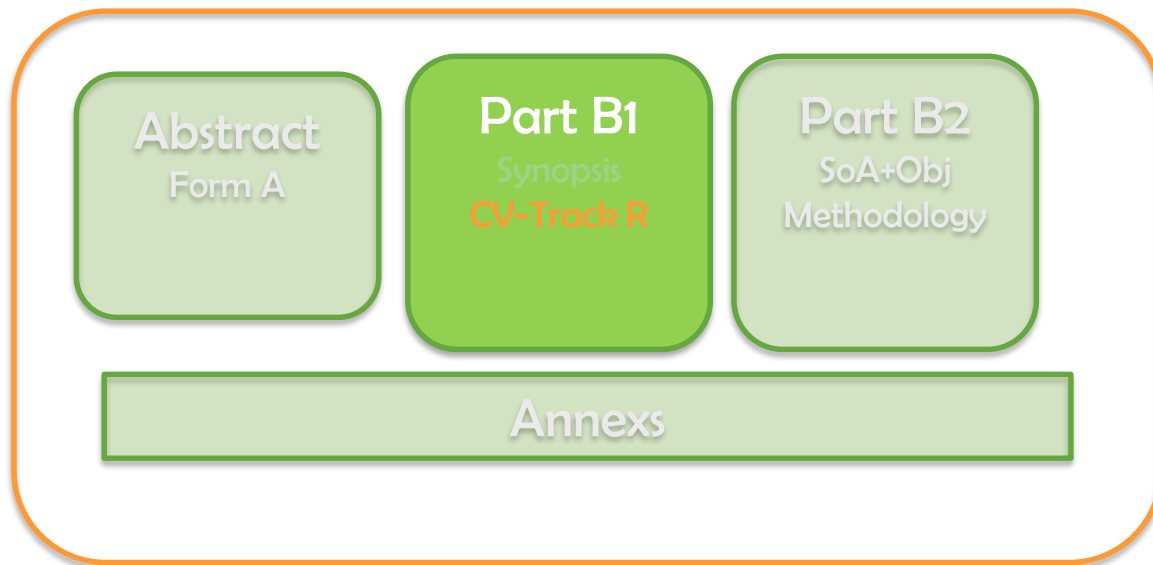
surveillance and control. Icons at the bottom of the screen show the different lenses you can apply, and by swiping through them, you can instantly see your face altered in a dozen ways or more. The facial recognition algorithms underlying Snapchat's selfie lens technology allow the distortions and masks to perfectly align with the user's own eyes, nose and mouth, so you can move with the lens, seeing for a moment what it would be like to have rabbit ears and whiskers, or divinely smooth skin, large eyes and a flower crown. Pass a photo to a child or adult and let them play with the selfie lenses: they will almost always laugh with delight.

MACHINE VISION investigates how ordinary people interact with machine vision (the registration, analysis and representation of visual information by machines and algorithms) in their everyday lives. While existing research has tended to emphasise system-level use of machine vision, for instance in scientific imaging or surveillance, I will instead examine its domestication and the playful nature of individuals' interaction with machine vision. MACHINE VISION is founded upon the assumption that art and aesthetic expression deeply engage with changes in perceptual technologies, and that the study of art, narratives and games will be a productive source for insights about our relationships with machine vision, and so my main empirical data will be digital art, game, and narratives that thematise and simulate machine vision, using digital methods and network analysis to gain an overview of a corpus, followed by close readings of a selection of works. This will be complemented by ethnographic fieldwork studying how ordinary people use machine vision apps and technologies for self-representation and communication in social media, and by a thorough survey of the history and theories of pre-digital machine vision. My overall objective is to develop a theory that explains how the algorithmic machine vision of the 21st century affects the way ordinary people see themselves and understand the world. Further objectives are specified under the individual research tasks on page 4-5.

Ground-breaking Nature of the Research: Visual technologies have undergone radical changes in the last decades and are still changing rapidly, creating a pressing need for new theories that build upon and go well beyond earlier work to understand a world where machine vision is not only ubiquitous, but where the majority of the population have access to machine vision as creators and publishers, not just consumers. Although there is a great deal of technological research and development on machine vision and computer vision in computer science, there is a large research gap on how this cultural shift to seeing with and through technology affects us as a society and as individuals. My research is unique in its focus on the personal use of machine vision, and in my three research questions I focus on shifts in agency, on the perceived objectivity of images, and on the values embedded in machine vision. This is high-risk research, because of its cross-disciplinary methodology (combining aesthetic analysis with digital methods and ethnographic research), novel object of study and innovative combination of theory and empirical analysis, but it is also extremely high-gain. 10 years from now, humanities scholars will use MACHINE VISION's findings to analyse digital visual technologies with the precision we now only can apply to older media, and computer scientists will use its insights to develop technology that supports a democratic, ethical and just society.

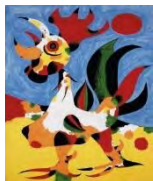
3. Recomendaciones para escribir -ERC Advanced Grant


La Propuesta





3. Recomendaciones para escribir -ERC Advanced Grant

B1- CV



 ERC_AdG_2023_B1

 ERC_AdG_2023_B2

 HI_letter ERC-2023-StG_CoG_AdG

Applicant's last name Part B1 ACRONYM

Section B: Curriculum vitae (max. 2 pages)

Please follow the template below as much as possible (it may however be amended if necessary).

PERSONAL INFORMATION

Family name, First name:
 Researcher unique identifier(s) (such as ORCID, Research ID, etc. ...):
 Date of birth:
 Nationality:
 URL for web site:

• EDUCATION

199? PhD
 Name of Faculty/ Department, Name of University/ Institution, Country
 199? Master
 Name of Faculty/ Department, Name of University/ Institution, Country

• CURRENT POSITION(S)

201? – Current Position
 Name of Faculty/ Department, Name of University/ Institutions/ Country
 200? – Current Position
 Name of Faculty/ Department, Name of University/ Institutions/ Country

• PREVIOUS POSITIONS

200? – 200? Position held
 Name of Faculty/ Department, Name of University/ Institution/ Country
 200? – 200? Position held
 Name of Faculty/ Department, Name of University/ Institution/ Country

• FELLOWSHIPS AND AWARDS

200? – 200? Scholarship, Name of Faculty/ Department/Centre, Name of University/ Institution/
 Country
 200? Award, Name of Institution/Country
 199? – 199? Scholarship, Name of Faculty/ Department/Centre, Name of University/ Institution/
 Country

• SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

200? – 200? Number of Postdocs/ PhD/ Master Students
 Name of Faculty/ Department/ Centre, Name of University/ Institution/ Country

• TEACHING ACTIVITIES (if applicable)

Applicant's last name Part B1 ACRONYM

• ORGANISATION OF SCIENTIFIC MEETINGS (if applicable)

201? Please specify your role and the name of event / Country
 200? Please specify type of event / number of participants / Country

• INSTITUTIONAL RESPONSIBILITIES (if applicable)

201? – Faculty member, Name of University/ Institution/ Country
 201? – 201? Graduate Student Advisor, Name of University/ Institution/ Country
 200? – 200? Member of the Faculty Committee, Name of University/ Institution/ Country
 200? – 200? Organizer of the Internal Seminar, Name of University/ Institutions/ Country
 200? – 200? Member of a Committee; role, Name of University/ Institution/ Country

• REVIEWING ACTIVITIES (if applicable)

201? – Scientific Advisory Board, Name of University/ Institution/ Country
 201? – Review Board, Name of University/ Institution/ Country
 201? – Review panel member, Name of University/ Institutions/ Country
 201? – Editorial Board, Name of University/ Institutions/ Country
 200? – Scientific Advisory Board, Name of University/ Institution/ Country
 200? – Reviewer, Name of University/ Institution/ Country
 200? – Scientific Evaluation, Name of University/ Institutions/ Country
 200? – Evaluator, Name of University/ Institutions/ Country

• MEMBERSHIPS OF SCIENTIFIC SOCIETIES (if applicable)

201? – Member, Research Network "Name of Research Network"
 200? – Associated Member, Name of Faculty/ Department/Centre, Name of University/
 Institution/ Country
 200? – Founding Member, Name of Faculty/ Department/Centre, Name of University/ Institution/
 Country

• MAJOR COLLABORATIONS (if applicable)

Name of collaborators, Topic, Name of Faculty/ Department/Centre, Name of University/
 Institution/ Country

• CAREER BREAKS (if applicable)²

Exact dates Please indicate the reason and the duration in months.

• COVID-19 IMPACT TO SCIENTIFIC PRODUCTIVITY (if applicable)

Please specify which of the following situations apply to you:

Increased caring responsibilities for dependent person, including home schooling of children

3. Recomendaciones para escribir -ERC Advanced Grant

B1- CV



Section b: Curriculum vitae (max. 2 pages) should follow the suggested template. Hyperlinks should be avoided, as experts are under no obligation to review external documents. Include (and explain) any career breaks or **unconventional career paths**, so that professional achievements are fairly assessed by the evaluation panels. If applicable, any impact Covid-19 had on the scientific productivity may be highlighted³⁵. List also any on-going grants and submitted grant applications in the funding ID table (this table will not count towards the page limits). Please note that also grants where your participation was/is *pro bono*, i.e., no funds were/are received, should be listed.

Crterios de Evaluación



Princial Investigator

Intellectual capacity and creativity (B1)

- demonstrated the ability to **conduct ground-breaking research**?
- evidence of creative independent thinking?
- **required scientific expertise** and capacity to successfully execute the project?
- demonstrated sound **leadership in the training** and advancement of young scientists?

3. Recomendaciones para escribir -ERC Advanced Grant

B1- CV

Applicant's last name Part B1 ACRONYM

Section b: Curriculum vitae (max. 2 pages)

Please follow the template below as much as possible (it may however be amended if necessary).

PERSONAL INFORMATION

Family name, First name:

Researcher unique identifier(s) (such as ORCID, Research ID, etc. ...):

Date of birth:

Nationality:

URL for web site:

• EDUCATION

199? PhD
Name of Faculty/ Department, Name of University/ Institution, Country
199? Master
Name of Faculty/ Department, Name of University/ Institution, Country

• CURRENT POSITION(S)

201? - Current Position
Name of Faculty/ Department, Name of University/ Institution/ Country
200? - Current Position
Name of Faculty/ Department, Name of University/ Institution/ Country

• PREVIOUS POSITIONS

200? - 200? Position held
Name of Faculty/ Department, Name of University/ Institution/ Country
200? - 200? Position held
Name of Faculty/ Department, Name of University/ Institution/ Country

• FELLOWSHIPS AND AWARDS

200? - 200? Scholarship, Name of Faculty/ Department/Centre, Name of University/ Institution/ Country
200? Award, Name of Institution/Country
199? - 199? Scholarship, Name of Faculty/ Department/Centre, Name of University/ Institution/ Country

• SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

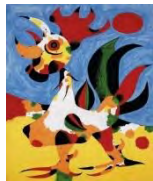
200? - 200? Number of Postdocs/ PhD/ Master Students
Name of Faculty/ Department/ Centre, Name of University/ Institution/ Country

Since the ERC review process takes several months and many ERC reviewers visit the PIs website this can be an excellent place to add extra strength to your proposal or provide “updates” about recently published data or even progress in preliminary results.

When mentioning local (national/university) prizes, it is relevant to have a short description (how prestigious they are or how many people receive this prize) to give a bit more depth since the reviewer might not be familiar with them.

Mentoring the next generation of research leaders is important for the ERC.

[< Volver al índice >](#)



3. Recomendaciones para escribir -ERC Advanced Grant

B1- CV

Applicant's last name Part B1 ACRONYM

Appendix: All on-going grants and submitted grants applications of the PI (Funding ID)
Mandatory information (not counted towards page limits)

On-going grants (Please indicate "No funding" when applicable):

Project Title	Funding source	Amount (Euros)	Period	Role of the PI	Relation to current ERC proposal ³

Grant applications (Please indicate "None" when applicable):

Project Title	Funding source	Amount (Euros)	Period	Role of the PI	Relation to current ERC proposal ³

This list is used by the reviewers to:

- Determine your previous success in acquiring research funds; if you have no current funding you might mention your startup funds or previous funding acquired during postdoc
- Estimate your time commitment to other projects; think about this list when stating your percentage commitment to the ERC project – is it realistic?
- Understand the novelty of the ERC project in relation to other running projects; check that you are not using exactly the same title. It is OK that there is limited overlap with the ERC project and it is best to first put the degree of overlap into context (e.g. overlap with some of the first aim, similar concept but approach and goals, limited overlap) and then provide a short description focusing on highlighting how the ERC submission is different or alternatively how the running project supports an aspect of the ERC submission.

3. Recomendaciones para escribir -ERC Advanced Grant

B1- CV




Ejemplo

Section b: Curriculum Vitae

PERSONAL INFORMATION

Gaita-Ariño, Alejandro Date of birth: May 26, 1976
 Instituto de Ciencia Molecular, Universidad de Valencia (UV)
 c/ Catedrático José Beltrán, 2, 46100, Paterna, Spain
 Tel:+34 96 334 4421 Fax: +34 96 334 3273

web page: <http://www.uv.es/gaita> e-mail: alejandro.gaita@uv.es
 Researcher ID: D-2110-2014



EDUCATION

2004	PhD in Chemistry (grade: excellent Cum Laude)	University of Valencia, Spain
	supervisors: Prof. E. Coronado and Dr. J.M. Clemente-Juan	
1999	Msc in Chemistry (grade: excellent)	University of Valencia, Spain

POSITION

2013 – 2018	Ramón y Cajal Fellow, Group Leader, ICMol, UV, Spain	FUNDING: GRANTS AND FELLOWSHIPS Ramón y Cajal Fellowship (Spanish government)
2011 – 2013	Research Associate, ICMol, UV, Spain	
2010 – 2011	Marie Curie fellow, ICMol, UV, Spain	Marie Curie Int. Out. Fellowship (CORDIS-FP7)
2008 – 2010	Marie Curie fellow, PTP, UBC, Canada	
2007 – 2008†	Postdoctoral fellow, PTP, UBC, Canada	Postdoctoral Fellowship, (Spain)
2007†	Postdoctoral fellow, ICMol, UV, Spain † - until I resigned to accept the next Fellowship	Postdoctoral Fellowship (Valencian regional government)
2004 – 2007	Research Associate, ICMol, UV, Spain	
2000 – 2004	Early Stage Researcher, Dept. Inorg. Chem, UV, Spain	Predoctoral Grant (Valencia)
1998 – 1999	Student Collaborator, Dept. Inorg. Chem, UV, Spain	Collaboration Grant, (Spain)

RESEARCH INTERESTS

My research interests are in molecular magnetism and quantum computing. I am currently interested in

- (1) the theoretical modeling of molecular nanomagnets (in particular rare-earth single-ion magnets),
- (2) the rational design of molecular spin qubits and of schemes for implementing quantum gates and
- (3) the modeling of the coupling of lattice phonons with molecular excitations.

SUPERVISION OF GRADUATE STUDENTS (2004-2014) and RESEARCH TEAM

Masters + PhD thesis (past): S. Cardona-Serra, M. A. Abdallah Abdmenem
 Masters + PhD thesis (ongoing): J. J. Baldovi Jachán, L. Escalera Morvino
 I currently lead a small research team formed by S.CS (postdoc), JTB (PhD) and LEM (Master).

RESEARCH STAYS and MAIN COLLABORATORS

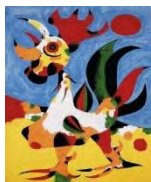
ongoing collaborations with	Prof. D. Loss, Universität Basel, CH
	Dr. S. Hill, National High Magnetic Field Lab., US
	Dr. F. Luis, Universidad de Zaragoza, ES
	Dr. L. Bogani, Universität Stuttgart, DE
	Dr. M. Schachtler, Ben Gurion University, IL




2013	1 short research stays at Institut für Physik (Basel, CH).	3 weeks
2007-2010	1 postdoctoral stay at Pacific Institute of Theoretical Physics (Vancouver, CA)	3 years
2008	2 research stays at Institut für Physik (Basel, CH).	3 months
1999 – 2005	3 short visits to the Institut Louis Langevin (Grenoble, FR)	2 weeks
2005 – 2006	2 research stays at Université Paul Sabatier (Toulouse, FR)	7 months



3. Recomendaciones para escribir -ERC Advanced Grant

B1- Track Record



-  ERC_AdG_2023_B1
-  ERC_AdG_2023_B2
-  HI_letter ERC-2023-StG_CoG_AdG

Applicant's last name

Part B1

ACRONYM

Section c: Ten years track-record (max. 2 pages)⁴

(see 'Information for Applicants to the Advanced Grant 2023 Call' for completing this section)

Present the last 10-year track-record; if longer, indicate relevant career breaks in section b ([ERC WP 2023](#), p.21-22).

Do NOT split the sections and/or references in Part B1 and do NOT upload them as separate documents. The peer reviewers will only receive one single document for evaluation at Step 1. Hence, Part B1 should contain all elements as explained in this template and if some parts of Part B1 are uploaded as separate attachments, the peer reviewers will not have access to them.

3. Recomendaciones para escribir -ERC Advanced Grant B1- Track Record



Section c: 10 years track-record (max. 2 pages) should list important achievements, including up to **10 of the most important publications³⁶**. The publications should be properly referenced, including all authors in the published order (see [section 1.1](#) on Research integrity). Field relevant **bibliometric indicators³⁷** as well as research monographs, any translations thereof, may also be included. If applicable list: **granted patent(s); invited presentations to internationally established conferences and/or international advanced schools; prizes/awards/academy memberships, etc.**

- 10 Publications as main author
- 5 Granted patents
- 10 Invited presentations
- 3 Research expeditions

A short narrative describing the scientific importance of the research outputs and the role played by the Principal Investigator may be added.

3. Recomendaciones para escribir -ERC Advanced Grant B1- Track Record



Section c: 10 years track-record (max. 2 pages) should list important achievements, including up to 10 of the most important publications³⁶. The publications should be properly referenced, including all authors in the published order (see [section 1.1](#) on Research integrity). Field relevant bibliometric indicators³⁷ as well as research monographs, any translations thereof, may also be included. If applicable list: granted patent(s); invited presentations to internationally established conferences and/or international advanced schools; prizes/awards/academy memberships, etc.

Criterios de Evaluación



Princial Investigator

Intellectual capacity and creativity (B1)

- demonstrated the ability to **conduct ground-breaking research**?
- evidence of creative independent thinking?
- **required scientific expertise** and capacity to successfully execute the project?
- demonstrated sound **leadership in the training** and advancement of young scientists?

3. Recomendaciones para escribir -ERC Advanced Grant B1- Track Record



Section c: 10 years track-record (max. 2 pages) should list important achievements, including up to 10 of the most important publications. The publications should be presented in chronological order, including all applicable lists granted patent(s), invited presentations to internationally established conferences and/or international advanced schools; prizes/awards/academy memberships, etc.

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Criterios de Evaluación



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- demonstrated the ability to **conduct ground-breaking research**?
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- **required scientific expertise** and capacity to successfully execute the project?
- demonstrated sound **leadership in the training** and advancement of young scientists?

3. Recomendaciones para escribir -ERC Advanced Grant

B1- Track Record

- Not be redundant with the CV.
- Narrative: describing your scientific career, major contributions to science, envisioned research path, your suitability to lead the proposed research, etc. Must be interesting/catching for reader!!
- Before 5/10 publications: give an overview of your bibliometrics.
- Publications, awards, conference presentations: highlight their importance.

3. Recomendaciones para escribir -ERC Advanced Grant

B1- Track Record



Ejemplo

Gaita-Arriño Part B1 DECRETISM

Section C: Early achievements track-record (max. 2 pages)
 My two current main research interests, which serve as basis for this project, are spin qubits and rare-earth single-ion magnets. In each one of these two fields I have made seminal contributions (see below) which have strongly impacted in the molecular magnetism community. The first one concerns the proposal of using molecular systems for the coupling of two spin qubits in order to develop a quantum gate (published in Nature Nanotechnology, 2007); this theoretical work had a strong impact in the nascent field of molecular spintronics since it proposed the way of controlling the spin state of a molecular system through an electrical current. The second was the discovery that lanthanoid mononuclear complexes based on polyoxometalates behave as single-molecule magnets (published in JACS, 2008). This work showed to the chemists working in molecular magnetism the key role played by the crystal field around the lanthanide in the magnetic properties exhibited by these mononuclear complexes, which represent the ultimate step towards the miniaturisation of the single-molecule magnets, as a single metal ion, rather than a magnetic cluster, is enough to behave as a tiny magnet.
 For both fields, these contributions were the first published papers about these topics at the ICMol, hence, they served to open two new lines of research. Most of my publications after my PhD period, including all my major contributions to date (see below for a selection) stem from the two fields mentioned above. Nowadays a total of around 30 researchers and technicians are working at the ICMol in these two lines. Four PhD students have been working in these lines of research under my supervision since then: M. A. Alderman, S. Cardona-Serra, J. J. Baldoví and L. Escalera (M.A.A. is now Distinguished Researcher in the U. of Jordan, he has obtained funding and supervises a PhD working in the same topic). Moreover, my theoretical team is a reference for molecular spin qubits in Spain, being the only chemistry team participating in the First Workshop on Quantum Information in Spain (2012). A Consolidator Grant will launch my career as group leader, which has recently been officially kickstarted by the extremely competitive Ramón y Cajal program, with 175 grants for 2194 applications (start: Nov. 2013). I include here 10 highlighted publications, divided by career period, plus 2 works currently under review. The star * indicates I am corresponding author (or first author in a publication with no starred author).

PhD period
 "Magnetic polyoxometalates: Anisotropic exchange interactions in the Co(II) moiety of $[(NaOH)_2Co_2(H_2O)(P_3W_{30}O_{102})]^{12-}$ ".
 J. M. Clemente-Juan *et al.*, *Inorg. Chem.* 2005, 44, 3389 [cite: 54]
 This work, representative of my PhD, focused on the use of Inelastic Neutron Scattering to characterize the exchange in transition metal ions.

Intra-European postdoctoral period
 In this period I produced my first scientific breakthrough, on the topic of using magnetic molecules as quantum bits and quantum gates:
 "Spin qubits with electrically gated polyoxometalate molecules".
 J. Lehmann *et al.*, *Nature News*, 2007, 2, 312 [cite: 164]
 J.L. and I equally contributed to the main idea of the paper. This proposal built upon the theoretical work performed by M.A.A., who was my first PhD student. It is having a high impact in the nascent field of the molecular nanospintronics. This work was highlighted in the cover of the journal, and also by a "News and Views" article entitled "Quantum information: High fidelity" and is considered a "highly cited paper" according to ISI Web of Knowledge (over 20 cit./year). I was invited to give a lecture about this work by the European Materials Research Society in 2008.

Extra-European postdoctoral period
 In this period I was invited to participate in a special issue of Journal of Materials Chemistry on Molecular Spintronics, resulting in the next two publications:
 "Quantum computing with molecular spin systems".
 J. Lehmann *et al.*, *J. Mat. Chem.* 2008, 19, 1672 [cite: 50]
 "Spin-based quantum computers made by chemistry: hows and whys".
 P. C. E. Stamp and A. Gaita-Arriño, *J. Mat. Chem.* 2008, 19, 1718 [cite: 61]
 The Status article I wrote together with PCE Stamp, my postdoctoral supervisor, was aimed to guide chemists to the design of molecular spin qubits. This work was a central result of my self-driven Marie Curie project "Decoherence in magnetic molecules as qubits" which funded my research both in Vancouver (during 2 years) and in Valencia (the third year). This project also consolidated my previous breakthrough in the field and resulted in the opening of a new line of research in the ICMol in Valencia. This work will serve

Relación de sus líneas de investigación con el proyecto

Contribuciones en el área

Formación de personal

Contribuciones por diferentes etapas

3. Recomendaciones para escribir -ERC Advanced Grant

B1- Track Record

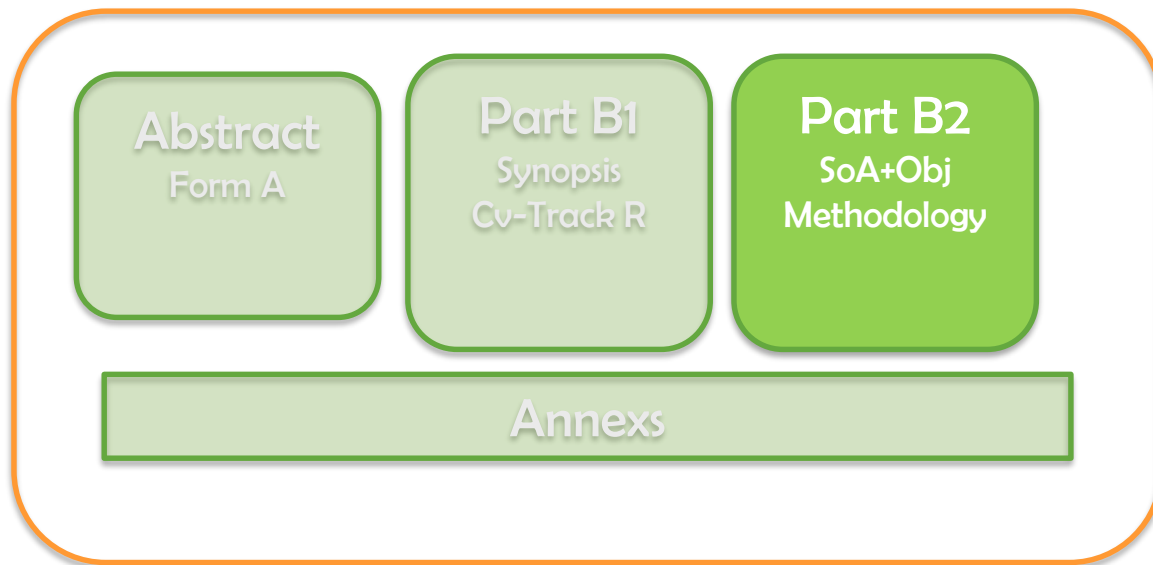


Ejemplo

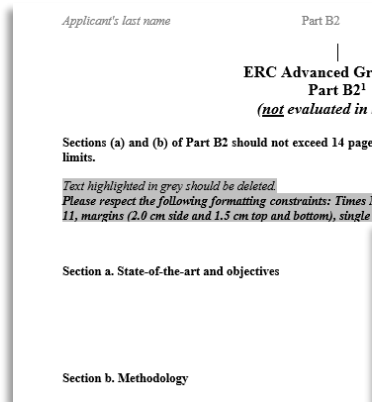
Brasoudou-Lafon	Part B1	ONE
<p>Section c: Ten years track-record (max. 2 pages)</p> <p>Over the past ten years, my research has focused on three main areas. First, I have continued to work on fundamental aspects of interaction, in particular on the performance of basic interaction tasks such as target acquisition and I developed advanced techniques that optimize performance in a variety of settings [1, 4, 9, 10]. Second, I have started to work on large interactive rooms that feature a variety of display and interaction devices and that support co-located as well as remote collaboration [2, 3, 6]. I have introduced <i>multisurface interaction</i>, which generalizes my instrumental interaction model to such environments. I anticipate that interactive rooms will become prevalent in the next ten to twenty years if we can create interfaces that are as easy to use and powerful as those created for desktop computers. Finally, I have maintained a strong interest in the design and engineering aspects of interactive systems [5, 7, 8], as they challenge many assumptions and practices of traditional software engineering.</p> <p>From 2005 to 2009, I served a second term as director of the laboratory for computer science (LRI – http://www.lri.fr) at Université Paris-Sud, joint with CNRS. During my 8-year tenure, the lab grew from 160 to 280 members and we created five joint research groups with Inria, which was establishing a new research center on the Saclay campus. I was also heavily involved in the creation of PCRI and Digito, two research networks linking all the computer science labs of the area, which contributed to the establishment of the new Université Paris-Saclay. Despite this heavy administrative load and a substantial teaching load (3 courses a year), I continued a sustained research activity and was inducted in the ACM SIGCHI Academy in 2006.</p> <p>I then spent two years as a visiting professor at Stanford University, during which I successfully applied for a 5-year fellowship with the prestigious Institut Universitaire de France. I also coordinated a successful project proposal to the French government call for Equipements of Excellence, called Digiscope (http://digiscope.fr). This 22M€ project received 6.7M€ funding from the French government, the rest being provided by the ten research partners. By the end of 2015, we will have created the ten interactive rooms planned in the project and interconnected them with a telepresence network enabling remote collaboration across the rooms. Each room features large wall-sized displays from 8 to 1400pixels, including two immersive CAVEs and four rooms with 3D capability, and rich input capabilities such as full-room motion-tracking systems and multi-touch displays. The rooms are used for research in human-computer interaction and virtual reality as well as visualization of complex simulations and natural phenomena, advanced computer graphics, and more.</p> <p>Since my return from Stanford, I manage Digiscope and I am the head of the newly formed Human-Centered Computing research group (8 faculty, 25 members). I have created and am chairing two international Master's</p>		
<p>Top ten publications in the last ten years</p> <p>Note: In my field, the top conferences are ACM CHI and ACM UIST. Publication in these conferences is considered as prestigious as in the top journals in the field (ACM TOCHI, IHCS). I work collaboratively with students and colleagues. As the most senior researcher, my name is usually last in the list of authors. However I only co-sign papers for which I have substantially contributed to both the work and the writing.</p> <p>However I only co-sign papers for which I have substantially contributed to both the work and the writing.</p> <ol style="list-style-type: none"> Nancel, M., Casati, O., Pietriga, E., & Brasoudou-Lafon, M. (2015) <i>Mid-Air Pointing on Ultra-High-Resolution Wall Displays</i>. <i>Trans. Computer-Human Interaction (TOCHI)</i>. ACM, in print, 50 pages. Liu, C., Chapuis, O., Brasoudou-Lafon, M., Lécroquet, B., & Mackay, W. (2014) <i>Effects of Display Size and Navigation Type on a Classification Task</i>. In <i>CHI '14: Proc. Human Factors in Computing Systems</i>. ACM, pages 4147-4156. <i>Best Paper Award</i>, 6 citations. Brasoudou-Lafon, M., Chapuis, O., Eagan, J., Gjerulufsen, T., Hoot, S., Klokmose, C., Mackay, W., Nancel, M., Pietriga, E., Pillias, C., Prinet, R., & Wagner, J. (2012) <i>Multi-surface Interaction in the WILD Room</i>. <i>IEEE Computer</i>, 45(4):48-56. 22 citations. 		
<p>References</p> <ol style="list-style-type: none"> Gjerulufsen, T., Rasmussen, C., Eagan, J., Miao, C., & Brasoudou-Lafon, M. (2011) <i>Shared Subspaces: Developing Flexible Multi-In-Room Applications</i>. In <i>CHI '11: Proc. Human Factors in Computing Systems</i>. ACM, pages 2312-2321. 6 citations. Appert, C., & Brasoudou-Lafon, M. (2008) <i>Subspaces: Adding Step Matrices in Java and the Swing Toolkit</i>. <i>Software Practice and Experience</i>, 38(11): 1451-152. 45 citations. Brasoudou-Lafon, M., & Mackay, W. (2007) <i>Prototyping Tools and Techniques in Human Computer Interaction Handbook</i>. (Eds: Norman, S.B.) Texas: IJAI. Rasmussen, C., Cookson, A., Rasmussen, E., & Brasoudou-Lafon, M. (2007) <i>Painting without holding a stylus: input through virtual and motor-space augmentation</i>. In <i>CHI '07: Proc. Human Factors in Computing Systems</i>. ACM, pages 557-564. 50 citations. Giard, Y., & Brasoudou-Lafon, M. (2006) <i>Target acquisition in multi-scale clickwork worlds</i>. <i>International Journal of Human-Computer Studies (IJHCS)</i>. Special issue: <i>Proc. 10th years' anniversary</i>. Applications and contributions from human-computer interaction. 6:105-123-995. 68 citations. 		
<p>Other Publications</p> <p>In my field, my latest papers appear on invited international conferences. I was a keynote speaker at the AVI Conference in 2010, and at two operations researches (IEEE OI, CHI 2012).</p> <p>I have given about 40 invited seminars around the world over the past ten years, including a Google Tech Talk and distinguished lectures at MIT, Stanford, UC San Diego, UC Irvine, Columbia, UCL, London, Urew, Glasgow, IMU, Munich, Univ. Aarhus, MIT, Bangalore. I have also been invited to two Dagstuhl Seminars. In 2015, I was co-mentor an ACM Distinguished Speaker (http://www.acm.org) for three years.</p> <p>Other Honors and Awards</p> <p>In 2013, the digiscope conference at IEEE, the ACM Conference on Human Factors in Computing Systems (CHI 2013 – http://chi2013.acm.org), gave at Paris for the first time. As Technical Program co-chair, I coordinated the entire program of the conference, with 1000 presentations selected from 3600 submissions (including 400 full papers out of 2000 submissions). Together with the conference chair and my co-chair, we coordinated the 130 members of the organizing committee, and organized the on-person meeting of the 210 program committee members to select 603 papers. We used our WILD interactive rooms to create the conference program, using for the first time a concrete-visual system: to avoid conflicts and cross-normal information from authors to create the program. The selection started with 31 workshops over the first two days, followed by four conference days with 16 parallel sessions, plus impromptu events such as interactive, a set of 77 interactive exhibits. CHI 2013 attracted a record-breaking 3300 participants from 54 countries over the next ten years. I also chaired the ACM SIGCHI conference (25 participants), and I was Program Chair of IEEE of</p> <p>to have received award to make it. Each</p>		
<p>Major contributions to the early careers of excellent researchers</p> <p>Ten Ph.D. students graduated under my supervision over the past ten years. Ten of them are now assistant professors, another is a tenured researcher with CNRS. Ten of my former Ph.D. students hold or have held academic positions at Universities and research organizations. Two of them, who were assistant professors, were recruited as assistant senior research scientists to Inria in 2009 and 2008, which is quite rare. Jean-Louis Focret is a prominent researcher in Interactive Visualizations and heads the Inria AVIZ group (http://www.inria.fr/en/teams/jean-louis-focret). Jean-Louis Focret is a prominent researcher in Interactive Visualizations and heads the Inria AVIZ group (http://www.inria.fr/en/teams/jean-louis-focret).</p>		

3. Recomendaciones para escribir -ERC Advanced Grant

La Propuesta



3. Recomendaciones para escribir -ERC Advanced Grant B2- State of the Art and Objectives



Part B2 (References should be included – they do not count towards the page limit,

The limit of 14 pages for the ‘Scientific Proposal’ as per the [ERC WP 2023](#) applies to Part B2.

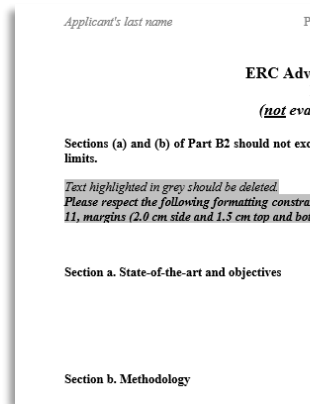
Section a: State-of-the-art and objectives. Specify the proposal objectives in the context of the state of the art in the research field. It should be clear how and why the proposed work is important for the field, and what impact it will have if successful, such as how it may open up new horizons or opportunities for science, technology or scholarship. Highlight any particularly challenging or unconventional aspects of the proposal, including multi- or inter-disciplinary aspects.

Section b: Methodology. Describe the proposed methodology in detail including any key intermediate goals. Explain and justify the methodology in relation to the state of the art, and particularly novel or unconventional aspects addressing the 'high risk-high gain' balance. Highlight any intermediate stages where results may require adjustments to the project planning.

- ERC_AdG_2023_B1
- ERC_AdG_2023_B2
- HI_letter ERC-2023-StG_CoG

3. Recomendaciones para escribir -ERC Advanced Grant

B2- Methodology



- ERC_AdG_2023_B1
- ERC_AdG_2023_B2
- HI_letter ERC-2023-StG



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3. Recomendaciones para escribir -ERC Advanced Grant

B2- State of the Art and Objectives



Research Project

Ground-breaking nature, ambition and feasibility

- Does the proposed research address important challenges?
- Are the objectives ambitious and beyond the state of the art?
- Are there novel concepts and approaches or development between or across disciplines?
- Is the proposed research high risk-high gain?

Scientific Approach

- are the proposed research methodology and working arrangements appropriate?
- does the proposal involve the development of novel methodology?
- are the proposed timescales, resources and PI commitment adequate?

3. Recomendaciones para escribir -ERC Advanced Grant

B2- Methodology



Research Project

Ground-breaking nature, ambition and feasibility (

- Does the proposed research address important challenges?
- Are the objectives ambitious and beyond the state of the art?
- Are there novel concepts and approaches or development between or across disciplines?
- Is the proposed research high risk-high gain?

Scientific Approach

- are the proposed research methodology and working arrangements appropriate?
- does the proposal involve the development of novel methodology?
- are the proposed timescales, resources and PI commitment adequate?

3. Recomendaciones para escribir -ERC Advanced Grant B2 Possible structure-2

Headings

Research Project

Ground-breaking nature and potential impact of the research project

- important challenges
- ambitious objectives and beyond the state of the art (novel concepts, approaches or development between or across disciplines)

3,5 pages/14

Scientific Approach

- research methodology and working arrangements?
- development of novel methodology
- timescales, resources and PI commitment adequate?

9 pages/14

Ground-breaking nature and potential impact of the research project (B1+B2)

- high risk-high gain research

1,5 pages/14

3. Recomendaciones para escribir -ERC Advanced Grant

B2- SoA, Objectives and Metodology

1. Brief description of the current state of the art
2. Presenting the existing challenges
3. Present the overall goal and justification of its ambition
4. **Justification non-incrementally and novelty/ innovation**
5. Description how the overall goal will be achieved.

Highlight the novelty of each aim and how you will integrate the outcomes of specific aims together in order to move towards the overall goal.

6. Justification for the feasibility of the project
7. Risk analysis (risk management at both level project level and methodology level)

8. Timescales and resources

3. Recomendaciones Generales

Principales razones de rechazo de la propuesta



Scope: too narrow or too broad



Unfocused



Incremental



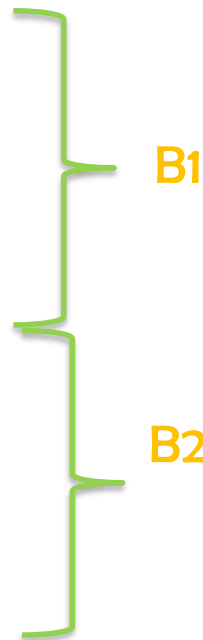
Not enough information



Insufficient risk assessment



Collaborative effort



B1

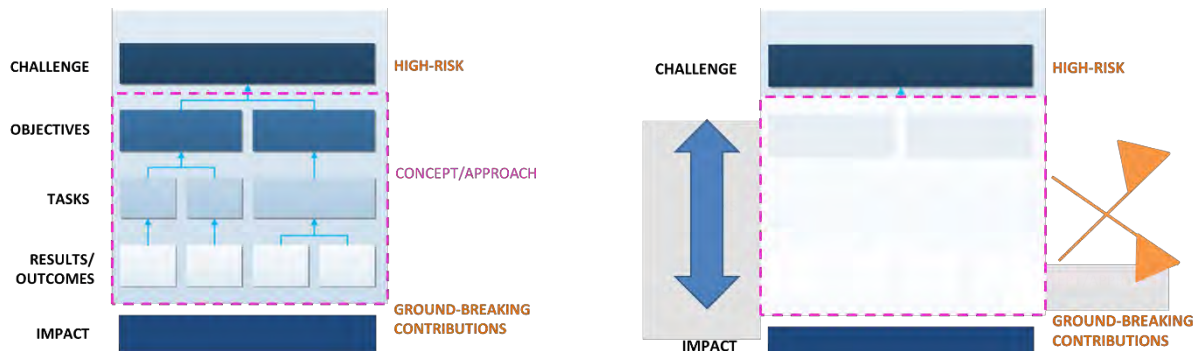
B2

3. Recomendaciones Generales

Estructura

Narración de la propuesta encuadrada en un marco lógico-conceptual que permita entender la ejecución del proyecto como consecuencia de un conjunto de acontecimientos relacionados y que tienen un orden conceptual.

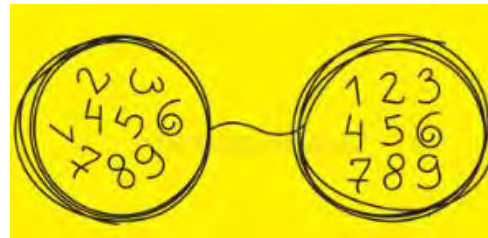
Hilo argumental que conteste a los criterios de evaluación



3. Recomendaciones Generales

Propuestas fáciles de leer y comprender

- La primera página es muy importante.
- Primera impresión puede hacerte ganar la atención del evaluador
- Estructura la propuesta en párrafos(subheadings), frases cortas.
- Usa recursos gráficos



Generales (B1y B2)

La primera impresión es muy importante

@BldgResilient

Writing an @ERC Research proposal?

First page of your proposal

The key to success

❑ How we made it attractive:


1. A figure showing what we wanted to solve
2. Clearly define the overall aim of the project
3. Objectives associated with the overall aim

<https://twitter.com/BldgResilient/status/1441019542495453190>

Section a: Extended Synopsis of the scientific proposal

The Mediterranean Sea is likely the world's most studied and theorized body of water. Its importance for past and present civilizations is amply recognized, as are the challenges this Sea poses today in environmental, economic, security, and humanitarian terms. In such a complex space, ideas and perceptions of the region shape attitudes and practices towards it. European policy oscillates between integration (in devising economically and environmentally sustainable futures) and division (with the building of a new maritime border). The field of Mediterranean studies has aptly discussed notions of unity and disunity as the historical co-production of culture and nature, but as historians of science and the environment show, what counts as "nature" changes historically. In the last 160 years, the Mediterranean Sea has changed in the eyes of scientists, strategists, and economic actors as humans have ventured below the surface, discovering a world to know, exploit, navigate, and conquer. The historical emergence of depth has come to define the Mediterranean Sea as a volume rather than a surface.

DEEPMED aims at unravelling the discovery of the deep Mediterranean environment. My groundbreaking hypothesis is that, from the late 19th century to the present, joint developments in science and strategy transformed perceptions of the Mediterranean retooling it into a deep three-dimensional maritime space that in turn shaped scientific and strategic approaches to the Sea. I identify three interrelated domains in which this process took shape: science and technology, strategy, and the environment. DEEPMED explores each of these through three specific objectives (SO). **SO1 (Topographies):** Tracking the development of volumetric notions of the Mediterranean from the late 19th century to the present; **SO2 (Temporalities):** Understanding the interplay between human and natural temporalities in past and present three-dimensional conceptions of the Mediterranean; and **SO3 (Globalities):** Analysing historical ideas about the place of the 3D Mediterranean with regards to the world oceans, global climate, and world history. Our deep history demands a novel methodology that is decisively interdisciplinary (bringing together the history of science and technology with strategic studies, environmental history, and the natural sciences), transnational (building a team with broad geographic and linguistic expertise), and digital (developing Historical GIS to understand the transformation of this marine space in scientific and strategic terms). DEEPMED bridges a major division between the views of the Mediterranean held by the natural sciences and studies of the human past, where the environment is no longer Braudel's durable structure but a fragile regime dependent on political events and decisions. As such, the project will highly impact the fields of Mediterranean Studies, maritime history, and the history of oceanography, among others. It will also inform more integrated public views of this Sea. The future of the Mediterranean depends on managing its deep environment. Knowing how it came to be opens up new possibilities about ways to face that future.

Borders of state of the art	DEEPMED's novelties	DEEPMED's impact
<p>Mediterranean Studies:</p> <ul style="list-style-type: none"> ○ Gap between human sciences and natural sciences ○ Difficulty in locating Mediterranean's modern significance <p>Maritime History, oceanic history and history of oceanography:</p> <ul style="list-style-type: none"> ○ Not entire basin ○ Overlooks specificities 	<p>Aim: Historical discovery of the deep Med</p> <p>Specific objectives:</p> <ul style="list-style-type: none"> • Topographies of deep Mediterranean • Natural and human volumetric temporalities • New globalities of the 3D Mediterranean <p>Methodology:</p> <ul style="list-style-type: none"> • Interdisciplinary: history science & tech, strategy, environmental hist., oceanography • Transnational: broad linguistic and geographical expertise; plural and non-linear • Digital: Historical GIS unveils spatial links <p>Domains:</p> <p>•Science & Technology •Strategy •Environment</p> <p>Work Packages:</p> <p>•Space•Territory•Change•Synthesis•Management</p>	<ul style="list-style-type: none"> ➢ Disrupts Mediterranean studies through attention to depth ➢ Contributes to oceanic history with study of entire basin ➢ Integrates disciplinary approaches from the humanities and the sciences to understand change ➢ Fosters better understandings of Mediterranean's volume by relevant audiences 

State of the Art

The Mediterranean Sea is receiving increasing attention from the public and policy makers, as well as a wide variety of disciplines. Yet, not all groups concerned with the Mediterranean agree on what defines this space. The most striking differences are between the natural sciences and historical approaches. For earth and environmental scientists, the Mediterranean is a semi-enclosed volume of water covering 3,750,000 km² with depths extending up to a maximum of 5km below the surface.¹ For oceanographers, geo-chemists, and ecologists, the Mediterranean forms a connected system with sub-regions that demand specific instruments, theories, and expertise.² Meanwhile, historians focus mainly on the land-based Mediterranean region. With few exceptions, when they look at the Sea, they understand it as a surface connecting or separating human groups. This is particularly the case in the burgeoning field of **Mediterranean Studies**. While this field has a

3. Recomendaciones Generales

Propuestas “catching” y fáciles de leer

“Overall/ challenge catching”

¿Hacer ejercicio puede hacer que generes nuevos vasos sanguíneos?



Muscle angiogenesis
We study how blood vessels grow in response to exercise

3. Recomendaciones Generales

Propuestas “catching” y fáciles de leer

“Overall/ challenge catching”

MARÍA LLORENS MARTÍN

“Hemos recon
neurogénesis”

• La bióloga del Centro de Biología de las nuevas neuronas durante toda



Fuente: <https://www.lavanguardia.com/vanguardia-de-la-ciencia/20220206/8030235/maria-llorens-martin-nuevas-neuronas.html>
<https://twitter.com/CSIC/status/1492055739292074002?s=20&t=cWUAjLRU1Q4ilve2YyQCnQ>

“¿Cuáles son los mecanismos que controlan la maduración y la integración sináptica de las células recién generadas en los seres humanos y cómo es la fisiopatología de las enfermedades neurodegenerativas y psiquiátricas?”

Su trabajo ha acabado con la discusión sobre estas neuronas inmaduras.

Había investigadores que afirmaban la posibilidad de que estas neuronas maduraran durante la infancia, pero otros, que dicen que no, están en desacuerdo. Esto permite entender mejor desde las

La investigación

"Hemos conseguido ver por primera vez tanto las células madre de las neuronas como las hijas"

Las implicaciones

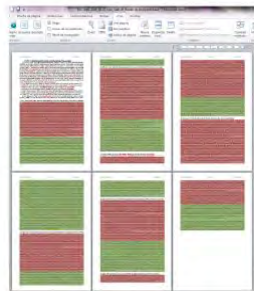
"Podría contribuir al diagnóstico precoz de las enfermedades neurodegenerativas"

3. Recomendaciones Generales

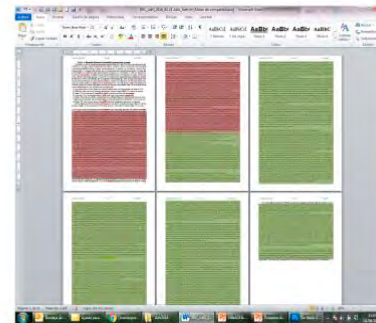
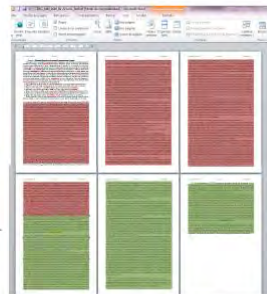
Centra la información y referenciala

Descripción del SoA centrada en la idea y referenciada

- No piden una revisión del SoA del campo
- No es un artículo científico
- Otorgan el dinero por los cambios (el efecto) que se es capaz de producir en el campo científico, no por escribir un buen SoA.



juntando rojo con
rojo y verde con
verde, queda así



ROJO = SoA

VERDE = proyecto

References (no limits)
criterio gráfico
aportaciones al SoA del IP



3. Recomendaciones Generales

Objetivos concisos que nos ayuden a operacionalizar la pregunta

The overall objective of this project is:

R To study the associations between the social and physical features of the urban environment in relation to population cardiovascular health.

The secondary objectives are the following:

R To run a formative research phase using an qualitative approach to identify and understand the main features of the environment in relation to CVD and the main pathways of this relation.

R To develop a methodology based on state of the art techniques to characterize the social and physical urban environments in a systematic and accurate fashion.

R To compare the already studied relation between the urban environment and cardiovascular health in the United States with this relation in Europe.

R To evaluate naturally occurring changes (natural experiments) such as public policy interventions occurring during the time of the study modifying the food and physical activity environment.

Groundbreaking contributions
Generar evidencia científica relevante
para prevenir la 1ª causa de muerte en
EU a nivel poblacional



Fuente: <https://hhhproject.eu/starting-grant>
Manuel Franco UAH

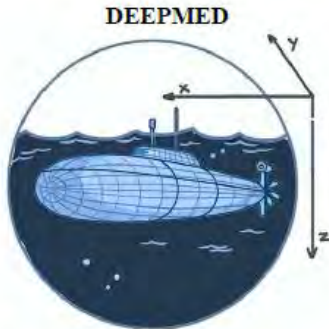
3. Recomendaciones Generales

Propuestas “catching” y fáciles de leer

Objetivos concisos que nos ayuden a operacionalizar la pregunta

ERC Consolidator Grant 2020
Research Proposal. Part B1.

**Discovering the Deep Mediterranean Environment:
A History of Science and Strategy (1860-2020)**



DEEPMED aims at unravelling the discovery of the deep Mediterranean environment

- 1) identifying the actors and contexts that enabled perceptions and practices of depth in the Med;
- 2) describing how natural and human time-scales interact in this body of water, and
- 3) tracking keyconceptual landmarks defining the uniqueness and representativeness of the Mediterranean volume *vis à vis* the global ocean.

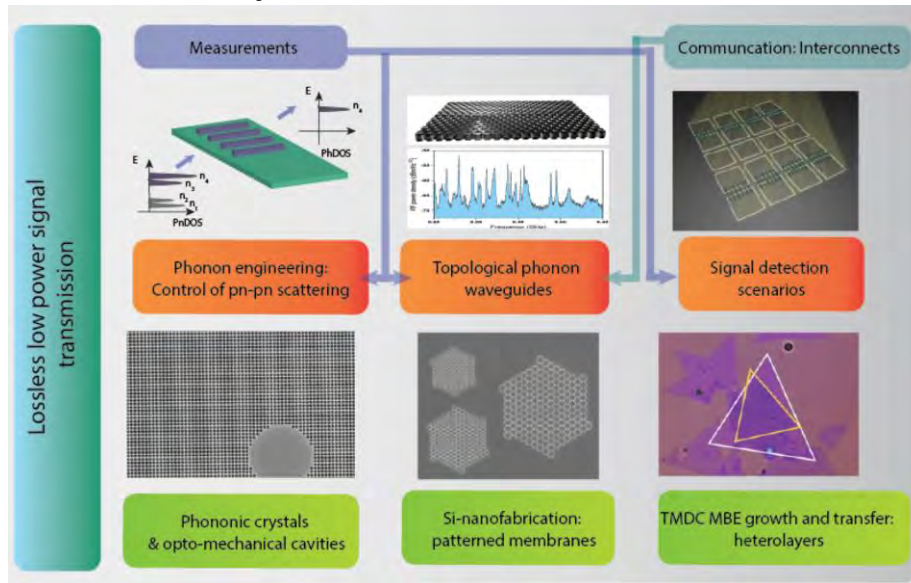
3. Recomendaciones Generales

Propuestas “catching” y fáciles de leer

Gráfica/diseño de la metodología investigación

Lossless Information for Emerging Information Technologies (L E I T)

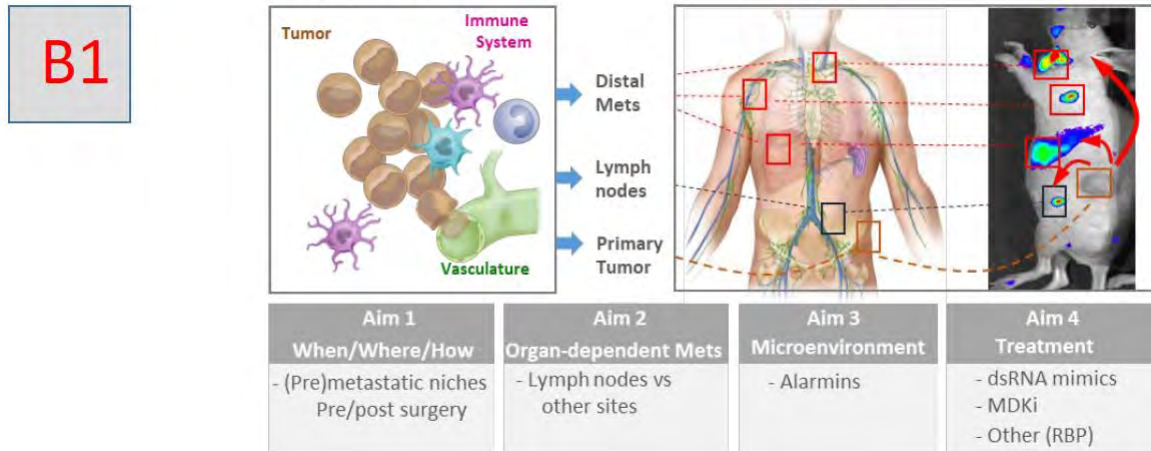
Clivia M. Sotomayor Torres ERC-2019-Advanced Grant



3. Recomendaciones Generales

Propuestas “catching” y fáciles de leer

Gráfica/diseño de la metodología investigación



María S. Soengas (LS4)

METALERT-STOP

Imaging, characterizing and targeting
metastatic niches in melanoma

AdG 2019

3. Recomendaciones Generales

Propuestas “catching” y fáciles de leer

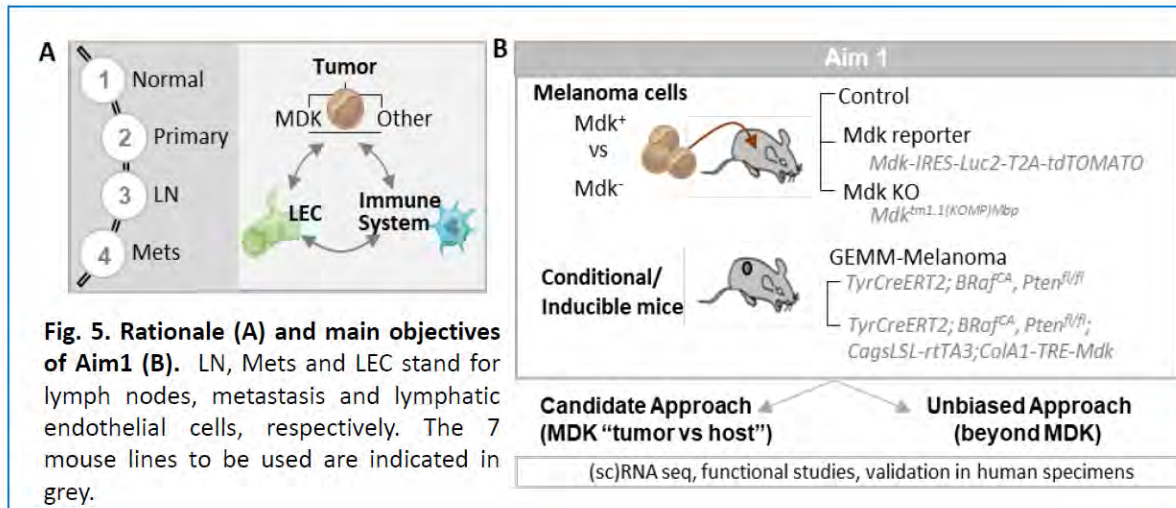
Gráfica/diseño de la metodología investigación

María S. Soengas (LS4)

METALERT-STOP

Imaging, characterizing and targeting metastatic niches in melanoma

B2



3. Recomendaciones Generales

Identifica los riesgos y incluye contingencias/plan B

Ejemplo

ALIEN project

B1

Risk table (B2 presents a more detailed risk table)

<i>Risk</i>	<i>Mitigation actions</i>
Problems generalizing to new referents	Work with (still useful) protocols limited to fixed but large class set. Explore special training techniques to encourage 0-shot generalization.
Problems generalizing to new agents	Explore simplified setups, e.g., limit architecture variety. Focus on emerged-language supervision.
Language-layer tuning of pre-trained DNNs does not suffice	Explore full-architecture re-training (emergent language should still have beneficial properties) and simplify. For example, limit to specific architectures or to visual models only.
DNNs do not learn to play full Grocery Challenge	Identify problematic aspects and simplify (e.g., simplify value and price structure).

Fuente: <https://marcobaroni.org/alien/>

B2

b.3 Risk table

<i>Risk</i>	<i>Mitigation actions</i>
WP1, WP2, WP3: Dependencies?	Although the experiments in the three simulation WPs are related and some techniques should ideally be prototyped in WP1 and then applied to WP2 and WP3, there is no crucial dependency such that delays in a WP would prevent concurrent progress in the other WPs.
WP1: Problems generalizing to new referents	i) Work with (still useful) protocols limited to a large but fixed number of object classes. ii) Special training methods to encourage 0-shot generalization: in particular, add many training examples where target and distractors are same-class or extremely similar, to spur emergence of a granular attribute-level language. iii) Study problem at the class level: are there specific classes where fast generalization works better? Does this depend on similarity to training classes? Can we capitalize on this observation, if confirmed?
WP1, WP2, WP3: Problems generalizing to new agents	i) Explore simplified setups, e.g., limit DNN architecture variety. ii) Focus on supervised imitation learning. iii) Study if community-evolved languages have other advantages, even if they are not as fast to transmit as hypothesized.
WP1, WP2: Supervision is not beneficial.	For the time being, we won't get a single "universal" language, but methods to evolve useful languages will still be delivered. Extensive study of <i>why</i> supervision does not help: Is it because language drift undoes its benefits? Does supervision hamper generalization?
WP3: Language layer tuning does not	Consider both the full-architecture re-training approach

[< Volver al índice >](#)

3. Recomendaciones Generales

Identifica los riesgos y incluye contingencias/plan B

Ejemplo *DEEPMED*

B1

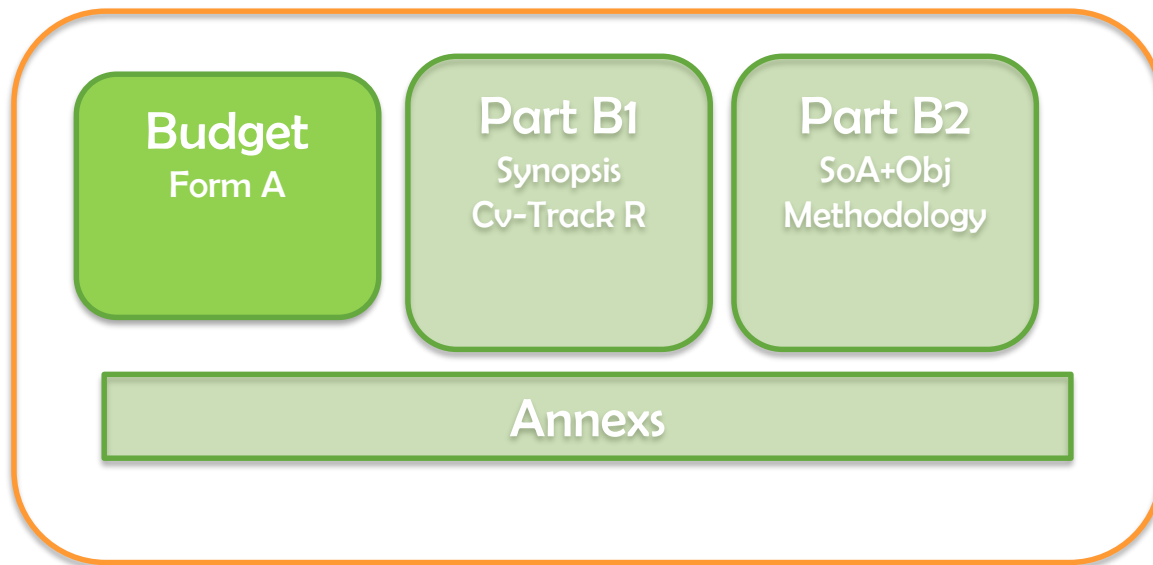
Challenge	Risk	Counteraction/contingency plan	Gain	Impact/Novelty
Project lacks unity due to ambition	High	PI marks clear agenda, HGIS ensure crosspollination and synthesis. Contingency: limit scope to landmarks.	High	First long-term first history of the perceptions and transformations of the deep Med environment.
Does not find the necessary expertise	High	PI mobilizes international networks through an open international call. Contingency: adapt focus to expertise.	High	Integrates different disciplinary and geographic perspectives in a non-linear history.
Collaboration with oceanographer	High	PI establishes clear questions and mobilizes local networks to find the right candidates. Contingency: outsource collaborations.	High	Overcomes current gap science/ history of deep Med and yields new views on temporality.
Secrecy blocks access to sources	High	Preliminary review of sources is promising and transnational research useful. Contingency: Adapt to available sources.	High	Offers full picture of the historical making of the deep Med and its asymmetries.
Digital humanities fails	Med	PI recruits advanced HGIS expert and redefines categories and tools of analysis. Contingency: reduce public outreach.	High	Offers environment for deep Med history and promotes new imaginations of this Sea.

DEEPMED Team and deliverables

https://www.academia.edu/49122878/B1_ERC_CoG_DEEPMED_Discovering_the_Deep_Mediterranean_Environment_A_History_of_Science_and_Strategy_1860_2020

3. Recomendaciones para escribir -ERC Advanced Grant

La Propuesta



Budget

BUDGET TABLE

- **A. Direct personnel costs** (PI, senior staff, post docs, students, other personnel costs).
- **B. Subcontracting costs** (no indirect costs).
- **C. Purchase costs** [travel and subsistence, equipment, consumables, publications and dissemination, and other additional direct costs].
- **D. Internally invoiced goods and services**
- **E. Indirect costs.**

Section C. Resources

1. State the amount of funding
2. Specify your commitment
3. Describe the size/nature team
4. Additional funding
5. Description of requested equipment
6. Costs for Open Access
7. Describe any existing resources

Budget

If **additional funding** above the ceiling of 2.500.000 € is requested for:

- (a) covering eligible 'start-up' costs for a PI moving from another country to the EU or an AC as a consequence of receiving an ERC grant and/or
- (b) the purchase of major equipment and/or
- (c) access to large facilities and/or
- (d) other major experimental and field work costs, excluding personnel costs,

The request has to be **fully justified in the description of the resources and the figures included in the budget table**, under the corresponding cost categories.

May be subject to 25% overhead, unless it falls under subcontracting or internally invoiced goods and services.

Budget



< Participants & contacts

Budget

Ethics >

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Acronym AdG-FPS

3 - Budget

Beneficiary Short Name	PI	Senior Staff	Postdocs	Students	Other Personnel costs	A Total personnel costs €	B Subcontracting Costs € (No indirect costs)	C.1 Travel and subsistence	C.2 Equipment - including major equipment	Consumables incl. fieldwork and animal costs	Publications (incl. Open Access fees) and dissemination	Other additional direct costs	C.3 Total other goods, works and services	Total Purchase costs €	D Internally invoiced goods and services € (No indirect costs)	E Indirect Cost €	Total Eligible Costs	Requested EU contribution €
Fps	0	0	0	0	0	0.00	0	0	0	0	0	0	0.00	0.00	0	0.00	0.00	0.00
Total	0	0	0	0	0	0.00	0	0	0	0	0	0	0.00	0.00	0	0.00	0.00	0.00

Section C. Resources (Maximum 8000 characters allowed)

This section and the budget table will be made available to the experts evaluating the proposal at Step 2. Important: your description of resources will be truncated once it exceeds the maximum allowed characters. Please make sure that your description is complete before submitting.

State and fully justify the amount of funding considered necessary to fulfil the objectives for the duration of the project. The project cost estimation should be as accurate as possible. The evaluation panels assess the estimated costs carefully; unjustified budgets will be consequently reduced. Please specify if you will use third parties giving in-kind contributions to the action.

If applicable, please specify the cost items covered by your 'Other personnel costs' category and the cost items covered by your 'Other additional direct costs' category.

Request for additional funding if applicable (All items MUST be included in the overall budget table above): (Cost in EUR)

Justification:



Budget

Section C. Resources

Headings-Narrative

1. State the amount of funding
2. Specify your commitment
3. Describe the size/nature team
4. Additional funding
5. Description of requested equipment
6. Costs for Open Access
7. Describe any existing resources

Budget



< Participants & contacts

Budget

Ethics >

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Proposal ID SEP-210922858

Acronym AdG-FPS

3 - Budget

Beneficiary Short Name	PI	Senior Staff	Postdocs	Students	Other Personnel costs	A Total personnel costs €	B Subcontracting Costs € (No indirect costs)	C.1 Travel and subsistence	C.2 Equipment - including major equipment	Consumables incl. fieldwork and animal costs	Publications (incl. Open Access fees) and dissemination	Other additional direct costs	C.3 Total other goods, works and services	Total Purchase costs €	D Internally invoiced goods and services € (No indirect costs)	E Indirect Cost €	Total Eligible Costs	Requested EU contribution €
Fps	0	0	0	0	0	0.00	0	0	0	0	0	0	0.00	0.00	0	0.00	0.00	0.00
Total	0	0	0	0	0	0.00	0	0	0	0	0	0	0.00	0.00	0	0.00	0.00	0.00

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If applicable, please specify the cost items covered by your 'Other personnel costs' category and the cost items covered by your 'Other additional direct costs' category.

Request for additional funding if applicable (All items MUST be included in the overall budget table above): (Cost in EUR)

Justification:

Budget

De aplicación:

- ↘ Indicaciones ERC
- ↘ Práctica habitual de la institución

Proposal number	999999999
Acronym	ERC proposal
Title	Title describing the ERC proposal
Evaluation panel	XXx
Principal Investigator	First Name, Last Name
Host Institution	Name of Institution, country
Project duration	xx months (this information will be extracted from the administrative submission form, 1 - General information)
Time commitment of the PI to the project	xx % (this information will be extracted from the administrative submission form, section 5 - Other questions)

Budget summary

Beneficiary organisation(s)	Total cost (€)	Requested AMT (€)
1. Name of Institution, country	x,xxx,xxx.00	xxx,xxx.00

Budget details

Cost Category / Beneficiary		Name of Institution	Total
A. Personnel costs	PI	xx	xx
	Senior Staff	xx	xx
	Postdocs	xx	xx
	Students	xx	xx
	Other Personnel costs	xx	xx
Total Personnel costs		Xxx	Xxx
B. Subcontracting costs (no indirect costs)		xx	xx
C. Purchase costs	C.1 Travel and subsistence		xx
	C.2. Equipment incl. major equipment		xx
	C.3 Other goods, works and services	Consumables incl. fieldwork and animal costs	xx
		Publications (incl. Open Access fees) and dissemination	xx
		Other additional direct costs	xx
C.3 Total other goods, works and services		Xx	
Total Purchase costs (C1 + C2 + C3)		Xxx	
D. Internally invoiced goods and services (no indirect costs)		xx	
E. Indirect costs (= 25% * [A + C1 + C2 + C3])		Xxx	
Total eligible costs (A + B + C + D + E)		X,xxx,xxx	
Requested EU contribution		X,xxx,xxx	

The PI + Team Members

Principal Investigator



Principal Investigator
+ Research Team



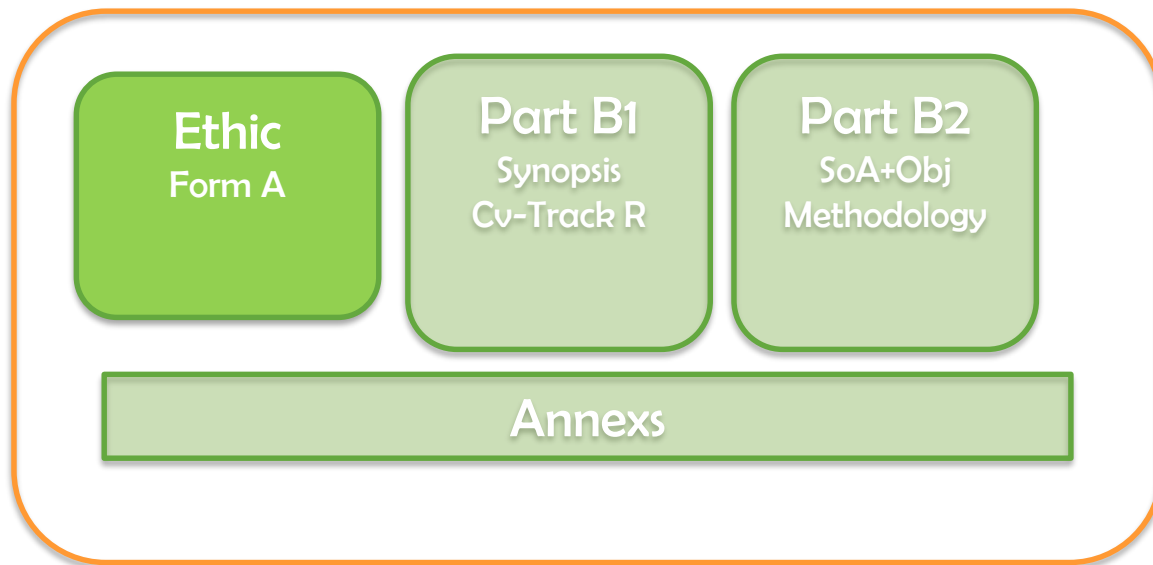
Principal Investigator
+ Research Team with
Experts / workshops



- ✘ El/la PI lidera el proyecto (no hay más PIs que generen consorcio o que sumen para evaluar el perfil individual)
- ✘ El PI elige a sus **team members**, que participarán en este proyecto ERC.
- ✘ **Team members:** personal de investigación de cualquier nivel: Postdocs, personal técnico, personal especialista (senior staff), ...
- ✘ A nivel de propuesta, los **team members** deben estar asignados a tareas/objetivos concretos del proyecto. Su participación debe ser necesaria.

3. Recomendaciones para escribir -ERC Advanced Grant

La Propuesta



3. Recomendaciones Generales

Forms A. Part 4. Ethics issues table + **Ethics Self-Assessment**

< Budget Ethics & Security Other questions >

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 Acronym AdG-FPS

4 - Ethics & security

Ethics Issues Table ?

1. Human Embryonic Stem Cells and Human Embryos	Page
Does this activity involve Human Embryonic Stem Cells (hESCs)?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Does this activity involve the use of human embryos?	<input type="radio"/> Yes <input checked="" type="radio"/> No
2. Humans	Page
Does this activity involve human participants?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Does this activity involve interventions (physical also including imaging technology, behavioural treatments, etc.) on the study participants?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Does this activity involve conducting a clinical study as defined by the Clinical Trial Regulation (EU 535/2014)? (using pharmaceuticals, biologicals, radiopharmaceuticals, or advanced therapy medicinal products)	<input type="radio"/> Yes <input checked="" type="radio"/> No
3. Human Cells / Tissues (not covered by section 1)	Page
Does this activity involve the use of human cells or tissues?	<input type="radio"/> Yes <input checked="" type="radio"/> No
4. Personal Data	Page
Does this activity involve processing of personal data?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Does this activity involve further processing of previously collected personal data (including use of preexisting data sets or sources, merging existing data sets)?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Is it planned to export personal data from the EU to non-EU countries? Specify the type of personal data and countries involved	<input type="radio"/> Yes <input checked="" type="radio"/> No
Is it planned to import personal data from non-EU countries into the EU or from a non-EU country to another non-EU country? Specify the type of personal data and countries involved	<input type="radio"/> Yes <input checked="" type="radio"/> No
Does this activity involve the processing of personal data related to criminal convictions or offences?	<input type="radio"/> Yes <input checked="" type="radio"/> No
5. Animals	Page
Does this activity involve animals?	<input type="radio"/> Yes <input checked="" type="radio"/> No

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Page 2

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Application forms

Proposal ID SEP-210922858

Acronym AdG-FPS

Ethics Self-Assessment ?

Ethical dimension of the objectives, methodology and likely impact

Explain in detail the identified issues in relation to:

- objectives of the activities (e.g. study of vulnerable populations, etc.)
- methodology (e.g. clinical trials, involvement of children, protection of personal data, etc.)
- the potential impact of the activities (e.g. environmental damage, stigmatisation of particular social groups, political or financial adverse consequences, misuse, etc.)

Remaining characters

5000

Compliance with ethical principles and relevant legislations


Describe how the issue(s) identified in the ethics issues table above will be addressed in order to adhere to the ethical principles and what will be done to ensure that the activities are compliant with the EU national legal and ethical requirements of the country or countries where the tasks are to be carried out. It is reminded that for activities performed in a non-EU countries, they should also be allowed in at least one EU Member State.

Remaining characters

5000

3. Recomendaciones Generales

Forms A. Annexes


European Commission | Funding: Submission Service

Deadline
23 May 2023 17:00:00 Brussels Local Time

105 days left until closure

Call data

Call: **ERC-2023-ADG**
 Topic: **ERC-2023-ADG**
 Type of action: **HORIZON-ERC**
 Type of MGA: **HORIZON-AG**

⚠ Topic and type of action can only be changed by creating a new proposal.

Proposal data

Acronym: **AdG-FPS**
 Draft ID: **SEP-210922858**

Download Part B templates

↓ Download part B templates

Support & Helpdesk

📖 Online Manual

🛠 IT How To

🗨 IT Helpdesk

❓ FAQ

Service Desk:

In this step you can edit the Administrative Forms and upload the proposal and its annexes. You may return to this step from the 'My Proposals' section of the Funding & Tenders Portal.

Submit your proposal as early in the process as possible - you can update and resubmit an improved version many times before the call closure.

Submitting a proposal will overwrite any previous versions of this same proposal - this process is irreversible.

Any changes made to the proposal will not be available to the European Commission service unless resubmitted before the call closure.

⚠ Your proposal contains changes that have not yet been submitted.

Administrative forms (Part A)

Edit forms
View history
Print preview

Part B and Annexes

In this section you may upload the technical annex of the proposal (in PDF format only) and any other requested attachments.

Part B1 *	<input type="text"/>	●	Upload
Part B2 *	<input type="text"/>	●	Upload
HI support letter *	<input type="text"/>	●	Upload
Annex 1	<input type="text"/>	●	Upload
Annex 2	<input type="text"/>	●	Upload
Annex 3	<input type="text"/>	●	Upload
Annex 4	<input type="text"/>	●	Upload

Muchas gracias por su atención

@

erc@fecyt.es

in

Guirado Esther

t

@Leticia ERC, @StefiMNZ ,@GuiradoEsther,
@ERC_Research
@HorizonteEuropa





Junta de Andalucía

Consejería de Salud y Consumo

Fundación Progreso y Salud