# FUNDING EXPERT ACADEMY

LIVE eCourse: The full recipe for developing successful grant applications in ERC(StG,CoG, AdG)

Nikolaos FLORATOS Research Coach

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## "Death by Powerpoint"



- This set of slides is the core material not only for my training on how to develop winning Horizon Europe grant applications but it serves also the purpose of a **manual** for consulting it and applying its step-by-step practices, tools, examples and tips EVERYTIME you are involved in the development of an ERC proposal. No matter, if you are a novice or an expert in ERC, I strongly recommend you to follow slide per slide its instructions for getting all the help and support you need for success in ERC.
- This is the **reason of the large number of slides**, i.e. to have a detailed manual to consult consistently in the ERC proposal development cycle as a compass AFTER THE TRAINING and **not to experience the death by powerpoint incident!**
- I normally run all my courses by using the flipchart for writing notes and having hands on practice but this would take us a week for such a course which is great if you can invest that time but if not, then we have to compromise with powerpoint slides.
- However, even so, I guarantee to you an exciting journey, so welcome on board!

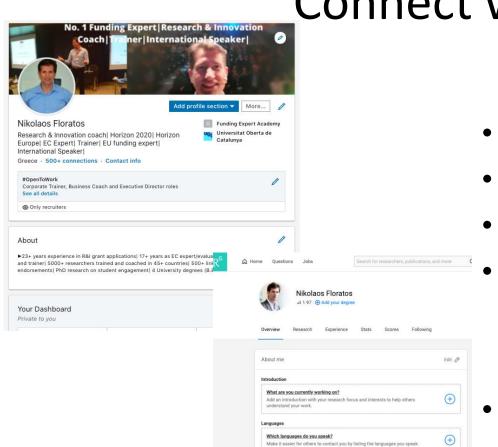
Nikolaos FLORATOS

### Who is Nikolaos Floratos

- Founder of Funding Expert Academy (<a href="www.fundingexpert.academy">www.fundingexpert.academy</a>) with programmes that master individuals in European research funding programmes and advance successful **proposal developers** across Europe
- **Active** in european research funding industry since 1997 (23+ years)
- EC expert/evaluator since 2003 (17+ years)
- Author of the ebook "Learn from the Horizon 2020 champions" downloadable from www.NikolaosFloratos.com
- Trained and coached hundreds of organisations and thousands of professionals on exploiting successfully research funds and advancing their sustainability
- Globally recognised as one of the most influential and inspiring speakers and trainers on Horizon 2020 with hundreds of speeches and trainings in 30+ countries including overseas
- 500+ linkedin recommendations and endorsements at https://www.linkedin.com/in/floratos/
- Multidisciplinary educational background with four university degrees (B.Eng, BA, M.Sc, MBA)
- Passionate with training and evangelist of "Anyone can achieve anything with the proper training & coaching"
- Phd Researcher in student engagement and online courses.
- Master in decomposing complex concepts into easy to understand and apply step-by-step recipes



Connect with me at



(Educational Assessment) (Computer and Society) (Software Engineering)

Social ... Marketing (Usability) (eLearning) (Accessibility) (Websites)

30

Citations

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Human-computer Interaction

Skills and expertise (5)

Total Research Interest (

Stats overview

24.8

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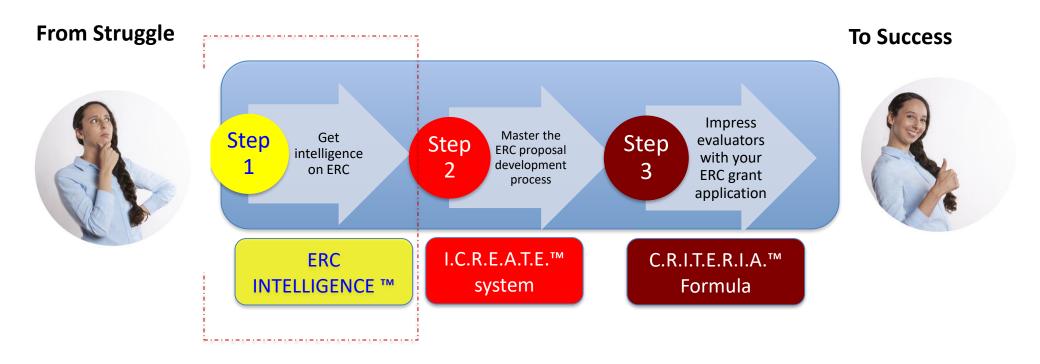
 https://www.researchgate.net/pr ofile/Nikolaos Floratos

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# How researchers will develop winning ERC grant applications

Transformation SET<sup>TM</sup> Formula

## S.E.T. Recipe for successful ERC applicants



## Module 1

Intelligence on ERC
Step 1

# Intelligence behind ERC Key Purpose

Why ERC

## Why ERC

- 1. Support the **best of the best** in Europe across all fields of science, scholarship and engineering
- 2. Promote wholly investigator-driven, or 'bottom-up'
- Encourage the work of the established and next generation of independent <u>top research leaders</u> in Europe
- 4. Reward innovative proposals by placing emphasis on the \_\_\_\_\_ rather than the research area
- 5. Raise the <u>status and visibility of European</u> frontier research and the very best researchers of today and tomorrow

## Eligibility Criteria in 2021

| Eligibility Period based on PhD date award   |  |                      |                      |
|--|--|----------------------|----------------------|
| Starting Grant (StG)   | Consolidator Grant (CoG)   | Advanced Grant (AdG) | Synergy Grant        |
| > 2 and ≤ 7 years  | > 7 and ≤ 12 years   | No Specific criteria | No specific criteria |
| Prior to 1 January 2021 i.e. PhD award date from 1 Jan 2014 to 31 Dec 2018 inclusive | Prior to 1 January 2021 i.e. PhD award date from 1 Jan 2009 to 31 Dec 2013 inclusive |                      |                      |

### **Main Grant Schemes**

### **ERC STARTING GRANTS**

Grants up to 1.5€ million for 5 years

For promising early-career researchers with 2 to 7 years experience after PhD

### **ERC ADVANCED GRANTS**

Grants up to 2.5€ million for 5 years

For established research leaders with a recognised track record of research achievements

### **SYNERGY GRANTS**

Grants up to 10€ million for 6 years

To address ambitious research questions that can only be answered by the coordinated work of a small group of 2-4 principal Investigators

### **ERC CONSOLIDATOR GRANTS**

Grants up to 2€ million for 5 years

For excellent researchers with 7 to 12 years experience after PhD

### **ERC PROOF OF CONCEPT**

Lump Sum Grant of 150.000€

For existing ERC grant holders to bring their research ideas closer to market

### **ADDITIONAL OPPORTUNITIES**

For researchers wishing to work or gain experience in an ERC grantee's team

### Outlook on Evaluation Criteria

### 1. Research Project

Ground-breaking nature, ambition and feasibility

#### Starting, Consolidator, Advanced and Synergy

Ground-breaking nature and potential impact of the research project

To what extent does the proposed research address in MINONIC NGE

To what extent are the objectives ambitious and beyond the stary of the attention concepts and approaches or development between or across disciplines.

To what extent is the proposed research high risk that the research project aces not entirely fulfill its aims)?

### Scientific Approach

To what are a least that the least the least the least that the le proposed research is high risk/high gain (based on the Extended Synopsis)? Implementationn

To what extent does the proposal go beyond what the individual Principal Investigators could achieve alone (for Synergy Grants, based on the Extended Synopsis)?

To what extent is the combination of scientific elements put forward in the proposal crucial to address the scope and complexity of the research question (for Synergy Grants, based on the Extended Synopsis)?

To what extent are the proposed research methodology and was and it is the proposed research methodology and was a second of the proposed research methodology and the proposed research appropriate to achieve the goals of the project (based on the full scientific Proposal)?

To what extent does the proposal involve the development of pred me indicate based on the full Scientific Proposal)?

To what extent are the proposed timescales, resources and PI promiting in the cause and PI PERSON TO THE COLUMN TO properly justified (based on the full Scientific Proposal)?

#### Criterion 1 - RESEARCH PROJECT

Current score: - / 5.0; Threshold 0

1.0 - Non-competitive 1.5 (2.0 - Good 2.5 (3.0 - Very Good 3.5 (4 - Excellent 4.5 (5 - Exceptional

### Ground-breaking nature and potential impact of the research project

To what extent does the proposed research address important challenges?

To what extent are the objectives ambitious and beyond the state of the art (e.g. novel concepts and approaches or development betwee To what extent is the proposed research high risk/high gain (i.e. if successful the payoffs will be very significant, but there is a higher-than Comments: \*

To what extent is the outlined scientific approach feasible bearing in mind the extent that the proposed research is high risk/high gain (bas

### 2. Principal Investigator(s)

### Intellectual capacity and creativity

### Starting and Consolidator

To what extent has the PI demonstrated the ability to conduct ground-breaking research?

To what extent does the PI provide evidence of creative independent thinking?

To what extent does the PI have the required scientific expertise and capacity to successfully execute the project?

### Intellectual capacity and creativity

#### Advanced and Synergy

To what extent has/have the PI(s) demonstrated the ability to conduct ground-breaking

To what extent does/do the PI(s) has/have the required scientific expertise and capacity to successfully execute the project?

To what extent has the PI demonstrated sound leadership in the training and advancement of young scientists (for Advanced Grant applicants)?

### Synergy Grant Group

To what extent does the Syneray Grant Group successfully demonstrate in the proposal that it brings together the elements - such as skills, knowledge, experience, expertise, disciplines, methods, approaches, teams - necessary to address the proposed research question (for **Synergy Grants,** based on the full Scientific Proposal)?

- Criterion 2 - PRINCIPAL INVESTIGATOR



### Current score: - / 5.0; Threshold 0

Please click here for more information

1.0 - Non-competitive 1.5 (2.0 - Good 2.5 (3.0 - Very Good 3.5 (4 - Excellent 4.5 (5 - Exceptional

To what extent has the PI demonstrated the ability to conduct ground-breaking research?

ONon-competitive OGood OVery Good OExcellent OExceptional

To what extent does the PI provide evidence of creative independent thinking?

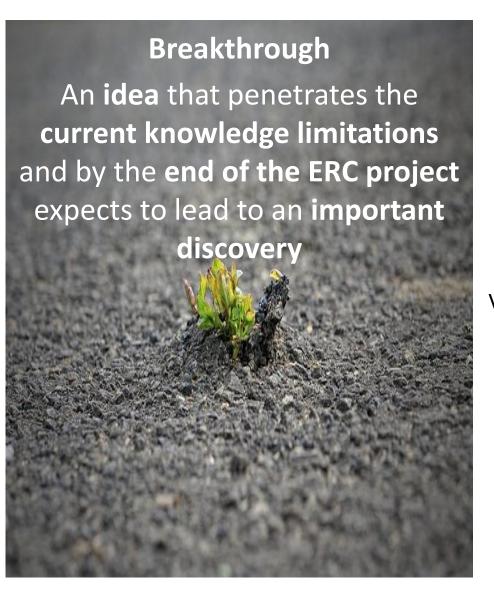
Non-competitive Good Very Good Excellent Exceptional

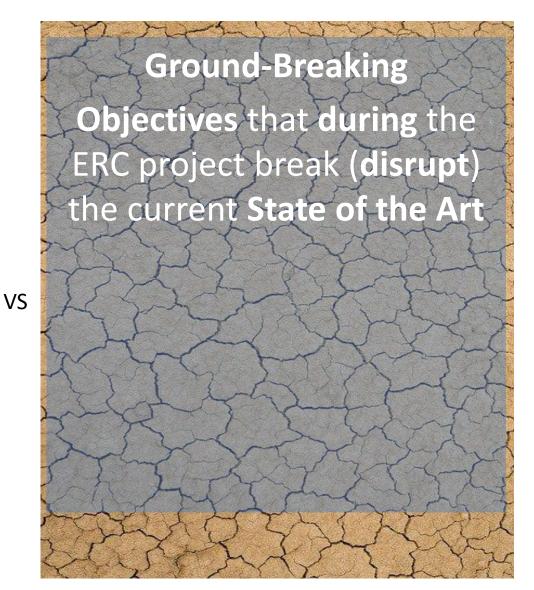
To what extent does the PI have the required scientific expertise and capacity to successfully execute the project? \*

ONon-competitive OGood OVery Good OExcellent OExceptional

Comments

## Breakthrough vs Ground-breaking

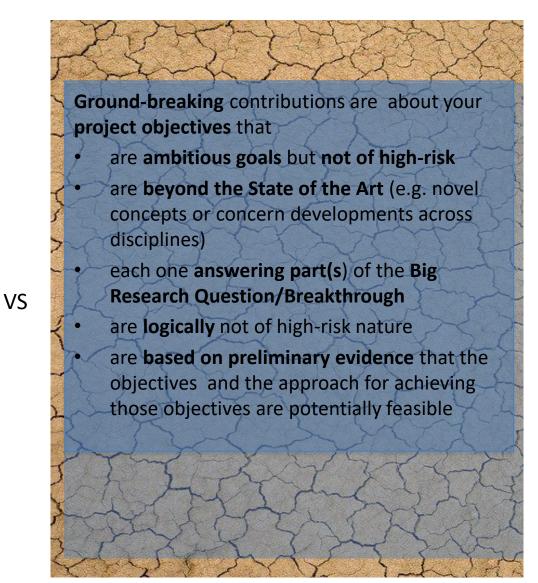




## Breakthrough vs Ground-breaking

The **breakthrough** is about your **research idea** that is

- high-risk
- related to a key challenge that your big research question will address (e.g. curing Alzheimer disease)
- related to a challenge that can be theoretical, conceptual and not only of applied nature. i.e. it solves an important problem or addresses an issue that changes how research is thinking
- not necessarily of a known outcome, since it can also be novel to the research community as it is often in Social Humanities.
- opening new research horizons and perspectives in your field and beyond either in basic research or in more applied one
- No incremental research



## High risk/High gain

### Match

- Gain with "Knowledge" and
- Risk with the "Unknown territories"

### i.e.

- Higher the knowledge expected, higher is the gain
- Higher the unknown territories (what we currently do not know), higher the risk



### Non-Incremental Research



In order to ensure that your proposed ERC research is **not incremental**,

- you don't necessarily need to propose something totally new
- On the contrary, in many cases
   preliminary findings are essential
   for overcoming the current
   unknown territories (the high
   risk) or
- you need to publish something first especially in case your ERC research is challenging the current state of the art

### Profile of Scientific Excellence

| Overarching group  | Checklist characteristics for Scientific Excellence   |
|--|---|
| The type of content is   | □ Addressing a gap in existing knowledge □ Presenting new data or making new datasets available □ Advancing a new theory □ Synthesising existing knowledge □ Methodological development or technical innovation   |
| The main finding   | □ Is a discovery of an entirely novel phenomenon □ Challenges existing understanding or represents a paradigm shift □ Is a disputed finding □ Is a promising early stage idea that calls for further development □ Makes previous contributions obsolete  |
| The research is novel/innovative in that it                        | ☐ Creates and applies entirely new concepts that did not exist before ☐ Applies existing concepts which have never been used in this specific field/context before ☐ Creates and applies new combinations of related scientific principles ☐ Creates and applies new combinations of previously unrelated scientific principles |
| The research approach is interdisciplinary in that it              | □ Brings together concepts from different bur related fields □ Brings together concepts from previously unrelated fields □ Produces findings that could lead to progress in fields other than its own □ Builds on findings from a field other than its own  |
| The research has a potential impact beyond generating knowledge by | □ Informing the direction of future research □ Informing policy □ Contributing to product/process development □ Contributing to economic benefits to society □ Producing benefits in the relevant sector (e.g. healthcare, engineering) □ Producing wider social or cultural impacts  |

### Outlook on Evaluation Criteria

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To what extent are the objectives ambitious and beyond the state of the art (e.g. novel concepts and approaches or development between or across disciplines)?

To what extent is the proposed research high risk-high gain (i.e. if successful the payoffs will be very significant, but there is a high risk that the research project does not entirely fulfil its aims)?

### Scientific Approach

To what extent is the outlined scientific approach feasible bearing in mind the extent that the proposed research is high risk/high gain (based on the Extended Synopsis)?

To what extent does the proposal go beyond what the individual Principal Investigators could achieve alone (for Synergy Grants, based on the Extended Synopsis)?

To what extent is the combination of scientific elements put forward in the proposal crucial to address the scope and complexity of the research question (**for Synergy Grants**, based on the Extended Synopsis)?

To what extent are the proposed research methodology and working arrangements appropriate to achieve the goals of the project (based on the full Scientific Proposal)?

To what extent does the proposal involve the development of novel methodology (based on the full Scientific Proposal)?

To what extent are the proposed timescales, resources and PI commitment adequate and properly justified (based on the full Scientific Proposal)?

2. Principal Investigator(s)

### Intellectual capacity and creativity

### Starting and Consolidator

Beyond the SoA

To what extent has the PI demonstrated the ability to conduct around breaking account.

Independent

To war act We the PIN Kingdence of creative independent thinking?

To what extent does the PI have the required scientific expertise and capacity to successfully execute the project?

Management skills

### Intellectual capacity and creativity

### Advanced and Synergy

To what extent has/have the PI(s) demonstrated the ability to conduct ground-breaking research?

To what extent does/do the PI(s) has/have the required scientific successfully execute the project?

Leadership

To what extent has the PI demonstrated sound leadership in the training and advancement of young scientists (for Advanced Grant applicants)?

### Synergy Grant Group

### Synergy

To what extent does the Synergy Grant Group successfully demonstrate in the proposal that it brings together the elements — such as skills, knowledge, experience, expertise, disciplines, methods, approaches, teams — necessary to address the proposed research question (**for Synergy Grants**, based on the full Scientific Proposal)?

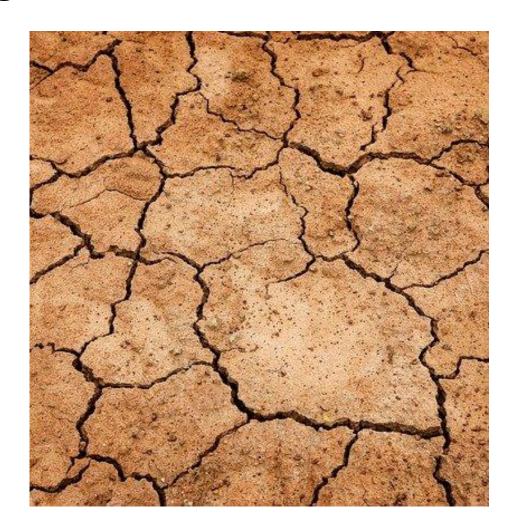
# Ability to propose & conduct ground—breaking research

Ability to **propose** ground-breaking research via e.g.

- successful records on attracting funding in the past for your research such as European individual grants (e.g. MSCA IF, or ERC grant), or
- from national research councils or
- even as part of a writing team for a collaborative Horizon 2020/Horizon Europe project

Ability to **conduct** ground-breaking research via e.g.

- supervision of post-docs, PhD researchers or even Master degree students or
- as coordinator or key partner in Horizon 2020/Horizon Europe collaborative projects that significant publications and deliverables were produced.

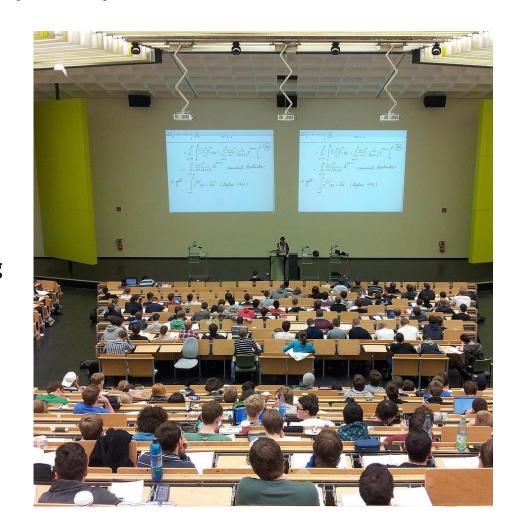


# Any achievements beyond the State-of-the-Art (SoA)

Do you have a track record that shows previous work that contributed to advancing the state of the art in a specific area? For example,

- have you published related papers in significant journals that draw a lot of attention (e.g. large no. of citations, or high impact factor)?
- have you received invitations as a visiting lecturer at other universities especially abroad?
- have you received an invitation as a keynote speaker in scientific conferences?

Make sure that that you highlight all these in your CV.



## Independent & Creative thinking

Demonstration of **Independent thinking** is well-justified mainly with

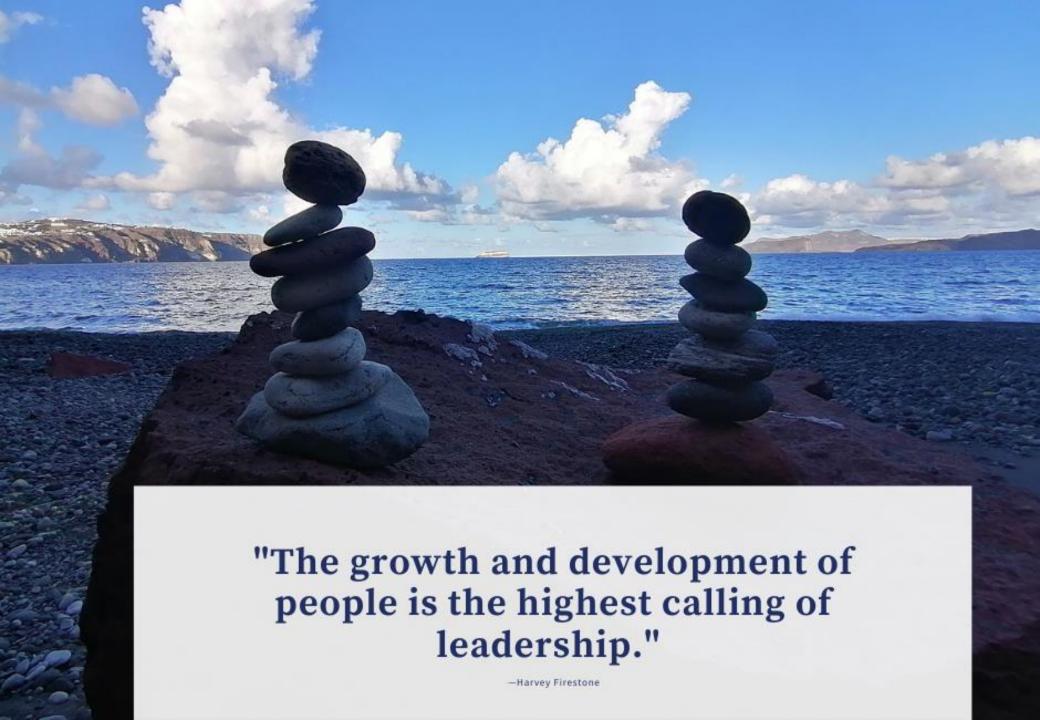
- a) the number of publications without your PhD supervisor and as a rough number something like 1 significant publication every 1-2 years and
- b) your affiliations or collaborations with various universities especially abroad.

Demonstration of **creative (and innovative)** thinking can be directly and indirectly justified. More specifically,

- first consider whether you have conducted research that was novel and opened new horizons and secondly,
- whether you have supported others to conduct novel research that opened new horizons such Post-docs, Phd researchers, master students, etc mainly with publications of international visibility.

Make sure that that you highlight all these in your CV.

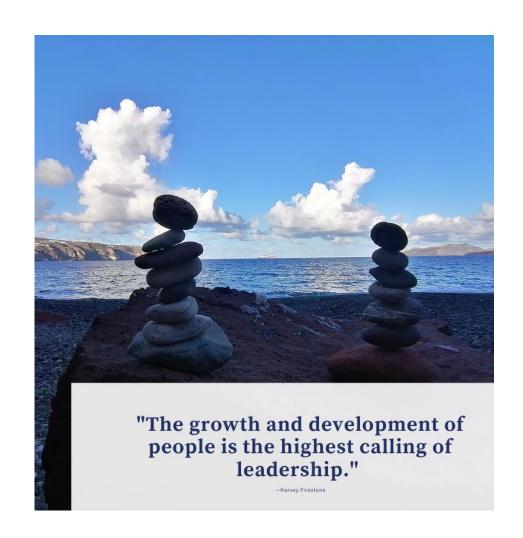




### Leadership in the training and advancement of scientists

Explain the career achievements of some of the researchers that you have supervised or trained in the past.

- Any start-ups they have created or
- any articles they have published as main authors with their name appearing first or any awards and recognitions they have been awarded, or
- any involvement as team members in a Horizon 2020/Horizon Europe collaborative project that you are coordinating or you are the key partner.



# Intelligence behind ERC & Horizon Europe Structure and Budget

Pillars and Budget

# ERC budget intelligence between Horizon 2020 and Horizon Europe

VS

## Horizon 2020 ERC budget Intelligence

13.1 bn €

5634 ERC grants (StG, CoG, AdG)

30% of excellent ERC projects not funded (unfunded As)

StG: 2334 projects, 3,47bn €

CoG: 1925 projects, 3,73 bn €

AdG: 1375 projects, 3,28 bn €

Horizon Europe ERC budget
Intelligence

16.1 bn €

~1450 more ERC projects funded

~ 7000 ERC grants (StG, CoG,
AdG)

20% more excellent projects to
be funded

# Intelligence behind ERC workprogramme

ERC EVALUATION PANELS AND KEYWORDS

### **ERC Evaluation Panels and Keywords**

### **Physical Sciences and Engineering**

### PE1 Mathematics

All areas of mathematics, pure and applied, plus mathematical foundations of computer science, mathematical physics and statistics

- PE1 1 Logic and foundations
- PE1 2 Algebra
- PE1\_3 Number theory
- PE1\_4 Algebraic and complex geometry
- PE1\_5 Lie groups, Lie algebras
- PE1 6 Geometry and global analysis
- PE1\_7 Topology
- PE1 8 Analysis
- PE1 9 Operator algebras and functional analysis
- PE1\_10 ODE and dynamical systems
- PE1\_11 Theoretical aspects of partial differential equations
- PE1 12 Mathematical physics
- PE1 13 Probability
- PE1\_14 Mathematical statistics
- PE1 15 Generic statistical methodology and modelling
- PE1 16 Discrete mathematics and combinatorics
- PE1 17 Mathematical aspects of computer science
- PE1 18 Numerical analysis
- PE1 19 Scientific computing and data processing
- PE1 20 Control theory, optimisation and operational research
- PE1\_21 Application of mathematics in sciences
- PE1\_22 Application of mathematics in industry and society

### PE2 Fundamental Constituents of Matter

Particle, nuclear, plasma, atomic, molecular, gas, and optical physics

- PE2 1 Theory of fundamental interactions
- PE2 2 Phenomenology of fundamental interactions
- PE2\_3 Experimental particle physics with accelerators
- PE2\_4 Experimental particle physics without accelerators
- PE2\_5 Classical and quantum physics of gravitational interactions
- PE2 6 Nuclear, hadron and heavy ion physics
- PE2 7 Nuclear and particle astrophysics
- PE2 8 Gas and plasma physics
- PE2 9 Electromagnetism
- PE2\_10 Atomic, molecular physics
- PE2\_11 Ultra-cold atoms and molecules
- PE2\_12 Optics, non-linear optics and nano-optics
- PE2 13 Quantum optics and quantum information
- PER\_15 Quantum optics and quantum miormatio
- PE2\_14 Lasers, ultra-short lasers and laser physics
- PE2\_15 Thermodynamics
- PE2\_16 Non-linear physics
- PE2\_17 Metrology and measurement
- PE2\_18 Equilibrium and non-equilibrium statistical mechanics: steady states and dynamics

#### PE3 Condensed Matter Physics

Structure, electronic properties, fluids, nanosciences, biological physics

- PE3\_1 Structure of solids, material growth and characterisation
- PE3\_2 Mechanical and acoustical properties of condensed matter, lattice dynamics
- PE3 3 Transport properties of condensed matter
- PE3\_4 Electronic properties of materials, surfaces, interfaces, nanostructures
- PE3 5 Physical properties of semiconductors and insulators
- PE3\_6 Macroscopic quantum phenomena, e.g. superconductivity, superfluidity, quantum Hall effect
- PE3\_7 Spintronics
- PE3 8 Magnetism and strongly correlated systems
- PE3 9 Condensed matter beam interactions (photons, electrons, etc.)
- PE3 10 Nanophysics, e.g. nanoelectronics, nanophotonics, nanomagnetism, nanoelectromechanics
- PE3\_11 Mesoscopic quantum physics and solid-state quantum technologies
- PE3\_12 Molecular electronics
- PE3\_13 Structure and dynamics of disordered systems, e.g. soft matter (gels, colloids, liquid crystals), granular matter, liquids, glasses, defects
- PE3\_14 Fluid dynamics (physics)
- PE3\_15 Statistical physics: phase transitions, condensed matter systems, models of complex systems, interdisciplinary applications
- PE3 16 Physics of biological systems

### PE4 Physical and Analytical Chemical Sciences

Analytical chemistry, chemical theory, physical chemistry/chemical physics

- PE4\_1 Physical chemistry
- PE4 2 Spectroscopic and spectrometric techniques
- PE4 3 Molecular architecture and Structure
- PE4\_4 Surface science and nanostructures
- PE4\_5 Analytical chemistry
- PE4 6 Chemical physics
- PE4 7 Chemical instrumentation
- PE4 8 Electrochemistry, electrodialysis, microfluidics, sensors
- PE4 9 Method development in chemistry
- PE4\_10 Heterogeneous catalysis
- PE4 11 Physical chemistry of biological systems
- PE4\_12 Chemical reactions: mechanisms, dynamics, kinetics and catalytic reactions
- PE4\_13 Theoretical and computational chemistry
- PE4\_14 Radiation and Nuclear chemistry
- PE4\_15 Photochemistry
- PE4\_16 Corrosion
- PE4\_17 Characterisation methods of materials
- PE4\_18 Environment chemistry

### PE5 Synthetic Chemistry and Materials

New materials and new synthetic approaches, structure-properties relations, solid state chemistry, molecular architecture, organic chemistry

- PE5\_1 Structural properties of materials
- PE5\_2 Solid state materials chemistry
- PE5\_3 Surface modification
- PE5 4 Thin films
- PE5\_5 Ionic liquids
- PE5\_6 New materials: oxides, alloys, composite, organic-inorganic hybrid, nanoparticles
- PE5\_7 Biomaterials synthesis
- PE5\_8 Intelligent materials synthesis self assembled materials
- PE5\_9 Coordination chemistry
- PE5\_10 Colloid chemistry
- PE5\_11 Biological chemistry and chemical biology
- PE5 12 Chemistry of condensed matter
- PE5 13 Homogeneous catalysis
- PE5\_14 Macromolecular chemistry
- PE5\_15 Polymer chemistry
- PE5\_16 Supramolecular chemistry
- PE5\_17 Organic chemistry
- PE5\_18 Medicinal chemistry

### PE6 Computer Science and Informatics

Informatics and information systems, computer science, scientific computing, intelligent systems

- PE6\_1 Computer architecture, embedded systems, operating systems
- PE6\_2 Distributed systems, parallel computing, sensor networks, cyber-physical systems
- PE6\_3 Software engineering, programming languages and systems
- PE6\_4 Theoretical computer science, formal methods, automata
- PE6\_5 Security, privacy, cryptology, quantum cryptography
- PE6\_6 Algorithms and complexity, distributed, parallel and network algorithms, algorithmic game theory
- PE6\_7 Artificial intelligence, intelligent systems, natural language processing
- PE6\_8 Computer graphics, computer vision, multimedia, computer games
- PE6\_9 Human computer interaction and interface, visualisation
- PE6\_10 Web and information systems, data management systems, information retrieval and digital libraries, data fusion
- PE6\_11 Machine learning, statistical data processing and applications using signal processing (e.g. speech, image, video)
- PE6\_12 Scientific computing, simulation and modelling tools
- PE6\_13 Bioinformatics, bio-inspired computing, and natural computing
- PE6\_14 Quantum computing (formal methods, algorithms and other computer science aspects)

### PE7 Systems and Communication Engineering

Electrical, electronic, communication, optical and systems engineering

- PE7\_1 Control engineering
- PE7\_2 Electrical engineering: power components and/or systems
- PE7 3 Simulation engineering and modelling
- PE7 4 (Micro- and nano-) systems engineering
- PE7\_5 (Micro- and nano-) electronic, optoelectronic and photonic components
- PE7 6 Communication systems, wireless technology, high-frequency technology
- PE7 7 Signal processing
- PE7\_8 Networks, e.g. communication networks and nodes, Internet of Things, sensor networks, networks of robots
- PE7\_9 Man-machine interfaces
- PE7\_10 Robotics
- PE7\_11 Components and systems for applications (in e.g. medicine, biology, environment)
- PE7\_12 Electrical energy production, distribution, applications

### PE8 Products and Processes Engineering

Product and process design, chemical, civil, environmental, mechanical, vehicle engineering, energy processes and relevant computational methods

- PE8\_1 Aerospace engineering
- PE8\_2 Chemical engineering, technical chemistry
- PES 3 Civil engineering, architecture, offshore construction, lightweight construction, geotechnics
- PE8 4 Computational engineering
- PE8 5 Fluid mechanics
- PE8\_6 Energy processes engineering
- PE8\_7 Mechanical engineering
- PE8\_8 Propulsion engineering, e.g. hydraulic, turbo, piston, hybrid engines
- PE8\_9 Production technology, process engineering
- PE8\_10 Manufacturing engineering and industrial design
- PE8\_11 Environmental engineering, e.g. sustainable design, waste and water treatment, recycling, regeneration or recovery of compounds, carbon capture & storage
- PE8\_12 Naval/marine engineering
- PE8\_13 Industrial bioengineering
- PE8\_14 Automotive and rail engineering; multi-/inter-modal transport engineering

### PE9 Universe Sciences

Astro-physics/-chemistry/-biology; solar system; planetary systems; stellar, galactic and extragalactic astronomy; cosmology; space sciences; astronomical instrumentation and data

- PE9 1 Solar physics the Sun and the heliosphere
- PE9 2 Solar system science
- PE9 3 Exoplanetary science, formation and characterization of extrasolar planets
- PE9\_4 Astrobiology
- PE9 5 Interstellar medium and star formation
- PE9\_6 Stars stellar physics, stellar systems
- PE9\_7 The Milky Way
- PE9\_8 Galaxies formation, evolution, clusters
- PE9\_9 Cosmology and large-scale structure, dark matter, dark energy
- PE9 10 Relativistic astrophysics and compact objects
- PE9 11 Gravitational wave astronomy
- PE9\_12 High-energy and particle astronomy
- PE9 13 Astronomical instrumentation and data, e.g. telescopes, detectors, techniques, archives, analyses

### PE10 Earth System Science

Physical geography, geology, geophysics, atmospheric sciences, oceanography, climatology, cryology, ecology, global environmental change, biogeochemical cycles, natural resources management

- PE10\_1 Atmospheric chemistry, atmospheric composition, air pollution
- PE10\_2 Meteorology, atmospheric physics and dynamics
- PE10\_3 Climatology and climate change
- PE10\_4 Terrestrial ecology, land cover change
- PE10 5 Geology, tectonics, volcanology
- PE10 6 Palaeoclimatology, palaeoecology
- PE10 7 Physics of earth's interior, seismology, geodynamics
- PE10\_8 Oceanography (physical, chemical, biological, geological)
- PE10 9 Biogeochemistry, biogeochemical cycles, environmental chemistry
- PE10\_10 Mineralogy, petrology, igneous petrology, metamorphic petrology
- PE10\_11 Geochemistry, cosmochemistry, crystal chemistry, isotope geochemistry, thermodynamics
- PE10\_12 Sedimentology, soil science, palaeontology, earth evolution
- PE10 13 Physical geography, geomorphology
- PE10 14 Earth observations from space/remote sensing
- PE10\_15 Geomagnetism, palaeomagnetism
- PE10\_16 Ozone, upper atmosphere, ionosphere
- PE10\_17 Hydrology, hydrogeology, engineering and environmental geology, water and soil pollution
- PE10\_18 Cryosphere, dynamics of snow and ice cover, sea ice, permafrosts and ice sheets
- PE10\_19 Planetary geology and geophysics
- PE10 20 Geohazards
- PE10 21 Earth system modelling and interactions

### PE11 Materials Engineering

Advanced materials development: performance enhancement, modelling, large-scale preparation, modification, tailoring, optimisation, novel and combined use of materials, etc.

- PE11\_1 Engineering of biomaterials, biomimetic, bioinspired and bio-enabled materials
- PE11\_2 Engineering of metals and alloys
- PE11 3 Engineering of ceramics and glasses
- PE11 4 Engineering of polymers and plastics
- PE11 5 Engineering of composites and hybrid materials
- PE11\_6 Engineering of carbon materials
- PE11\_7 Engineering of metal oxides
- PE11\_8 Engineering of alternative established or emergent materials
- PE11\_9 Nanomaterials engineering, e.g. nanoparticles, nanoporous materials, 1D & 2D nanomaterials
- PE11\_10 Soft materials engineering, e.g. gels, foams, colloids
- PE11\_11 Porous materials engineering, e.g. covalent-organic, metal-organic, porous aromatic frameworks
- PE11\_12 Semi-conducting and magnetic materials engineering
- PE11 13 Metamaterials engineering
- PE11\_14 Computational methods for materials engineering

### Life Sciences

### 51 Molecules of Life: Biological Mechanisms, Structures and Functions

### For all organisms:

Molecular biology, biochemistry, structural biology, molecular biophysics, synthetic and chemical biology, drug design, innovative methods and modelling

- LS1\_1 Macromolecular complexes including interactions involving nucleic acids, proteins, lipids and carbohydrates
- LS1\_2 Biochemistry
- LS1\_3 DNA and RNA biology
- LS1 4 Protein biology
- LS1 5 Lipid biology
- LS1\_6 Glycobiology
- LS1\_7 Molecular biophysics, biomechanics, bioenergetics
- LS1 8 Structural biology
- LS1\_9 Molecular mechanisms of signalling processes
- LS1 10 Synthetic biology
- LS1\_11 Chemical biology
- LS1\_12 Protein design
- LS1\_13 Early translational research and drug design
- LS1\_14 Innovative methods and modelling in molecular, structural and synthetic biology

### LS2 Integrative Biology: from Genes and Genomes to Systems

### For all organisms:

Genetics, epigenetics, genomics and other 'omics studies, bioinformatics, systems biology, genetic diseases, gene editing, innovative methods and modelling, 'omics for personalised medicine

- LS2\_1 Genetics
- LS2 2 Gene editing
- LS2\_3 Epigenetics
- LS2 4 Gene regulation
- LS2\_5 Genomics
- LS2\_6 Metagenomics
- LS2 7 Transcriptomics
- LS2 8 Proteomics
- LS2 9 Metabolomics
- LS2 10 Glycomics/Lipidomics
- LS2\_11 Bioinformatics and computational biology
- LS2 12 Biostatistics
- LS2\_13 Systems biology
- LS2 14 Genetic diseases
- LS2\_15 Integrative biology for personalised medicine
- LS2\_16 Innovative methods and modelling in integrative biology

### LS3 Cellular, Developmental and Regenerative Biology

### For all organisms:

Structure and function of the cell, cell-cell communication, embryogenesis, tissue differentiation, organogenesis, growth, development, evolution of development, organoids, stem cells, regeneration, therapeutic approaches

- LS3\_1 Cell cycle, cell division and growth
- LS3\_2 Cell senescence, cell death, autophagy, cell ageing
- LS3\_3 Cell behaviour, including control of cell shape, cell migration
- LS3\_4 Cell junctions, cell adhesion, the extracellular matrix, cell communication
- LS3\_5 Cell signalling and signal transduction, exosome biology
- LS3\_6 Organelle biology and trafficking
- LS3\_7 Mechanobiology of cells, tissues and organs
- LS3\_8 Embryogenesis, pattern formation, morphogenesis
- LS3\_9 Cell differentiation, formation of tissues and organs
- LS3 10 Developmental genetics
- LS3 11 Evolution of developmental strategies
- LS3\_12 Organoids
- LS3\_13 Stem cells
- LS3\_14 Regeneration
- LS3\_15 Development of cell-based therapeutic approaches for tissue regeneration
- LS3\_16 Functional imaging of cells and tissues
- LS3\_17 Theoretical modelling in cellular, developmental and regenerative biology

### LS4 Physiology in Health, Disease and Ageing

Organ and tissue physiology, comparative physiology, physiology of ageing, pathophysiology, interorgan and tissue communication, endocrinology, nutrition, metabolism, interaction with the microbiome, non-communicable diseases including cancer (and except disorders of the nervous system and immunity-related diseases)

- LS4\_1 Organ and tissue physiology and pathophysiology
- LS4\_2 Comparative physiology
- LS4\_3 Physiology of ageing
- LS4\_4 Endocrinology
- LS4\_5 Non-hormonal mechanisms of inter-organ and tissue communication
- LS4 6 Microbiome and host physiology
- LS4\_7 Nutrition and exercise physiology
- LS4 8 Impact of stress (including environmental stress) on physiology
- LS4 9 Metabolism and metabolic disorders, including diabetes and obesity
- LS4 10 The cardiovascular system and cardiovascular diseases
- LS4\_11 Haematopoiesis and blood diseases
- LS4\_12 Cancer
- LS4\_13 Other non-communicable diseases (except disorders of the nervous system and immunity-related diseases)

#### LS5 Neuroscience and Disorders of the Nervous System

Nervous system development, homeostasis and ageing, nervous system function and dysfunction, systems neuroscience and modelling, biological basis of cognitive processes and of behaviour, neurological and mental disorders

- LS5 1 Neuronal cells
- LS5\_2 Glial cells and neuronal-glial communication
- LS5 3 Neural development and related disorders
- LS5 4 Neural stem cells
- LS5\_5 Neural networks and plasticity
- LS5\_6 Neurovascular biology and blood-brain barrier
- LS5\_7 Sensory systems, sensation and perception, including pain
- LS5 8 Neural basis of behaviour
- LS5 9 Neural basis of cognition
- LS5 10 Ageing of the nervous system
- LS5\_11 Neurological and neurodegenerative disorders
- LS5 12 Mental disorders
- LS5\_13 Nervous system injuries and trauma, stroke
- LS5\_14 Repair and regeneration of the nervous system
- LS5 15 Neuroimmunology, neuroinflammation
- LS5\_16 Systems and computational neuroscience
- LS5\_17 Imaging in neuroscience
- LS5 18 Innovative methods and tools for neuroscience

### LS6 Immunity, Infection and Immunotherapy

The immune system, related disorders and their mechanisms, biology of infectious agents and infection, biological basis of prevention and treatment of infectious diseases, innovative immunological tools and approaches, including therapies

- LS6\_1 Innate immunity
- LS6 2 Adaptive immunity
- LS6 3 Regulation of the immune response
- LS6\_4 Immune-related diseases
- LS6\_5 Biology of pathogens (e.g. bacteria, viruses, parasites, fungi)
- LS6 6 Infectious diseases
- LS6\_7 Mechanisms of infection
- LS6\_8 Biological basis of prevention and treatment of infection
- LS6 9 Antimicrobials, antimicrobial resistance
- LS6 10 Vaccine development
- LS6\_11 Innovative immunological tools and approaches, including therapies

### LS7 Prevention, Diagnosis and Treatment of Human Diseases

Medical technologies and tools for prevention, diagnosis and treatment of human diseases, therapeutic approaches and interventions, pharmacology, preventative medicine, epidemiology and public health, digital medicine

- LS7\_1 Medical imaging for prevention, diagnosis and monitoring of diseases
- LS7\_2 Medical technologies and tools (including genetic tools and biomarkers) for prevention, diagnosis, monitoring and treatment of diseases
- LS7 3 Nanomedicine
- LS7 4 Regenerative medicine
- LS7\_5 Applied gene, cell and immune therapies
- LS7\_6 Other medical therapeutic interventions, including transplantation
- LS7\_7 Pharmacology and toxicology
- LS7 8 Effectiveness of interventions, including resistance to therapies
- LS7\_9 Public health and epidemiology
- LS7\_10 Preventative and prognostic medicine
- LS7\_11 Environmental health, occupational medicine
- LS7\_12 Health care, including care for the ageing population
- LS7\_13 Palliative medicine
- LS7\_14 Digital medicine, e-medicine, medical applications of artificial intelligence
- LS7\_15 Medical ethics

### LS8 Environmental Biology, Ecology and Evolution

### For all organisms:

Ecology, biodiversity, environmental change, evolutionary biology, behavioural ecology, microbial ecology, marine biology, ecophysiology, theoretical developments and modelling

- LS8 1 Ecosystem and community ecology, macroecology
- LS8\_2 Biodiversity
- LS8\_3 Conservation biology
- LS8\_4 Population biology, population dynamics, population genetics
- LS8\_5 Biological aspects of environmental change, including climate change
- LS8\_6 Evolutionary ecology
- LS8\_7 Evolutionary genetics
- LS8\_8 Phylogenetics, systematics, comparative biology
- LS8\_9 Macroevolution and paleobiology
- LS8\_10 Ecology and evolution of species interactions
- LS8\_11 Behavioural ecology and evolution
- LS8\_12 Microbial ecology and evolution
- LS8\_13 Marine biology and ecology
- LS8\_14 Ecophysiology, from organisms to ecosystems
- LS8\_15 Theoretical developments and modelling in environmental biology, ecology, and evolution

### LS9 Biotechnology and Biosystems Engineering

Biotechnology using all organisms, biotechnology for environment and food applications, applied plant and animal sciences, bioengineering and synthetic biology, biomass and biofuels, biohazards

- LS9 1 Bioengineering for synthetic and chemical biology
- LS9\_2 Applied genetics, gene editing and transgenic organisms
- LS9\_3 Bioengineering of cells, tissues, organs and organisms
- LS9\_4 Microbial biotechnology and bioengineering
- LS9\_5 Food biotechnology and bioengineering
- LS9\_6 Marine biotechnology and bioengineering
- LS9\_7 Environmental biotechnology and bioengineering
- LS9\_8 Applied plant sciences, plant breeding, agroecology and soil biology
- LS9\_9 Plant pathology and pest resistance
- LS9\_10 Veterinary and applied animal sciences
- LS9 11 Biomass production and utilisation, biofuels
- LS9\_12 Ecotoxicology, biohazards and biosafety

### Social Sciences and Humanities

### SH1 Individuals, Markets and Organisations

Economics, finance, management

- SH1 1 Macroeconomics; monetary economics; economic growth
- SH1\_2 International trade; international management; international business; spatial economics
- SH1\_3 Development economics; structural change; political economy of development
- SH1\_4 Finance; asset pricing; international finance; market microstructure
- SH1\_5 Corporate finance; banking and financial intermediation; accounting; auditing; insurance
- SH1\_6 Econometrics; operations research
- SH1\_7 Behavioural economics; experimental economics; neuro-economics
- SH1\_8 Microeconomic theory; game theory; decision theory
- SH1\_9 Industrial organisation; entrepreneurship; R&D and innovation
- SH1\_10 Management; strategy; organisational behaviour
- SH1\_11 Human resource management; operations management, marketing
- SH1\_12 Environmental economics; resource and energy economics; agricultural economics
- SH1\_13 Labour and demographic economics
- SH1\_14 Health economics; economics of education
- SH1\_15 Public economics; political economics; law and economics
- SH1\_16 Historical economics; quantitative economic history; institutional economics; economic systems

### SH2 Institutions, Governance and Legal Systems

Political science, international relations, law

- SH2\_1 Political systems, governance
- SH2\_2 Democratisation and social movements
- SH2 3 Conflict resolution, war, peace building, international law
- SH2\_4 Legal studies, constitutions, human rights, comparative law
- SH2\_5 International relations, global and transnational governance
- SH2\_6 Humanitarian assistance and development
- SH2\_7 Political and legal philosophy
- SH2\_8 Big data in political and legal studies

### SH3 The Social World and Its Diversity

Sociology, social psychology, social anthropology, education sciences, communication studies

- SH3\_1 Social structure, social mobility, social innovation
- SH3\_2 Inequalities, discrimination, prejudice
- SH3\_3 Aggression and violence, antisocial behaviour, crime
- SH3 4 Social integration, exclusion, prosocial behaviour
- SH3\_5 Attitudes and beliefs
- SH3\_6 Social influence; power and group behaviour
- SH3 7 Kinship; diversity and identities, gender, interethnic relations
- SH3 8 Social policies, welfare, work and employment
- SH3 9 Poverty and poverty alleviation
- SH3\_10 Religious studies, ritual; symbolic representation
- SH3\_11 Social aspects of teaching and learning, curriculum studies, education and educational policies
- SH3\_12 Communication and information, networks, media
- SH3\_13 Digital social research
- SH3\_14 Social studies of science and technology

### SH4 The Human Mind and Its Complexity

Cognitive science, psychology, linguistics, theoretical philosophy

SH4\_1 Cognitive basis of human development and education, developmental disorders; comparative cognition

- SH4\_2 Personality and social cognition; emotion
- SH4\_3 Clinical and health psychology
- SH4\_4 Neuropsychology
- SH4\_5 Attention, perception, action, consciousness
- SH4\_6 Learning, memory; cognition in ageing
- SH4\_7 Reasoning, decision-making; intelligence
- SH4\_8 Language learning and processing (first and second languages)
- SH4\_9 Theoretical linguistics; computational linguistics
- SH4 10 Language typology; historical linguistics
- SH4\_11 Pragmatics, sociolinguistics, linguistic anthropology, discourse analysis
- SH4\_12 Philosophy of mind, philosophy of language
- SH4\_13 Philosophy of science, epistemology, logic

#### SH5 Cultures and Cultural Production

Literary studies, cultural studies, study of the arts, philosophy

- SH5\_1 Classics, ancient literature and art
- SH5\_2 Theory and history of literature, comparative literature
- SH5\_3 Philology; text and image studies
- SH5\_4 Visual and performing arts, film, design and architecture
- SH5\_5 Music and musicology; history of music
- SH5\_6 History of art and architecture, arts-based research
- SH5\_7 Museums, exhibitions, conservation and restoration
- SH5\_8 Cultural studies, cultural identities and memories, cultural heritage
- SH5\_9 Metaphysics, philosophical anthropology; aesthetics
- SH5\_10 Ethics and its applications; social philosophy
- SH5 11 History of philosophy
- SH5\_12 Computational modelling and digitisation in the cultural sphere

### SH6 The Study of the Human Past

Archaeology and history

- SH6\_1 Historiography, theory and methods in history, including the analysis of digital data
- SH6\_2 Classical archaeology, history of archaeology, social archaeology
- SH6\_3 General archaeology, archaeometry, landscape archaeology
- SH6\_4 Prehistory, palaeoanthropology, palaeodemography, protohistory, bioarchaeology
- SH6\_5 Palaeography and codicology
- SH6 6 Ancient history
- SH6\_7 Medieval history
- SH6\_8 Early modern history
- SH6\_9 Modern and contemporary history
- 3rio\_3 Wodern and contemporary mistor
- SH6\_10 Colonial and post-colonial history
- SH6\_11 Global history, transnational history, comparative history, entangled histories
- SH6\_12 Social and economic history
- SHG 13 Gender history, cultural history, history of collective identities and memories, history of religions
- SH6\_14 History of ideas, intellectual history, history of economic thought
- SH6\_15 History of science, medicine and technologies

### H7 Human Mobility, Environment, and Space

Human geography, demography, health, sustainability science, territorial planning, spatial analysis

- SH7\_1 Human, economic and social geography
- SH7\_2 Migration
- SH7\_3 Population dynamics: households, family and fertility
- SH7\_4 Social aspects of health, ageing and society
- SH7\_5 Sustainability sciences, environment and resources
- SH7 6 Environmental and climate change, societal impact and policy
- SH7\_7 Cities; urban, regional and rural studies
- SH7\_8 Land use and planning
- SH7\_9 Energy, transportation and mobility
- SH7\_10 GIS, spatial analysis; big data in geographical studies

# Intelligence from the ERC Evaluation Panels

## Panel synthesis per year

Panel member synthesis most likely is repeated every two years per Funding Schema

## COMPOSITION OF EVALUATION PANELS

ERC Starting Grant 2020:

Panel Chairs

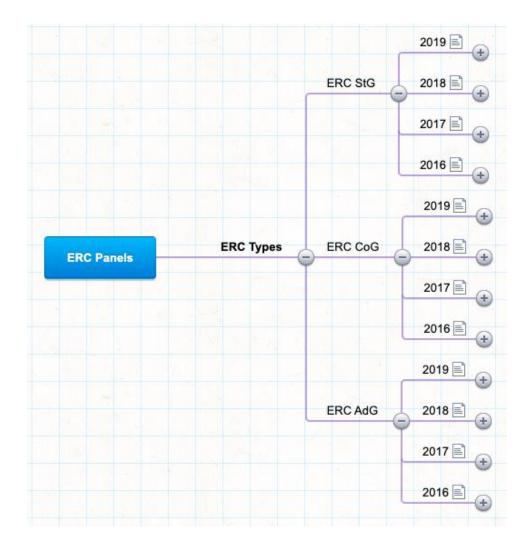
Panel Members

ERC Starting Grant 219:

Panel Chairs

Panel Members

Click here to check Panel Chairs and Panel Members from previous calls



https://mind42.com/mindmap/f34593c9-a97d-4ef0-8496-c1db534e4e35

Keywords define who- PM/external referee- will evaluate your proposal. Check them carefully!!!

### PE9

- Georges Meylan (Panel Chair)
- João Manuel Alves
- Luciana Bianchi
- Robert H. Brandenberger
- Marc Chaussidon
- Carsten Dominik
- Eva Grebel
- Luigi Guzzo
- Richard Harrison
- Carole Mundell
- Hagai Netzer
- Guy Perrin
- Peter Schneider
- José-María Torrelles

Source: ERC NCP Oficina Europea

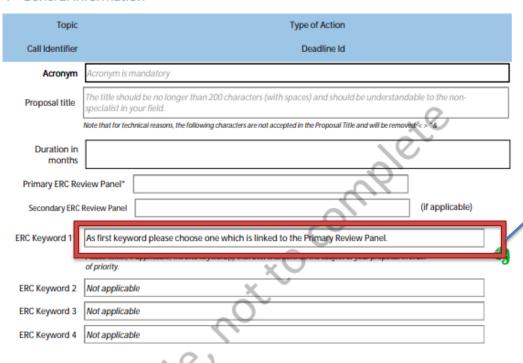
### PE9

- PE9\_1 Solar and interplanetary physics
- PE9\_2 Planetary systems sciences
  - PE9\_3 Interstellar medium
  - PE9\_4 Formation of stars and planets
    - PE9\_5 Astrobiology
    - PE9\_6 Stars and stellar systems
- PE9\_7 The Galaxy
- PE9 8 Formation and evolution of galaxies
- PE9\_9 Clusters of galaxies and large scale structures
- PE9\_10 High energy and particles astronomy
   X-rays, cosmic rays, gamma rays, neutrinos
- PE9\_11 Relativistic astrophysics
- PE9\_12 Dark matter, dark energy
- PE9 13 Gravitational astronomy
- PE9 14 Cosmology
- PE9\_15 Space Sciences

## Select just one ERC keyword (1)



#### 1 - General information



Defines the lead panel evaluator and other panel evaluators for Stage 1 and Stage 2 evaluations

Defines the remote referees (external evaluators at stage 2 evaluation

Free keyword 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.

## Intelligence behind the targeted Panel insights

Seek intelligence on call insights wherever applicable

### **Insights**

- Official Success Rate = no. of proposals funded/no. of proposals submitted
- Actual Success Rate: no. of proposals funded/no. of proposals > passed to Step 2
- The total mark the <u>last in the rank</u> funded proposal received in the previous related call

### Hence,

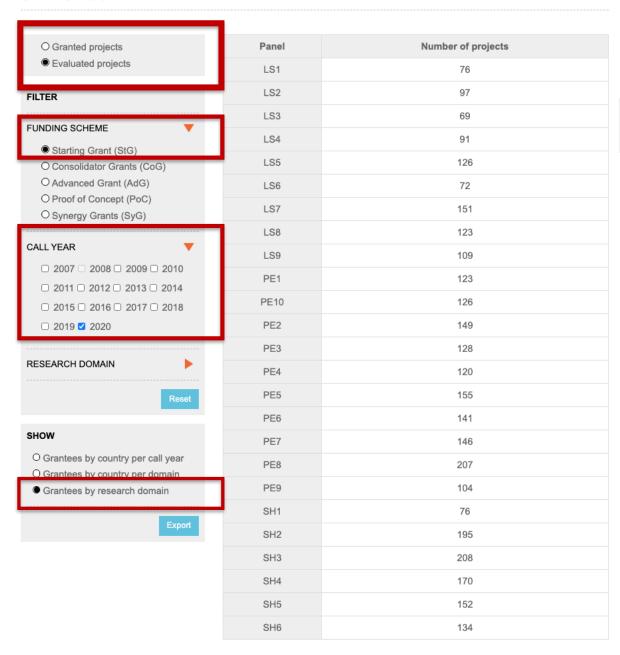
Are you feeling comfortable with the above 3 numbers in your panel?

From ERC erc.europa.eu/projects-figures/statistics

From NCP

From Panel member/NCP

#### **STATISTICS**



## Success rates from the ERC website as an example StG

<u>erc.europa.eu/projects-</u> <u>figures/statistics</u>

Granted projectsEvaluated projects

| Panel | Number of projects |
|-------|--------------------|
| LS1   | 11                 |
| LS2   | 13                 |
| LS3   | 9                  |
| LS4   | 13                 |
| LS5   | 18                 |
| LS6   | 10                 |
| LS7   | 17                 |
| LS8   | 17                 |
| LS9   | 15                 |
| PE1   | 16                 |
| PE10  | 16                 |
| PE2   | 19                 |
| PE3   | 17                 |
| PE4   | 16                 |
| PE5   | 21                 |
| PE6   | 20                 |
| PE7   | 19                 |
| PE8   | 25                 |
| PE9   | 14                 |
| SH1   | 11                 |
| SH2   | 25                 |
| SH3   | 28                 |
| SH4   | 23                 |
| SH5   | 20                 |
| SH6   | 19                 |
|       |                    |

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## 2020 Official Success Rate StG per panel

| Panel | StG projects funded | StG projects submitted | Success rate |
|-------|---------------------|------------------------|--------------|
| LS1   | 11                  | 76                     | 14.47%       |
| LS2   | 13                  | 97                     | 13.40%       |
| LS3   | 9                   | 69                     | 13.04%       |
| LS4   | 13                  | 91                     | 14.29%       |
| LS5   | 18                  | 126                    | 14.29%       |
| LS6   | 10                  | 72                     | 13.89%       |
| LS7   | 17                  | 151                    | 11.26%       |
| LS8   | 17                  | 123                    | 13.82%       |
| LS9   | 15                  | 109                    | 13.76%       |
| PE1   | 16                  | 123                    | 13.01%       |
| PE10  | 16                  | 126                    | 12.70%       |
| PE2   | 19                  | 149                    | 12.75%       |
| PE3   | 17                  | 128                    | 13.28%       |
| PE4   | 16                  | 120                    | 13.33%       |
| PE5   | 21                  | 155                    | 13.55%       |
| PE6   | 20                  | 141                    | 14.18%       |
| PE7   | 19                  | 146                    | 13.01%       |
| PE8   | 25                  | 207                    | 12.08%       |
| PE9   | 14                  | 104                    | 13.46%       |
| SH1   | 11                  | 76                     | 14.47%       |
| SH2   | 25                  | 195                    | 12.82%       |
| SH3   | 28                  | 208                    | 13.46%       |
| SH4   | 23                  | 170                    | 13.53%       |
| SH5   | 20                  | 152                    | 13.16%       |
| SH6   | 19                  | 134                    | 14.18%       |

### **Actual Success Rate**

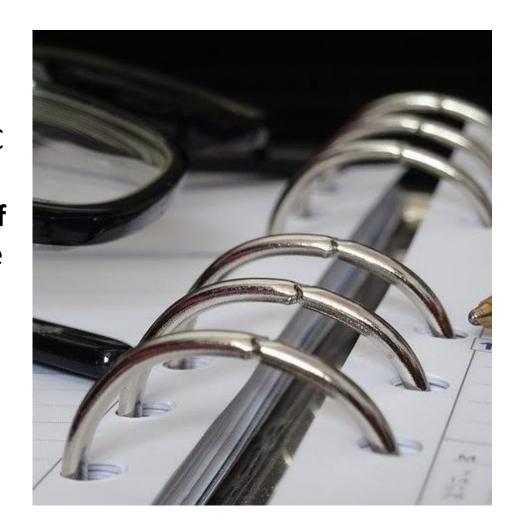
i.e. The ranking range of successful proposals out of the proposals evaluated by the panel is Step 2, indicatively in various years (Not provided)

- For panel LS1 is 1%-46% in StG, i.e. the top 46% in panel LS1/StG received an ERC grant
- For panel PE2 is 1%-37% in AdG, i.e. the top 37% in panel PE2/AdG received an ERC grant
- For panel PE3 1%-38% in AdG, i.e. the top 38% in panel PE2/AdG received an ERC grant
- For panel PE5 1%-65% in CoG, i.e. the **top 65%** in panel PE5 in CoG received an ERC grant
- For panel PE6 1%-34% in StG, i.e. the top 34% in panel PE6/StG received an ERC grant

### Homework #0

Set a day in your calendar to

to contact your NCP or your Research Support Office in ERC and provide you for the last two years the ranking range of successful proposals, since the larger it is, the easier may be for your application to be funded. However, this may be useful only in cases that you have a dilemma which of two panels to target according to your research focus.



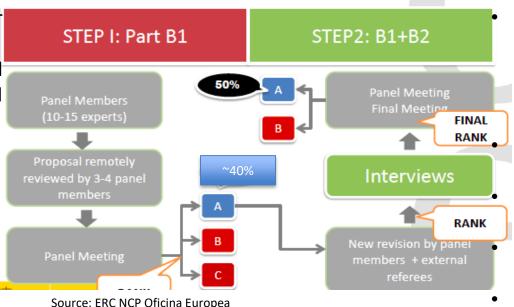
# Intelligence from ERC Guide for Peer Reviewers per funding scheme

Per Funding Scheme (e.g. StG, CoG, AdG)

#### **Step 1 Evaluation**

- **100-150** proposals per panel
- 1 lead expert and 2-3 panel members as co-readers per proposal
- Each panel member is lead
   expert in 2-3 proposals and
   12-40 as co-readers
- Each lead expert or coreader evaluates individually each proposal based on B1
- Based on averages of individual markings, panel discusses the ranking and proposals with 4/5 (i.e. A) pass to step 2
- ~3x proposals pass to step 2 that can be funded
- A list of potential referees
   (~12 external reviewers) for
   proposals in step 2 is
   prepared based on free
   keywords and references

## **Evaluation Process**



#### **Step 2 Evaluation**

- Each panel evaluates 25-40 proposalsEach panel member is lead
  - Each panel member is lead
    expert in 2-3 and co-reader
    3-10 proposals that
    evaluates individually each
    proposal based on B1&B2
    An external reviewer
    evaluates just one proposal
    All proposals in step 2 are
    invited to an interview
    ~50% receive an A and 20%
    are granted
    Panel members with no load
  - Panel members with no lead or co-reader role in one proposal, they read just B1 to participate in panel discussions and interview.

## Restrictions in 2021 based on previous evaluation results

| Call to which the PI applied under previous ERC WP        | Evaluation Outcome                        | Calls to which a PI is NOT eligible in 2021 |
|---|---|---|
| 2019 and 2020 Starting,<br>Consolidator, or Synergy Grant | Rejected for breach of research integrity | StG, CoG, AdG                               |
| 2019 Starting, Consolidator or Advanced Grant             | C at Step 1                               | StG, CoG, AdG                               |
| 2019 Synergy grant  | A, or B at Step 3                         | No restriction                              |
|   | B at Step 1 or 2                          | No restriction                              |
|   | C at Step 1                               | AdG   |
| 2020 Starting, Consolidator, or Advanced Grant            | A, or B at Step 2                         | No restriction                              |
|   | B or C at Step 1                          | StG, CoG, AdG                               |
| 2020 Synergy Grant  | A, or B at Step 3                         | No restriction                              |
|   | B at Step 2                               | No restriction                              |
|   | C at Step 1                               | AdG   |

## Intelligence from the ERC Application Template

Parts B1 and B2

## Intelligence on ERC Proposal Structure

#### PART A - online forms

A1 Proposal and PI info A2 Host Institution info

A3 Budget

### Annexes – submitted as .pdf

- Statement of support of HI
- If applicable: explanatory information on ethical issues; copy of PhD (StG, CoG); document for extension of eligibility window (StG, CoG)

#### PART B1

- Extended Synopsis
- CV
- Track Record

Make it more general with the use in addition of words and concepts that can be understood by all the panel members (generalists)

#### PART B2

Scientific Proposal

15 p.

5 p.

2 p.

2 p.

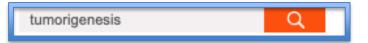
Make it more specialised with the words and concepts that can be understood by experts in the research area (specialists)

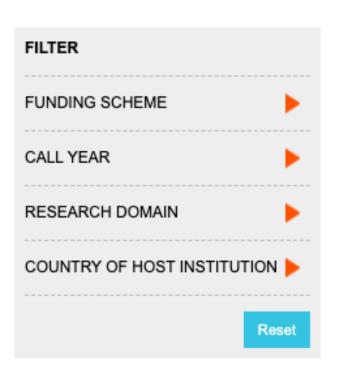
## Intelligence from previous ERC projects

erc.europa.eu/

### https://erc.europa.eu/projects-figures/erc-funded-projects

### **ERC FUNDED PROJECTS**





Displaying 1 - 10 of 48. Show 10 | 20 results per page.

| Project acronym       | AUROMYC   |
|-----------------------|---|
| Project               | N-Myc and Aurora A: From Protein Stability to<br>Chromosome Topology N-Myc and Aurora A: From<br>Protein Stability to Chromosome Topology Myc and<br>Aurora A: From Protein Stability to Chromosome<br>Topology |
| Researcher (PI)       | Martin Eilers   |
| Host Institution (HI) | JULIUS-MAXIMILIANS-UNIVERSITAT WURZBURG   |
| Call Details          | Advanced Grant (AdG), LS4, ERC-2014-ADG   |
| Summary -             |   |

| Project acronym       | CAN-IT-BARRIERS   |
|-----------------------|---|
| Project               | Disruption of systemic and microenvironmental barriers to immunotherapy of antigenic tumors |
| Researcher (PI)       | Douglas HANAHAN   |
| Heat Institution (HI) | ECOLE DOLVTECHNIQUE EEDERALE DE LAURANNE.   |





About 14,300 results (0.69 seconds)

### Including results for Martin Eilers @ JULIUS-MAXIMILIANS-UNIVERSITAT WUERZBURG

Search only for Martin Eilers @ JULIUS-MAXIMILIANS-UNIVERSITAT WURZBURG

www.uni-wuerzburg.de > people > principal-investigators \*

#### Martin Eilers - GRK 2243 - Universität Würzburg

Sep 30, 2019 — Prof. Dr. Martin Eilers. Department of Biochemistry and Molecular Biology Biocenter, University of Würzburg Am Hubland D-97074 Würzburg.

Email: martin.eilers@biozentrum.uni-wuerzbur...

www.biozentrum.uni-wuerzburg.de > research-groups \*

#### AG Eilers - Biozentrum der Universität Würzburg

May 19, 2020 — Dr. Martin Eilers. Prof. Dr. Martin Eilers. Lehrstuhl für Biochemie und Molekularbiologie Biozentrum Am Hubland 97074 Würzburg. Tel: 0931 ...

Missing: MAXIMILIANS- | Must include: MAXIMILIANS-

wuerzburgwiki.de > wiki > Martin\_E... ▼ Translate this page

#### Martin Eilers - WürzburgWiki

Prof. Dr. Martin Eilers (\* 1960 in Bonn) ist Biochemiker, Krebsforscher und Professor an der Julius-Maximilians-Universität Würzburg.



### JNDERSTANDING UBIQUITYLATION: FROM R MECHANISMS TO DISEASE"

# > GRK 2243 > PEOPLE > PRINCIPAL INVESTIGATORS > MARTIN EILERS

## Martin Eilers Property of the property of the

#### Prof. Dr. Martin Eilers

Department of Biochemistry and Molecular Biology Biocenter, University of Würzburg

Am Hubland D-97074 Würzburg

Tel.: 0931 31-84111 Fax.: 0931 31-84113

Email: martin.eilers@biozentrum.uni-wuerzburg.de
Web: www.pch2.biozentrum.uni-wuerzburg.de

Biochemistry, Molecular Cell Biology, Tumor Biology

Many cancers are life-threatening diseases and there is an urgent need for novel therapeutic strategies.

The Eilers lab works on the human MYC protein family, which is involved in the development of the majority of all human cancers. Our aim is both to understand the function of MYC proteins and explore new strategies to inhibit their function.

#### Martin Eilers

Caroline Kisker

Vera Kozjak-Pavlovic

Sonja Lorenz (vicespokesperson)

Thomas Rudel

Hermann Schindelin

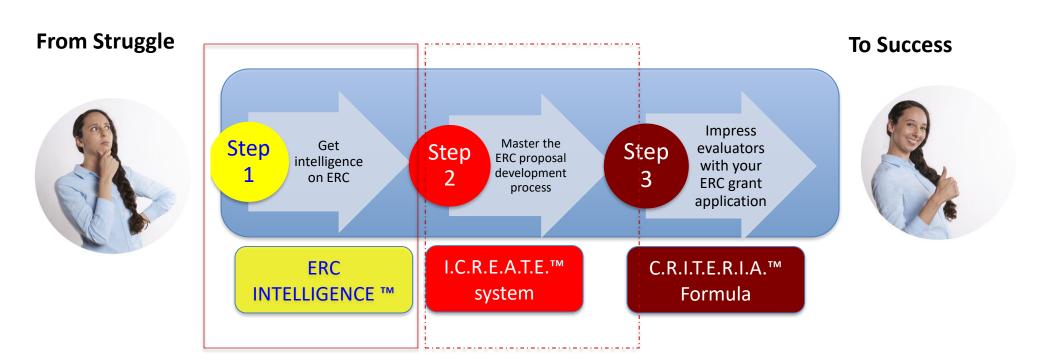
Andreas Schlosser

Christoph Sotriffer

Elmar Wolf

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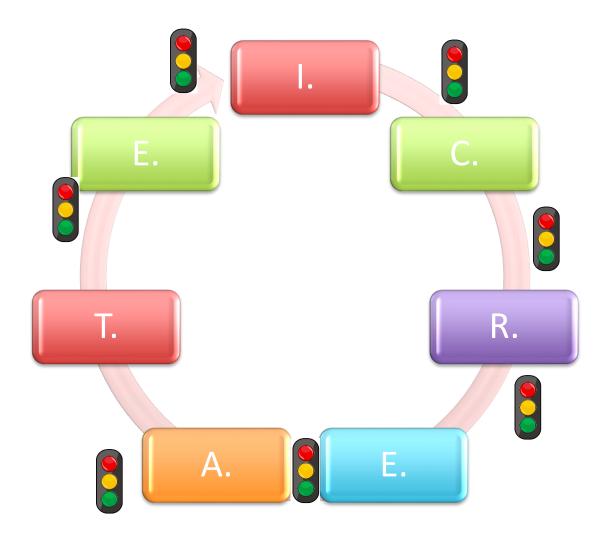
## Recipe for successful ERC applicants



## Module 2: I.C.R.E.A.T.E.S.™ formula

Full Proposal Development Cycle of an ERC proposal- Step-by-step

## The Full Proposal Development Cycle



## The I. Element from the I.C.R.E.A.T.E. System

Winning proposals and successful projects start with an I. <u>Idea</u> that supports the following 7 principles

- 1. Mission of you as a researcher
- 2. V<u>ision</u> of you as a researcher
- Addressing a key scientific challenge/problem
- 4. Creation of <u>forefront</u> (<u>novel and with high</u> <u>impact</u>) knowledge
- 5. Unique with new horizons for research and society
- 6. Challenging to be fully achieved
- 7. Not possible to be implemented by others now



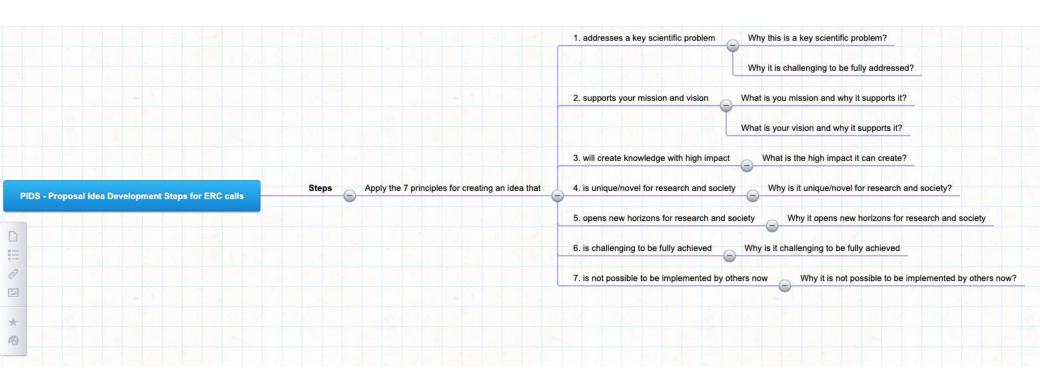
## How to create innovative ideas for your Horizon Europe proposal

## Everything starts with problem(s) & opportunities

- We cannot have great ideas if they are not based on big problems, challenges and opportunities
- Albert Einstein emphasized the 80/20 ratio between problems and solutions



## Idea creation process for ERC calls



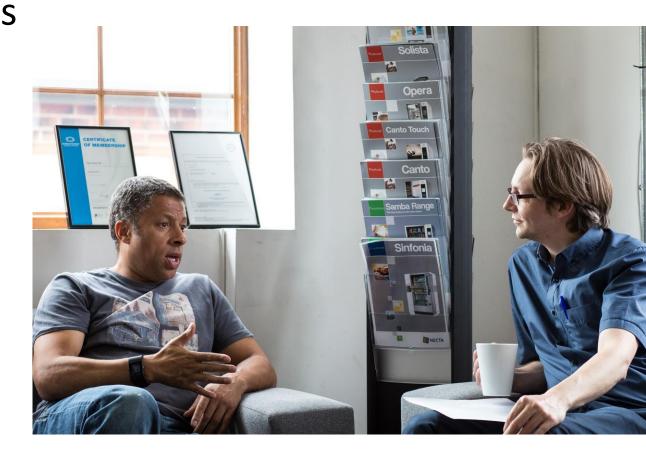
Mind map can be accessed here

## The **C**. Element from the I.**C**.R.E.A.T.E.S. System

### The C. Element from the I.C.R.E.A.T.E.S. System

C. \_\_\_\_\_

- Input to Connections is our <u>idea</u> (3-4 sentences) that we have internally validated.
- Output is to
   \_\_\_\_\_\_ validate
   the idea



## The **C**. Element from the I.**C**.R.E.A.T.E.S. System

Home » Funding » National Contact Points NATIONAL CONTACT POINTS National Contact Points (NCPs) are independent organizations of different nature (Ministries, Academies of Science, Research agencies, etc) that act as information providers to ERC applicants in their native language. They are based in all EU countries and Associated States, as well as in some non-European countries. NCPs do not represent the ERC. Their mission is to raise awareness, inform and advise on ERC funding opportunities at a national and -- Select Country --**ERC FUNDED PROJECTS** tumorigenesis Displaying 1 - 10 of 48. Show 10 | 20 results per page FILTER AUROMYC FUNDING SCHEME N-Myc and Aurora A: From Protein Stability to Chromosome Topology N-Myc and Aurora A: From CALL YEAR Protein Stability to Chromosome Topology Myc and Aurora A: From Protein Stability to Chromosome RESEARCH DOMAIN Topology Martin Filers Researcher (PI) COUNTRY OF HOST INSTITUTION | Host Institution (HI JULIUS-MAXIMILIANS-UNIVERSITAT WURZBURG Summary Project acro Researcher INDERSTANDING UBIQUITYLATION: FROM Martin Eilers – WürzburgWiki Prof. Dr. Martin Eilers (\* 1960 in Bonn) is

2 essential groups to **c**onnect with:

 ERC <u>National</u> Contact Points: <u>https://erc.europa.eu/funding/n</u> ational-contact-points

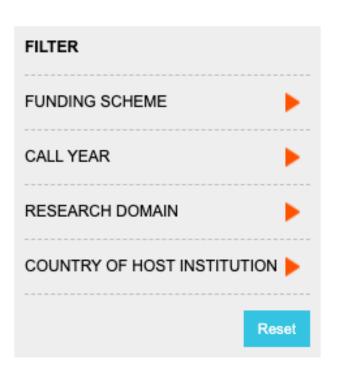
• \_\_\_\_\_\_in ERC in your research topic

erc.europa.eu/projectsfigures/erc-funded-projects

### erc.europa.eu/projects-figures/erc-funded-projects

### **ERC FUNDED PROJECTS**

tumorigenesis



Displaying 1 - 10 of 48. Show 10 | 20 results per page.

| Project acronym       | AUROMYC   |
|-----------------------|---|
| Project               | N-Myc and Aurora A: From Protein Stability to<br>Chromosome Topology N-Myc and Aurora A: From<br>Protein Stability to Chromosome Topology Myc and<br>Aurora A: From Protein Stability to Chromosome<br>Topology |
| Researcher (PI)       | Martin Eilers   |
| Host Institution (HI) | JULIUS-MAXIMILIANS-UNIVERSITAT WURZBURG   |
| Call Details          | Advanced Grant (AdG), LS4, ERC-2014-ADG   |
| Summary (             |   |

| Project acronym       | CAN-IT-BARRIERS   |
|-----------------------|---|
| Project               | Disruption of systemic and microenvironmental barriers to immunotherapy of antigenic tumors |
| Researcher (PI)       | Douglas HANAHAN   |
| Heat Institution (HI) | ECOLE DOLVTECHNIQUE EEDERALE DE LAURANNE.   |





About 14,300 results (0.69 seconds)

#### Including results for Martin Eilers @ JULIUS-MAXIMILIANS-UNIVERSITAT WUERZBURG

Search only for Martin Eilers @ JULIUS-MAXIMILIANS-UNIVERSITAT WURZBURG

www.uni-wuerzburg.de > people > principal-investigators \*

#### Martin Eilers - GRK 2243 - Universität Würzburg

Sep 30, 2019 — Prof. Dr. Martin Eilers. Department of Biochemistry and Molecular Biology Biocenter, University of Würzburg Am Hubland D-97074 Würzburg.

Email: martin.eilers@biozentrum.uni-wuerzbur...

www.biozentrum.uni-wuerzburg.de > research-groups \*

#### AG Eilers - Biozentrum der Universität Würzburg

May 19, 2020 - Dr. Martin Eilers. Prof. Dr. Martin Eilers. Lehrstuhl für Biochemie und Molekularbiologie Biozentrum Am Hubland 97074 Würzburg. Tel: 0931 ...

Missing: MAXIMILIANS- | Must include: MAXIMILIANS-

wuerzburgwiki.de > wiki > Martin\_E... ▼ Translate this page

#### Martin Eilers - WürzburgWiki

Prof. Dr. Martin Eilers (\* 1960 in Bonn) ist Biochemiker, Krebsforscher und Professor an der Julius-Maximilians-Universität Würzburg.



### R MECHANISMS TO DISEASE"

★ > GRK 2243 > PEOPLE > PRINCIPAL INVESTIGATORS > MARTIN EILERS



#### Prof. Dr. Martin Eilers

Department of Biochemistry and Molecular Biology Biocenter, University of Würzburg

Am Hubland D-97074 Würzburg

Tel.: 0931 31-84111 Fax.: 0931 31-84113

> Email: martin.eilers@biozentrum.uni-wuerzburg.de Web: www.pch2.biozentrum.uni-wuerzburg.de

Biochemistry, Molecular Cell Biology, Tumor Biology

Many cancers are life-threatening diseases and there is an urgent need for novel therapeutic strategies.

The Eilers lab works on the human MYC protein family, which is involved in the development of the majority of all human cancers. Our aim is both to understand the function of MYC proteins and explore new strategies to inhibit their function.

### JNDERSTANDING UBIQUITYLATION: FROM

#### Martin Eilers

Caroline Kisker

Vera Kozjak-Pavlovic

Sonja Lorenz (vicespokesperson)

Thomas Rudel

Hermann Schindelin

Andreas Schlosser

Christoph Sotriffer

Elmar Wolf

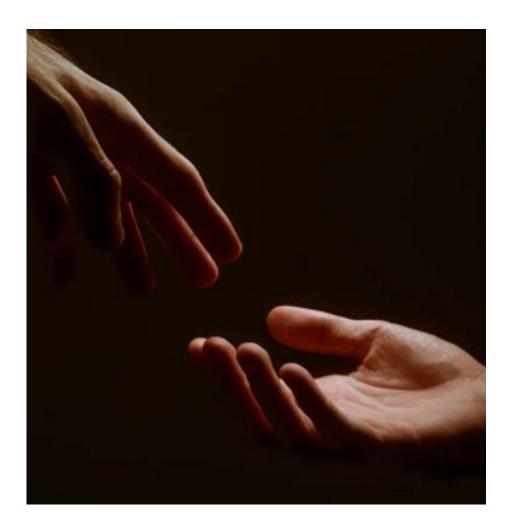
## Communication Approach to successful ERC applicants in your research area



- Send an email as follows
  - 1. Start with an **honest compliment** (e.g. congratulate about their project and explain why)
  - 2. Elaborate on **your high interest and expertise** in their key research area
  - 3. Express your <u>offer</u> to get more involved in their project (if still running), e.g. as peer-reviewer, co-author, Advisor, etc. (NB. Give and shall receive ©)
  - 4. Express your plan to submit an ERC proposal at the same panel and your high appreciation in case you could receive a feedback on your proposal idea
  - 5. Conclude with your desire to virtually meet and have a discussion on any ideas in your common research area
- Ensure you get a response. e.g. Follow-up over the phone (You never send an email to anyone if you are not determined to follow-up and should persist to get a response)
- The main purpose here is to receive some external feedback on your idea and whether it stands as the foundation of an ERC proposal
- Additionally, it is always nice to extend your network with thinking alike researchers ©

## Create your own list of actors active already successfully in similar **specific** research areas

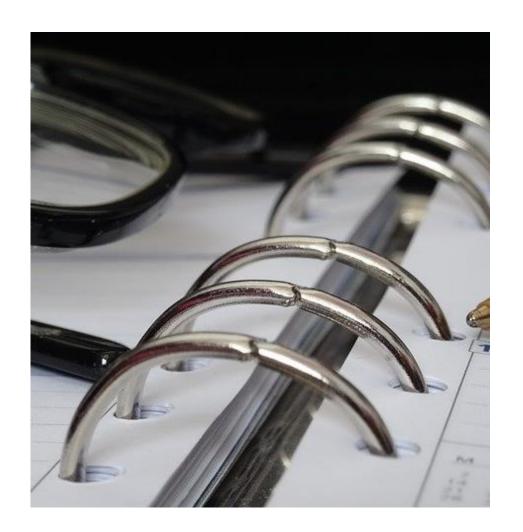
- CV Profile models
- Advisors of your ERC proposal idea
- Advisors of your ERC proposal summary
- Advisors of your ERC Extended Synopsis (B1)
- Advisors of your ERC whole proposal (B1&B2)
- Advisors/experts of your ERC project
- Collaborators on your ERC project



### Homework #2

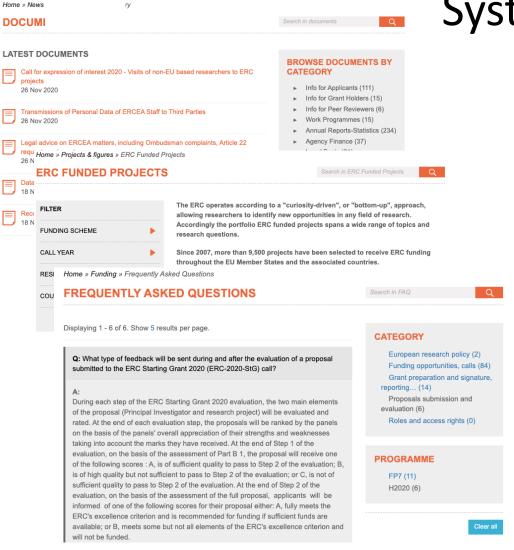
### Set a day in your calendar to

- Identify actors successfully active in similar research domain
- Connect with them via email, linkedin, researchgate and other tools
- Give them an honest compliment about their work
- Ask them to provide you feedback on your ERC idea



## The **R**. Element from the I.C.R.E.A.T.E.™ System

## The **R**. Element from the I.C.R.E.A.T.E.™ System



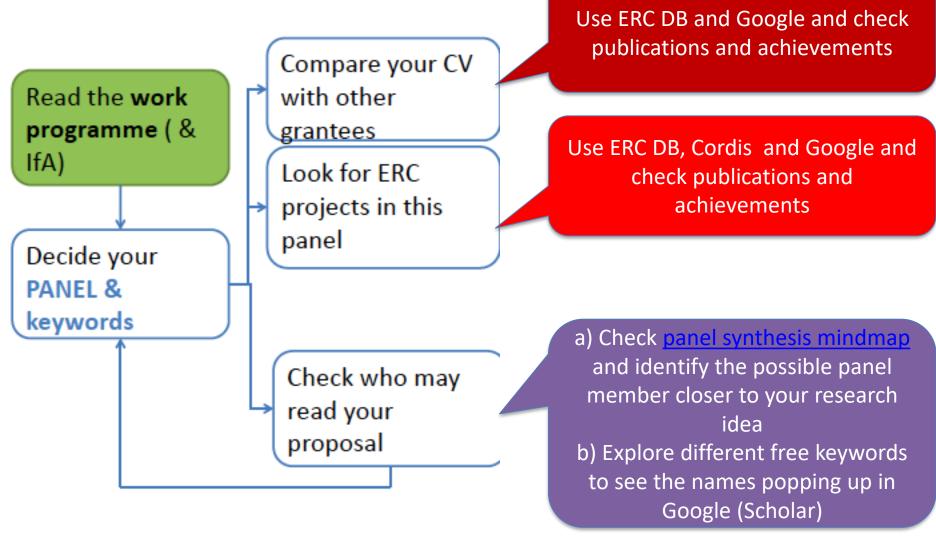
- R. <u>Read</u> and in specific **study** the reference material related to the ERC call mainly from <u>erc.europa.eu/document-library</u> and in specific the related
- 1. ERC Workprogramme
- 2. Info for applicants
- 3. Info for peer-reviewers
- 4. Publication "Spotlight on ERC projects" related to your topic
- Outlook on <u>previously related projects</u> funded from your targeted topic/panel (from <u>erc.europa.eu/projects-figures/erc-funded-</u> projects
- Frequently Asked Questions by participants on Horizon Europe targeted call from <a href="https://erc.europa.eu/funding/frequently-asked-questions">https://erc.europa.eu/funding/frequently-asked-questions</a>

## The **R**. Element from the I.C.R.E.A.T.E.™ System

The output of the Read action/step should be a well-structured 2 page summary of the ERC call topic with the following information:

- Eligibility Criteria
- Submission Deadline
- <u>Evaluation</u> Criteria
- Key documents (links to consider)
- Previously projects funded <u>similar</u> to your project idea
- Success Rates
- <u>Contact</u> details of NCP representatives, HI support office, and/or an expert/successful ERC grantee to provide you further feedback

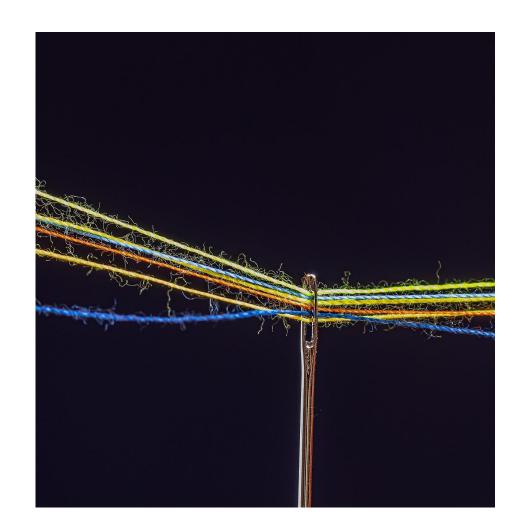
## R. Read Outcomes



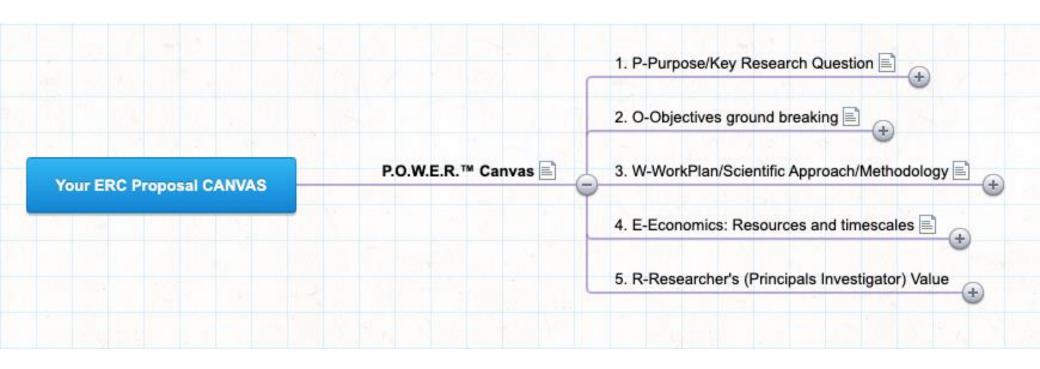
## The **E**. Element from the I.C.R.**E**.A.T.E.™ System

## The **E**. Element from the I.C.R.**E**.A.T.E.™ System

- E. \_\_\_\_\_\_\_ the essentials of your proposal idea and approach in 2 pages summary as shown in the next slide:
- Output of this step is the proposal
- It can be described in a word document or via a mindmap



### ERC proposal structure based on POWER C.A.N.V.A.S.™ tool

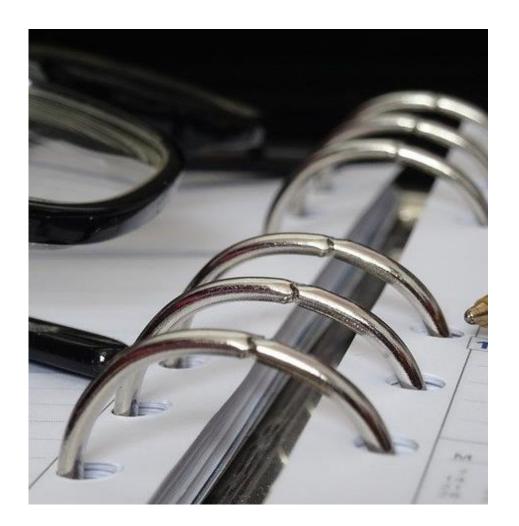


A mindmap structure similar to the example

#### Homework #3

#### Set a day in your calendar to

- Prepare your ERC proposal summary based on P.O.W.E.R.™ template
- Use a word document based on the given ERC P.O.W.E.R.™ CANVAS template



#### **Proposal Summary Uses**



A great proposal summary (max 2-3 pages) is your main tool for

- Receiving <u>fruitful feedback</u> on your ERC project
- Engaging competent individuals as experts/collaborators\_(if applicable/necessary)
- Building the Section B1: Extended Synopsis by adding elements comprehensive for generalists also
- Building the Section B2 by going into more detail and deeper in details for specialists in your research topic
- Engaging resources for developing further the proposal.

# The A. Element from the I.C.R.E.A.T.E.™ System

## The **A**. Element from the I.C.R.E.**A**.T.E.™ System

- A. <u>Attract</u> competent researchers (direct and indirect ones)
- Direct team members that expect to join your team as experts/collaborators/assist ants
- Indirect team members are mainly stakeholders that have strong interest in your research and they will have an advisory role to your project



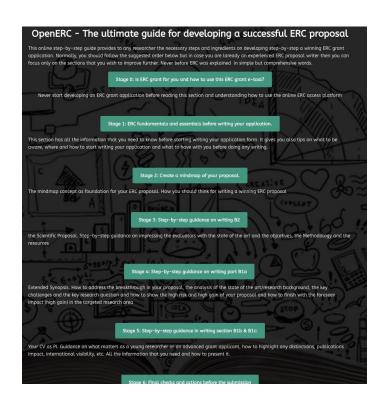
#### The **A**. Element from the I.C.R.E.**A**.T.E.™ System

- **A.** \_\_\_\_ competent team members
- B. Sources for competent direct and indirect individuals
  - Your own <u>network</u>
  - Actors successful in previously ERC funded projects related to your topic!!! - (very useful)
  - Experts/top researchers in a specific topic essential in your methodology and/or with access to special infrastructure needed



# The **T**. Element from the I.C.R.E.A.**T**.E.™ System

#### The **T**. Element from the I.C.R.E.A.**T**.E.™ System



- **T.** \_\_\_\_\_ an empty application form into a great and winning proposal
- The high quality of the proposal content and approach will be enhanced with the C.R.I.T.E.R.I.A. formula (See next Modules)
- Step-by-step guidance for writing B1 and B2
- Register and use the <u>OpenERC platform</u> for step-by-step guidance based on winning examples on how to write each of the two parts (B1 and B2) in your proposal

# The **E**. Element from the I.C.R.E.A.T.**E**.™ System

### The **E**. Element from the I.C.R.E.A.T.**E**.™ System

- E. \_\_\_\_\_ the final draft by an external, i.e. someone that hasn't been involved in the preparation of the proposal
- Possible candidates:
  - A colleague
  - Your ERC support Office
  - An already successful applicant in ERC in your panel/research area
  - An external expert with a fee
  - Output: The final proposal ready to be submitted



#### Tip!



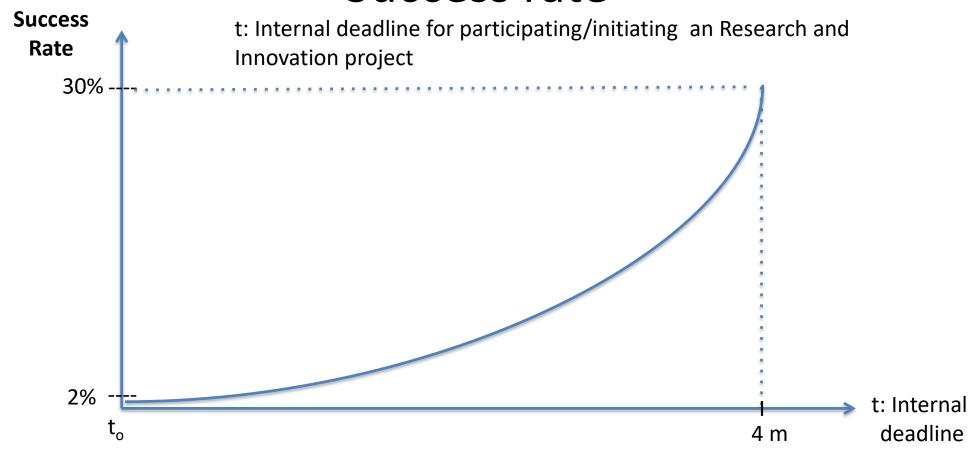
### Evaluation feedback should be critical and based on

- How convincing the proposal is against each subsection criterion
- On <u>weaknesses</u> on the approach based on the text provided
- Evaluation can <u>also</u> take place earlier on the proposal <u>summary and/or on the</u> <u>proposal idea</u>

#### You address the evaluation feedback and ...

- **S.** \_\_\_\_\_ the final proposal
- Send a thank you message to all partners/team members
- <u>Tidy-up</u> your office and e-folders
- Last but not least \_\_\_\_\_ with your team that supported you!

# Internal deadline for participating/initiating an R&I project vs Success rate



t<sub>o</sub>: Submission deadline/Internal deadline

Source: EARMA conference 2017

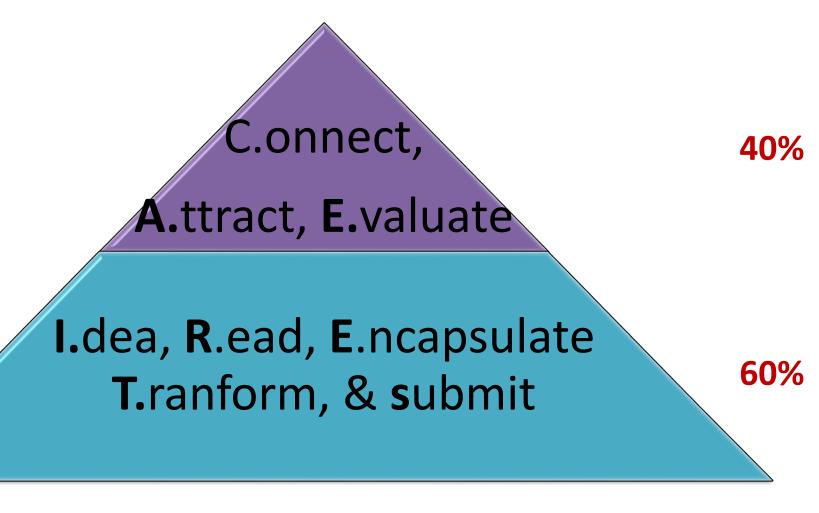
#### I.C.R.E.A.T.E.™ Timeline (thumb rule)

• t0>4 months: **Idea** to be worked • t0-4 months: Although **connecting& sharing** is a continuous process • t0-3 months: **Reading** and studying the suitable call • t0-2.5 months: **Encapsulating** and preparing the proposal summary • t0-2 months: Attracting Milestone: Finalise any collaborators/experts • t0-1.5 months: Transforming your proposal into a great one after the finalisation of the consortium • t0-1 week: **Evaluating** your proposal by an external and address their comments • t0 is Submission deadline

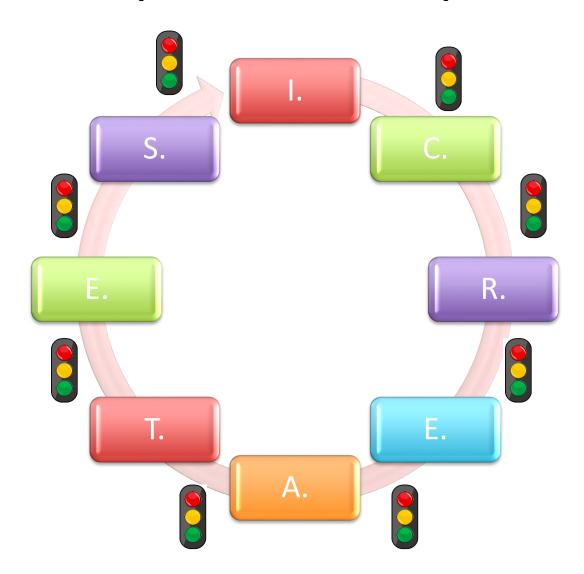




### As rule of tumb: Effort for reaching the top as ERC applicant



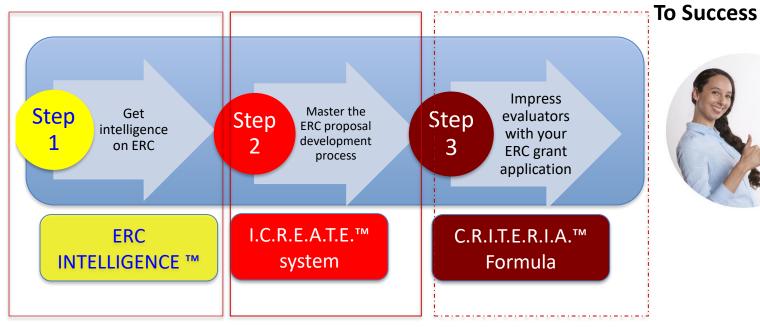
### The Full Proposal Development Cycle



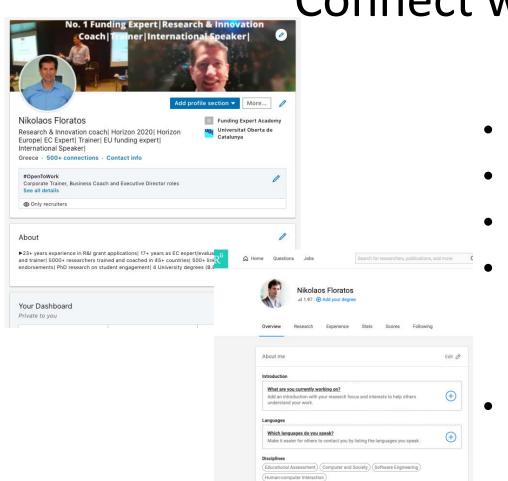
### Recipe for successful ERC applicants

#### **From Struggle**





Connect with me at



- www.linkedin.com/in/floratos/
- Email: <u>info@keyinnovation.co.uk</u>
- www.NikolaosFloratos.com
  - www.fundingexpert.academy

https://www.researchgate.net/pr ofile/Nikolaos Floratos

Skills and expertise (5)

Stats overview

24.8

Total Research Interest (

Social ... Marketing (Usability) (eLearning) (Accessibility) (Websites)

2 of your research items don't have full-texts yet

30

Citations

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