



Le call ERC 2015:

**informazioni pratiche per l'immediato
e strategie per il futuro**

Padova – 10 Ottobre 2014

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ERC

...equilibrio tra tre dimensioni:

- CV**
- Progetto**
- [10-year] track record**



L'Europa NON finanzia la «mia» ricerca

- **Elemento distintivo** del 7° Programma Quadro per la Ricerca dell'UE
- Creato nel 2007 dall'UE per rafforzare la ricerca fondamentale in Europa e le opportunità per i migliori talenti scientifici
- Budget FP7 – **7.5 Miliardi EUR per 7 anni** (2007-2013)
- Budget H2020 – **13 Miliardi EUR per 7 anni** (2014-2020)
- Peer review internazionale
- Aperto a ricercatori provenienti da qualsiasi parte del mondo...
 - ➔ ... che intendono lavorare in Europa



- Grant assegnati a **singoli** ricercatori
- **1 Progetto, 1 ricercatore, 1 istituto, 1 criterio di valutazione**
- Unico criterio di selezione: **eccellenza**
- Borse sostanziose (2,5 M€ per Advanced grant)
- Nessuna priorità tematica pre-definita ('su iniziativa dei ricercatori' – **bottom-up**); aperto a **tutti i settori della scienza**
- No network e no-cofinanziamento
- Portabilità del grant

*With the focus on the Principal Investigators, the concepts of the individual team is fundamentally different from that of a network or consortium of undertakings, universities, research centres or other legal entities. Proposals from such **consortia** should not be submitted to the ERC.*



L'ERC offre:

- **Libera scelta** dell'area di ricerca, dell'istituzione ospitante e dei membri del team (europei e non)
- **Autonomia finanziaria** per 5 anni
- Possibilità di negoziare le migliori condizioni di lavoro con le istituzioni ospitanti
- Mobilità dei ricercatori ovunque in Europa (**portability of grants**)
- Un "marchio di qualità" per **attrarre finanziamenti aggiuntivi e ottenere riconoscimento**
- Procedure semplici e burocrazia "leggera"





I bandi ERC 2015 in breve

	<i>Starting Grant</i>	<i>Consolidator Grant</i>	<i>Advanced Grant</i>	<i>Proof of Concept Grant</i>
<i>Call identifier</i>	ERC-2015-StG	ERC-2015-CoG	ERC-2015-AdG	ERC-2015-PoC
<i>Call Opens</i>	7 October 2014	13 November 2014	10 February 2015	7 November 2014
<i>Deadline(s)</i>	3 February 2015	12 March 2015	2 June 2015	5 February 2015 28 May 2015 1 October 2015
<i>Budget million EUR (estimated number of grants)</i>	430 (330)	585 (330)	630 (280)	20 (130)
<i>Planned dates to inform applicants</i>	7 July 2015 12 November 2015	6 August 2015 20 January 2016	18 November 2015 16 March 2016	1 May 2015 1 October 2015

2014
370 – 400 – 200

PE1 Mathematics

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

PE2 Fundamental Constituents of Matter

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

PE3 Condensed Matter Physics

Structure, electronic properties, fluids, nanosciences, biophysics.

PE4 Physical and Analytical Chemical Sciences

Analytical chemistry, chemical theory, physical chemistry/chemical physics.

PE5 Synthetic Chemistry and Materials

Materials synthesis, structure-properties relations, functional and advanced materials, molecular architecture, organic chemistry.

PE6 Computer Science and Informatics

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

PE7 Systems and Communication Engineering

Electronic, communication, optical and systems engineering.

PE8 Products and Processes Engineering

Product design, process design and control, construction methods, civil engineering, energy systems, material engineering.

PE9 Universe Sciences

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

PE10 Earth System Science

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

<i>Call ERC</i>	<i>Budget [M€]</i>	<i>Proposals Evaluated</i>	<i>Funded</i>	<i>Success rate %</i>	<i>Success rate IT %</i>	<i>Average Grant [M€]</i>
<i>Starting Grant 2007</i>	335	8.787	299	3,40	1,59	1,12
<i>Starting Grant 2009</i>	325	2.392	245	10,24	4,31	1,33
<i>Starting Grant 2010</i>	580	2.767	436	15,76	6,30	1,33
<i>Starting Grant 2011</i>	660	4.005	486	12,13	6,11	1,36
<i>Starting Grant 2012</i>	730	4.652	566	12,17	6,68	1,29
<i>Starting Grant 2013 *</i>	400	3.266	300	9,22	2,97	1,33
<i>Consolidator Grant 2013</i>	575	3.604	312	8,66	-	1,84
<i>Totale Starting Grant</i>	3.605	29.473	2.644	8,97	3,28	1,36
<i>Advanced Grant 2008</i>	517	2.034	282	13,86	6,83	1,83
<i>Advanced Grant 2009</i>	490	1.526	245	16,06	6,76	2,00
<i>Advanced Grant 2010</i>	590	1.967	271	13,78	8,13	2,18
<i>Advanced Grant 2011</i>	660	2.245	301	13,41	8,24	2,19
<i>Advanced Grant 2012</i>	680	2.269	319	14,06	5,34	2,13
<i>Advanced Grant 2013</i>	662	2.363	284	12,02	7,98	2,33
<i>Totale Advanced Grant</i>	3.599	12.404	1.702	13,72	7,13	2,11
<i>Totale</i>	7.204	41.877	4.346	10,38	4,76	1,66

<i>Nazione</i>	<i>Tasso di successo [%]</i>	<i>No. progetti [Host Institution]</i>	<i>% progetti</i>	<i>Contributo finanziario €</i>	<i>% contributo finanziario</i>
GRAN BRETAGNA	13,96	849	22,3%	1.353.043.543	22,4%
GERMANIA	12,94	542	14,3%	914.746.816	15,2%
FRANCIA	15,72	480	12,6%	743.993.094	12,3%
OLANDA	14,36	313	8,2%	527.651.831	8,7%
SVIZZERA	22,95	286	7,5%	483.288.769	8,0%
ISRAELE	17,24	220	5,8%	334.254.457	5,5%
SPAGNA	7,08	203	5,3%	308.288.667	5,1%
ITALIA	4,76	210	5,5%	290.329.668	4,8%
SVEZIA	9,10	139	3,7%	231.535.503	3,8%
BELGIO	11,82	129	3,4%	184.985.110	3,1%
AUSTRIA	13,46	98	2,6%	148.673.877	2,5%
DANIMARCA	10,10	70	1,8%	117.201.285	1,9%
FINLANDIA	5,49	60	1,6%	93.546.575	1,6%
NORVEGIA	7,18	35	0,9%	66.406.327	1,1%
GRECIA	3,53	33	0,9%	48.912.195	0,8%
IRLANDA	6,08	32	0,8%	45.585.809	0,8%
UNGHERIA	7,61	32	0,8%	40.490.886	0,7%
PORTOGALLO	5,35	25	0,7%	37.742.631	0,6%
POLONIA	1,98	15	0,4%	18.256.936	0,3%
CIPRO	5,80	9	0,2%	12.999.766	0,2%
REP. CECA	3,15	7	0,2%	9.786.193	0,2%
TURCHIA	1,25	3	0,1%	4.990.540	0,1%
ESTONIA	6,52	3	0,1%	4.259.297	0,1%
CROAZIA	2,82	2	0,1%	3.254.897	0,1%
BULGARIA	2,07	3	0,1%	2.722.739	0,0%
ISLANDA	2,70	1	0,0%	2.399.634	0,0%
SLOVENIA	0,91	2	0,1%	1.999.082	0,0%
LETTONIA	3,45	1	0,0%	1.360.980	0,0%
SLOVACCHIA	1,06	1	0,0%	1.155.970	0,0%
TOTALE	10,78	3.803	100,0%	6.033.863.077	100,0%

<i>PE2 - Fundamental constituents of matter</i>			
<i>Call ERC</i>	<i>Funded</i>	<i>IT</i>	<i>% IT</i>
<i>Starting Grant 2007</i>	-	-	-
<i>Starting Grant 2009</i>	11	0	0,00
<i>Starting Grant 2010</i>	24	3	12,50
<i>Starting Grant 2011</i>	28	2	7,14
<i>Starting Grant 2012</i>	32	5	15,63
<i>Starting Grant 2013 *</i>	15	2	13,33
<i>Consolidator Grant 2013</i>	19	1	5,26
<i>Totale Starting Grant</i>	129	13	10,08
<i>Advanced Grant 2008</i>	14	1	7,14
<i>Advanced Grant 2009</i>	12	3	25,00
<i>Advanced Grant 2010</i>	17	3	17,65
<i>Advanced Grant 2011</i>	19	1	5,26
<i>Advanced Grant 2012</i>	17	1	5,88
<i>Advanced Grant 2013</i>	18	1	5,56
<i>Totale Advanced Grant</i>	97	10	10,31
<i>Totale</i>	226	23	10,18

AdG basati in Italia: 109

SubPa nel	Title	Acronym	PI	HI	Grant
ID1	Molecular Nanotechnology for Life Science Applications: QUantitative Interactomics for Diagnostics, PROteomics and QUantitative Oncology	QUIDPROQUO	Giacinto Scoles	Udine	€ 2.979.700
ID1	Novel variation in plant breeding and the plant pan-genomes	NOVABREED	Michele Morgante	Udine	€ 2.473.500
ID1	Epigenetics and microRNAs in Myocardial Function and Disease	CARDIOEPIGEN	Gianluigi Condorelli	Humanitas Mirasole SPA	€ 2.500.000
ID1	Molecular mechanisms of the regulation of mammary stem cell homeostasis and their subversion in cancer	MAMMASTEM	Paolo Di Fiore	IFOM	€ 2.274.862
ID1	Optimization and inference algorithms from the theory of disordered systems: theoretical challenges and applications to large-scale inverse problems in systems biology	OPTINF	Riccardo Zecchina	Politecnico di Torino	€ 1.260.104
PE1	Analytic techniques for geometric and functional inequalities	ANTEGEFI	Nicola Fusco	Napoli Federico II	€ 600.000
PE1	Frobenius Manifolds and Hamiltonian Partial Differential Equations	FROM-PDE	Boris Dubrovin	SISSA	€ 864.000
PE1	Quasistatic and Dynamic Evolution Problems in Plasticity and Fracture	QUADYNEVOPRO	Gianni Dal Maso	SISSA	€ 968.500
PE1	Macroscopic laws and dynamical systems	MALADY	Carlangelo Liverani	Roma Tor Vergata	€ 1.372.720
PE1	Operator algebras and conformal field theory	OACFT	Roberto Longo	Roma Tor Vergata	€ 1.044.750
PE1	Phase transitions in random evolutions of large-scale structures	PTRELSS	Fabio Martinelli	Roma Tre	€ 1.248.067
PE1	Geometric Measure Theory in non-Euclidean spaces	GEMETHNES	Luigi Ambrosio	SNS Pisa	€ 749.800
PE1	Integral and Algebraic Points on Varieties, Diophantine Problems on Number Fields and Function Fields	DIOPHANTINE PROBLEMS	Umberto Zannier	SNS Pisa	€ 928.500
PE1	Complex Patterns for Strongly Interacting Dynamical Systems	COMPAT	Susanna Terracini	Torino	
PE10	AFRICA-GHG: The role of African tropical forests on the Greenhouse Gases balance of the atmosphere	AFRICA-GHG	Riccardo Valentini	Centro Euro-Mediterraneo per i cambiamenti climatici	€ 2.406.950
PE10	How long have human activities been affecting the climate system?	EARLYHUMANIMPACT	Carlo Barbante	Ca' Foscari Venezia	€ 2.370.767
PE2	Low-background underground cryogenic installation for elusive rates	LUCIFER	Fernando Ferroni	INFN	€ 3.294.400
PE2	SOX: Short distance neutrino Oscillations with BoreXino	SOX	Marco PALLAVICINI	INFN	€ 3.451.600
PE2	The Electron Capture Decay of ¹⁶³Ho to Measure the Electron Neutrino Mass with sub-eV sensitivity	HOLMES	Stefano Ragazzi	INFN	€ 3.057.067
PE2	Nano Photonics-Based Micro Robotics	PHOTBOTS	Diederik Wiersma	LENS	€ 2.200.000
PE2	Disorder physics with ultracold quantum gases	DISQUA	Massimo Inguscio	LENS	€ 2.500.000
PE2	Electron-scale dynamics in chemistry	ELYCHE	Mauro Nisoli	Politecnico di Milano	€ 2.446.200
PE2	Critical Phenomena in Random Systems	CRIPHERASY	Giorgio Parisi	Roma La Sapienza	€ 2.098.800
PE2	Electroweak Symmetry Breaking, Flavor and Dark Matter: One Solution for Three Mysteries	DAMESYFLA	Guido Martinelli	SISSA	€ 1.439.400
PE2	Quantum Gases Beyond Equilibrium	QGBE	Sandro Stringari	Trento	€ 1.638.560

SubPa nel	Title	Acronym	PI	HI	Grant
PE3	Sound-Light Manipulation in the Terahertz	SoulMan	Alessandro TREDICUCCI		CNR
PE3	Modeling the Physics of Nano-Friction	MODPHYSFRICT	Erio Tosatti	SISSA	€ 1.550.000
PE3	Patchy colloidal particles: a powerful arsenal for the fabrication of tomorrow new super-molecules. A theoretical and numerical study of their assembly processes	PATCHYCOLLOIDS	Francesco Sciortino	Roma La Sapienza	€ 1.559.159
PE3	Molecular Nanomagnets at Surfaces: Novel Phenomena for Spin-based Technologies	MOLNANOMAS	Roberta Sessoli	Firenze	€ 2.269.200
PE4	Structure and dynamics of biomolecules by two-dimensional ultraviolet spectroscopy	STRATUS	Giulio Cerullo	Politecnico di Milano	€ 2.493.000
PE5	Neuron Networking with Nano Bridges via the Synthesis and Integration of Functionalized Carbon Nanotubes	CARBONANOBRIDGE	Maurizio Prato	Trieste	€ 2.500.000
PE5	Development of a Research Environment for Advanced Modelling of Soft matter	DREAMS	Vincenzo Barone	SNS Pisa	€ 2.152.600
PE5	Patterning the surface of monolayer-protected nanoparticles to obtain intelligent nanodevices	MOSAIC	Fabrizio Mancin	Padova	€ 1.499.000
PE6	Multiscale Thermal Management of Computing Systems	MULTIHERMAN	Luca Benini	Bologna	€ 2.483.397
PE6	Open intelligent systems for future autonomous vehicles	OFAV	Alberto Broggi	Parma	€ 1.751.066
PE6	Self-managing situated computing	SMSCOM	Carlo Ghezzi	Politecnico di Milano	€ 2.544.156
PE6	Search computing	SECO	Stefano Ceri	Politecnico di Milano	€ 2.500.000
PE6	Foundations for Software Evolution	LUCRETIUS	John Mylopoulos	Trento	€ 2.462.095
PE7	Robotic Dynamic Manipulation	RODYMAN	Bruno Siciliano	CREATE	€ 2.496.600
PE7	A Theory of Soft Synergies for a New Generation of Artificial Hands	SOFT HANDS	Antonio Bicchi	IIT	€ 2.279.600
PE8	Size effects in fracture and plasticity	SIZEEFFECTS	Stefano Zapperi	CNR	€ 2.500.000
PE8	Isogeometric Methods for Biomechanics	ISOBIO	Alessandro Reali	Pavia	€ 1.195.200
PE8	New eddy-simulation concepts and methodologies for frontier problems in ...	NEWTURB	Luca Biferale	Roma Tor Vergata	€ 1.986.000
PE8	Instabilities and nonlocal multiscale modelling of materials	INSTABILITIES	Davide Bignoni	Trento	
PE8	Cavitation across scales: following Bubbles from Inception to Collapse	BIC	Carlo Casciola	Roma La Sapienza	
PE8	Multiscale modeling and simulation of biological and artificial locomotion at the micron scale: from metastatic tumor cells and unicellular swimmers to bioinspired microrobots	MicroMotility	Antonio De Simone	SISSA	€ 1.302.270
PE9	Star clusters as cosmic laboratories for Astrophysics, Dynamics and Fundamental Physics	COSMIC-LAB	Francesco Ferraro	Bologna	€ 1.880.000
PE9	ILLUMINATING DARK ENERGY WITH THE NEXT GENERATION OF COSMOLOGICAL REDSHIFT SURVEYS	DARKLIGHT	Luigi Guzzo	INAF	€ 1.723.600

SubPanel	Title	Acronym	PI	HI	Grant
ID1	Probabilistic And Statistical methods for Cosmological Applications	PASCAL	Domenico Marinucci	Roma Tor Vergata	€ 1.193.000
PE1	Hamiltonian partial differential equations: new connections between	HAMILTONIANPDES	Massimo Berti	Napoli Federico II	€ 400.000
PE1	Vectorial elliptic, parabolic and variational problems: singularities and	VECTORIAL PROBLEMS	Giuseppe Mingione	Parma	€ 500.000
PE1	Hyperbolic Systems of Conservation Laws: singular limits, properties o	CONLAWS	Stefano Bianchini	SISSA	€ 422.000
PE1	Hamiltonian PDE's and small divisor problems: a dynamical systems ap	HAMPDES	Michela Procesi	Roma La Sapienza	€ 678.000
PE1	Developing and Applying Structural Techniques for Combinatorial Obj	DASTCO	Paul Wollan	Roma La Sapienza	€ 850.000
PE1	Holomorphic Evolution Equations	HEVO	Filippo Bracci	Roma Tor Vergata	€ 700.000
PE1	Collective phenomena in quantum and classical many body systems	COMBOS	Alessandro Giuliani	Roma Tre	€ 650.000
PE1	Innovative compatible discretization techniques for partial differentia	GEPDES	Annalisa Buffa	CNR	€ 750.000
PE1	Mathematics for shape memory technologies in biomechanics	BIOSMA	Ulisse Stefanelli	CNR	€ 700.000
PE1	Entropy formulation of evolutionary phase transitions	ENTROPHASE	Elisabetta Rocca	Milano	€ 659.784
PE1	Elliptic Pdes and Symmetry of Interfaces and Layers for Odd Nonlinear	EPSILON	Enrico Valdinoci	Milano	€ 850.000
PE1	Stability and wall-crossing in algebraic and differential geometry	STABAGDG	Jacopo Stoppa	Pavia	€ 511.936
PE1	New directions in Bayesian Nonparametrics	N-BNP	Igor Pruenster	Collegio Carlo Alberto	€ 957.939
PE1	Space-Time Methods for Multi-Fluid Problems on Unstructured Meshe	STIMULUS	Michael Dumbser	Trento	€ 918.000
PE1	Highly accurate Isogeometric Method	HIGEOM	SANGALLI Giancarlo	Pavia	
PE2	Dynamics of the Quark-Gluon Plasma: A Journey into new phases of th	QGPDYN	Vincenzo Greco	Catania	€ 655.000
PE2	Light and complexity	COMLEXLIGHT	Claudio Conti	CNR	€ 1.085.000
PE2	Ultrafast Dynamic Imaging of Complex Molecules	UDYNI	Caterina Vozzi	CNR	€ 1.483.967
PE2	Polariton condensates: from fundamental physics to quantum based d	POLAFLOW	Daniele Sanvitto	CNR	€ 1.482.600
PE2	Quantum simulation of two-dimensional fermionic systems	QUFERM2D	Giacomo Roati	CNR	€ 1.243.200
PE2	New generation of high sensitive atom interferometers	AISENS	Marco Fattori	CNR	€ 1.068.000
PE2	The Flavour of New Physics	NPFLAVOUR	Luca Silvestrini	INFN	€ 1.258.920
PE2	Low-probability, large fluctuations of the noise in detectors of gravitat	RARENOISE	Livia Conti	INFN	€ 1.000.000
PE2	Quantum gases of ultracold polar molecules	QUPOL	Giovanni Modugno	LENS	€ 1.230.000
PE2	Quantum-Enhanced Sensors with Single Spins	Q-SEnS2	Paola Cappellaro	LENS	
PE2	The Structure of the Extra Dimensions of String Theory	XD-STRING	Alessandro Tomasiello	Milano Bicocca	€ 679.200
PE2	ENTANGLING AND DISENTANGLING EXTENDED QUANTUM SYSTEMS IN	EDEOS	Pasquale Calabrese	Pisa	€ 1.108.000
PE2	3D-Quantum Integrated Optical Simulation	3D-QUEST	Fabio Sciarino	Roma La Sapienza	€ 1.474.800
PE2	Cryogenic wide-Area Light Detectors with Excellent Resolution	CALDER	Marco Vignati	Roma La Sapienza	€ 1.176.758
PE2	Challenging General Relativity	CGR2011TPS	Thomas Sotiriou	SISSA	€ 1.375.226
PE2	Crystal channeling to extract a high energy hadron beam from an accel	CRYSBEAM	CAVOTO Gianluca	INFN	

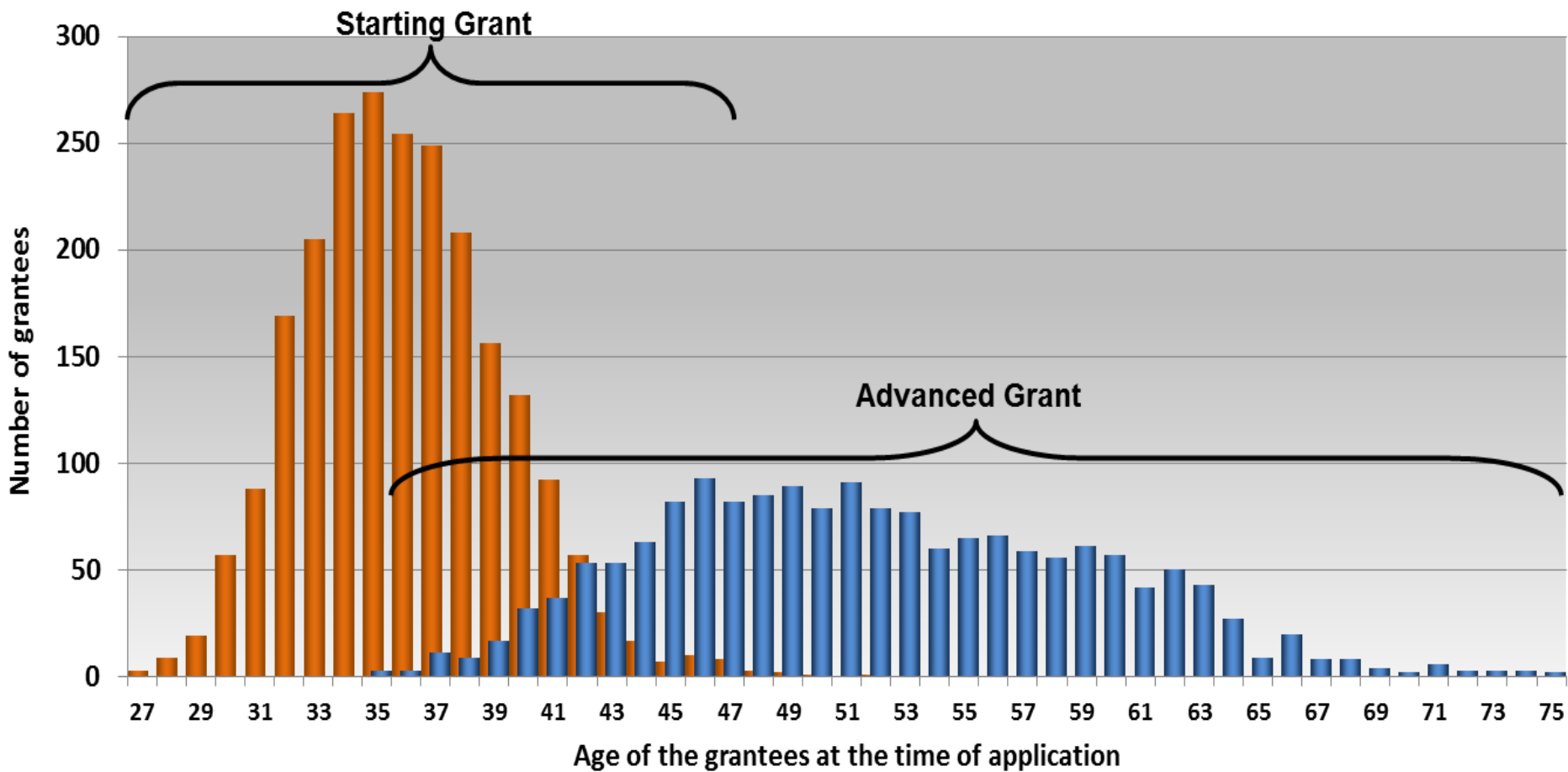
SubPanel	Title	Acronym	PI	HI	Grant
PE3	TIME-resolved spectroscopy of nanoscale dynamics in condensed matter	TIMER	Claudio Mastrocchio	Sincrotrone Trieste	€ 1.792.800
PE3	Understanding high-temperature superconductivity from the foundation	SUPERBAD	Massimo Capone	CNR	€ 1.000.000
PE3	Femtosecond Raman Spectroscopy: ultrafast transformations in physics	FEMTOSCOPY	Tullio Scopigno	Roma	€ 1.544.400
PE3	Statistical Mechanics of Active Matter	SMART	Roberto Di Leonardo	Roma La Sapienza	€ 1.448.400
PE3	DROPLETS AND EMULSIONS: DYNAMICS AND RHEOLOGY	DROEMU	Mauro Sbragaglia	Roma Tor Vergata	€ 1.170.923
PE3	Neuro-Plasmonics		DE ANGELIS Francesco	IIT	
PE3	Coherent manipulation and control of heat in solid-state nanostructures	COMANCHE	GIAZOTTO Francesco	CNR	
PE4	Breaking inversion symmetry in magnets: understand via theory	BISMUTH	Silvia Picozzi	CNR	€ 684.000
PE4	Small ribonucleic acids in silico	S-RNA-S	Giovanni Bussi	SISSA	€ 1.295.700
PE4	Electronic Structure of Chemical, Biochemical, and Biophysical Systems	MUTISCALECHEM BIO	Leonardo Guidoni	Roma La Sapienza	€ 1.200.000
PE4	Development of density functional theory methods for organic materials	DEDOM	Fabio Della Sala	CNR	€ 1.250.000
PE4	The interplay between quantum coherence and environment in the photosynthesis	ENLIGHT	Benedetta Mennucci	Pisa	€ 1.300.000
PE4	Quantum-coherent drive of energy transfer along helical structures by	QUENTRHEL	Elisabetta Collini	Padova	€ 1.479.480
PE5	Silicon nanocrystals coated by photoactive molecules: a new class of optoelectronic materials	PHOTOSI	Paola Ceroni	Bologna	€ 182.606
PE5	Assembly of colloidal nanocrystals into unconventional types of nanostructures	NAONO-ARCH	Liberato Manna	IIT	€ 1.299.960
PE5	Folding with Halogen Bonding	FODHALO	Pierangelo Metrangolo	Politecnico di Milano	€ 1.393.000
PE5	Dynamic covalent capture: Dynamic chemistry for biomolecular recognition	DYCOCA	Leonard Jan Prins	Padova	€ 1.400.000
PE5	Folding with Halogen Bonding	FOLDHALO	Pierangelo Metrangolo	POLITECNICO DI MILANO	€ 1.393.000
PE5	Advancing the Study of Chemical, Structural and Surface Transformations	TRANS-NANO	MANNA Liberato	IIT	
PE6	Multilingual Joint Word Sense Disambiguation	MULTIJEDI	Roberto Navigli	Roma La Sapienza	€ 1.288.400
PE6	New Approaches to Network Design	NEWNET	Fabrizio Grandoni	Roma Tor Vergata	€ 1.122.199
PE7	Video-oriented UWB-based Intelligent Ubiquitous Sensing	VISION	Dajana Cassioli	Aquila	€ 1.173.680
PE7	Galaxies through the cosmic ages: the role of primordial conditions and evolution	STGDELUCIA2007	Gabriella De Lucia	INAF	€ 750.000
PE7	Towards compressive information processing systems	CRISP	Enrico Magli	Politecnico di Torino	€ 1.390.000
PE7	PHOtonic-based full Digital Radar	PHODIR	Antonella Bogoni	CNIT	€ 1.600.000
PE8	Uncovering the secrets of an earthquake: multidisciplinary study of physical processes	USEMS	Giulio Di Toro	INGV	€ 1.992.000
PE8	Morphing Locally and Globally Structures with Multiscale Intelligence	MORPHOSIS	Giulia Lanzara	Roma Tre	€ 1.664.600
PE8	Multi-field and multi-scale Computational Approach to design and durability	CA2PVM	Marco Paggi	Politecnico di Torino	€ 1.483.980
PE8	Next-generation polymer nanofibers: from electrified jets to hybrid organic-inorganic materials	NANO-JETS	Dario Pisignano	Salento	€ 1.491.823
PE8	Mechanical modeling of interfaces in advanced materials and structures	INTERFACES	Laura De Lorenzis	Salento	€ 1.399.087
PE8	Bio-inspired Hierarchical Super Nanomaterials	BIHSNAM	Nicola Pugno	Trento	€ 1.004.400
PE8	Engineering Discoidal Polymeric Nanoconstructs for the Multi-Physics	POTENT	DECUZZI Paolo	IIT	
PE8	Non classical rarefaction shock-waves in molecularly complex vapours	NSHOCK	GUARDONE Alberto	Politecnico di Milano	
PE9	Gravitational Lensing as a Cosmological Probe	GLENCO	Benton Metcalf	Bologna	€ 1.500.000
PE9	The Intergalactic Medium as a Cosmological Tool	COSMOIGM	Matteo Viel	INAF	€ 891.400
PE9	The first stars and galaxies	FIRST	Raffaella Schneider	INAF	€ 882.807
PE9	Solving the TP-AGB STAR Conundrum: a KEY to Galaxy Evolution	STARKEY	MARIGO Paola	Padova	
PE10	Bridging the gap between Gas Emissions and geophysical observations	BRIDGE	Alessandro Aiuppa	Palermo	€ 1.496.222
PE10	CO2VOLC: Quantifying the global volcanic CO2 cycle	CO2VOLC	Michael Burton	INGV	€ 1.720.999
PE10	InteGrated Laboratories to investigate the mechanics of ASeismic vs. S	GLASS	Cristiano Collettini	INGV	€ 1.514.400
PE10	Inclusions in diamonds: messengers from the deep Earth	INDIMEDEA	Fabrizio Nestola	Padova	€ 1.423.464
PE10	New Outlook on seismic faults: From EARTHquake nucleation to arrest	NOFEAR	DI TORO Giulio	Padova	
PE10	A geochemical clock to measure timescales of volcanic eruptions	CHRONOS	PERUGINI Diego	Perugia	

	Starting Grant	Consolidator Grant	Advanced Grant
Specific Eligibility Criteria	Principal Investigator shall have been awarded his/her first PhD ≥ 2 and ≤ 7 years prior to 1 January 2015	Principal Investigator shall have been awarded his/her first PhD > 7 and ≤ 12 years prior to 1 January 2015	none

Maternità: 18 mesi per figlio fino a un massimo di 3 figli

Paternità: durata effettiva del congedo

Malattia: durata effettiva



A Principal Investigator may submit proposals to different ERC frontier research grant calls made under the same Work Programme, but only the first eligible proposal will be evaluated.

*A Principal Investigator whose proposal was evaluated as **category C** in the Starting, Consolidator or Advanced Grant calls for proposals under Work Programme 2014 may not submit a proposal to the Starting, Consolidator or Advanced Grant calls for proposals made under Work Programmes 2015 and 2016.*

*A Principal Investigator whose proposal was finally evaluated as **category B** in the Starting, Consolidator or Advanced Grant calls for proposals under Work Programme 2014 may not submit a proposal to the Starting, Consolidator or Advanced Grant calls for proposals made under Work Programme 2015.*

A researcher may participate as Principal Investigator or Co-Investigator¹⁴ in only one ERC frontier research project at any one time¹⁵.

A researcher participating as Principal Investigator in an ERC frontier research project may not submit a proposal for another ERC frontier research grant, unless the existing project ends¹⁶ no more than two years after the call deadline.

A Principal Investigator who is a serving Panel Member for a 2015 ERC call or who served as a Panel Member for a 2013 ERC call may not apply to a 2015 ERC call for the same type of grant¹⁷.

	Starting Grant	Consolidator Grant	Advanced Grant
Max EU contribution [€]	1.500.000 (+500.000)	2.000.000 (+750.000)	2.500.000 (+1.000.000)
Year max	5	5	5
Effort	> 50%	> 50%	> 30%

B.1 [1 pdf to be uploaded]

- Cover page: Tile, Acronym, Abstract, Panel, key words, interdiscip.?
- Extended synopsis [Max 5 pages]
- CV [Max 2 pages]
- Funding ID [no page limit] NEW
- Track record [Max 2 pages]

B.2 [1 pdf to be uploaded]

- Scientific proposal [Max 15 pages]
 - State of the art and objectives
 - Methodology
 - Resources (incl. Budget table)
- + Ethical issues table

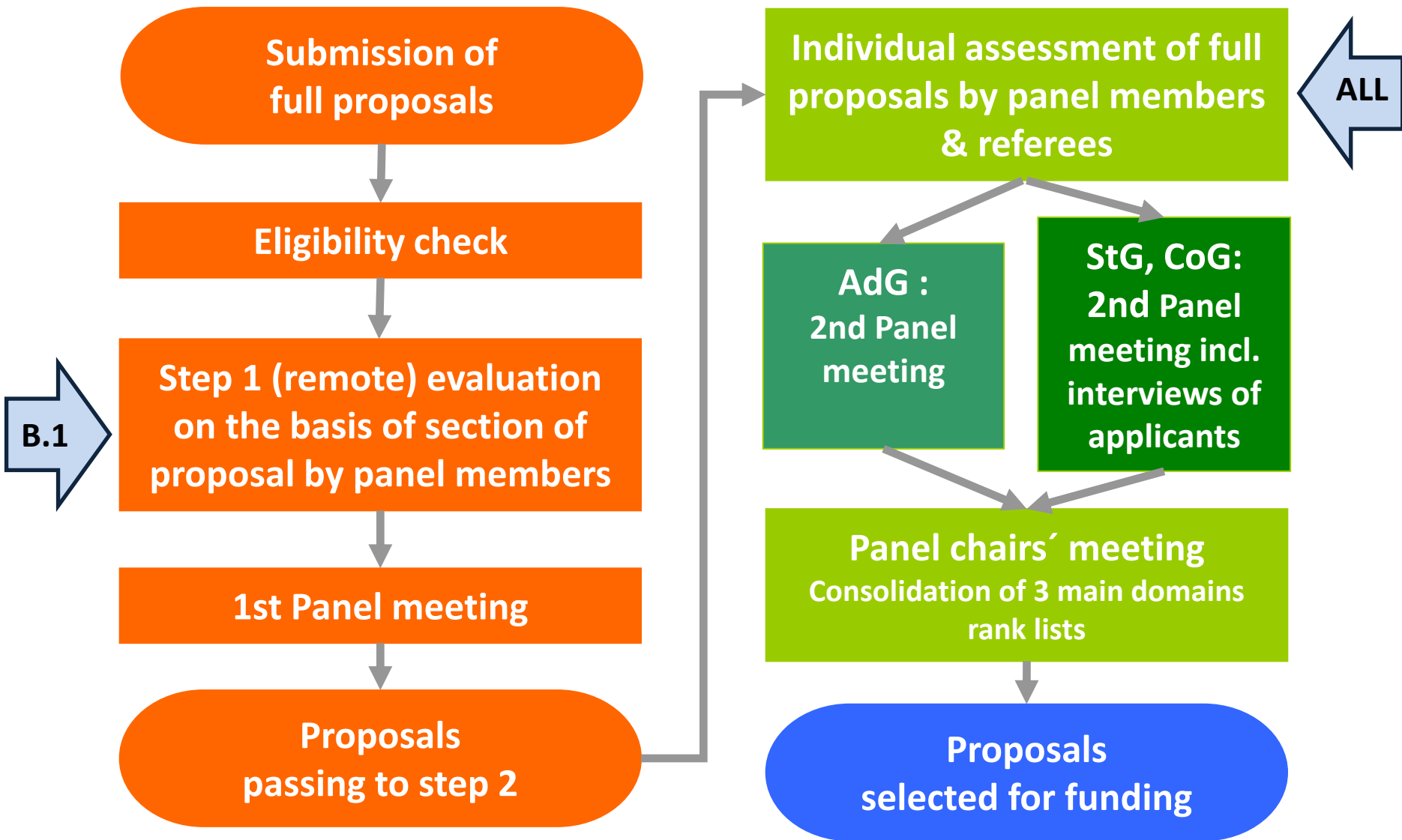
A [online only]

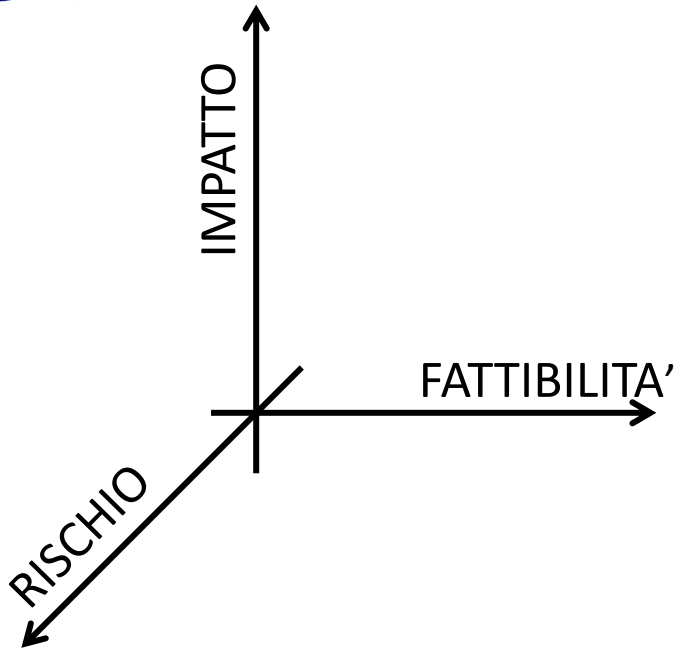
- A.1: proposal and PI info
- A.2 HI infos
- A.3 Budget

Annexes [pdfs to be uploaded]

- **PhD award**
- Maternity leaves (birth certificates) and other support documents
- Ethical issues annex (if needed)
- **Support letter of the HI**

Il processo di valutazione





IMPATTO:

- *ground-breaking research*
- *change the paradigms of the discipline*
- *pioneering proposals*
- *at the frontiers of knowledge*
- *set inspirational targets*

RISCHIO:

- *high-risk /high-gain projects*
- *unconventional innovative approaches*

FATTIBILITA':

- *excellent investigators*
- *scientific excellence is the sole criterion*

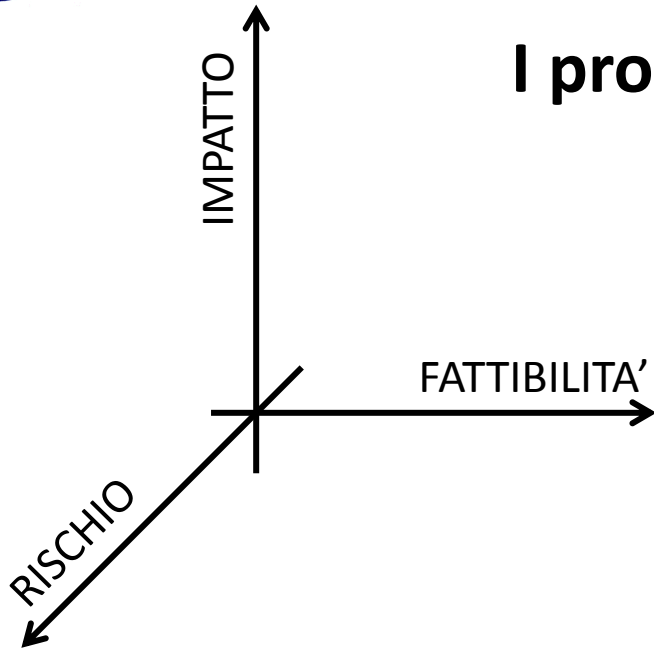
FATTIBILITA' VS RISCHIO:

- **NO** al **rischio «di partenza»** (eg. disponibilità dati, accesso ad apparecchiature, selezione di un team totalmente ex novo, prima volta nella gestione di risorse ingenti, coordinamento di più sedi di lavoro, cv «leggero», poca indipendenza PI, ...)
- **SI** al **rischio «di arrivo»** (i valutatori sanno che un programma di ricerca a 5 anni ha una probabilità di deviazione che cresce più che linearmente con il tempo)

L'Idea progettuale

I progetti ad alto rischio sono apprezzati,

ma è necessario spiegare:



che si è consapevoli dei rischi

come li si vuole affrontare

I potenziali benefici in termini di impatto

risultati intermedi interessanti

Prima di iniziare a scrivere, domande:

- Perché adesso è il momento giusto?
- Perché io sono la persona giusta?
- Perché l'ERC?
- Questa idea è fattibile? Quali sono i miei assets?
- Siamo nel 2020 a progetto terminato. Tutto è andato (ragionevolmente) bene. Cosa è cambiato nella mia disciplina? L'impatto è questionabile o un qualunque collega (di settori vicini) riconoscerebbe il valore di tale impatto?
- E' valso i soldi impegnati? Soldi pubblici? Il tuo tempo?

1. Research Project

Ground-breaking nature, ambition and feasibility

Starting, Consolidator and Advanced

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 across disciplines)?

To what extent is the proposed research high risk/high gain?

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 is the proposed research methodology 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 and resources necessary and properly justified (based on the full Scientific Proposal)?

Starting Grant profile

Objectives

ERC Starting Grants are designed to support excellent Principal Investigators at the career stage at which they are **starting their own independent research team or programme**. Applicant Principal Investigators **must demonstrate** the **ground breaking** nature, ambition and **feasibility** of their scientific proposal.

A competitive Starting Grant Principal Investigator **must have already shown the potential** for research independence **and evidence of maturity**. **For example**, it is expected that applicants will have produced **at least one important publication without the participation of their PhD supervisor**. Applicant Principal Investigators should also be able to demonstrate a **promising track record of early achievements** appropriate to their research field and career stage, including significant publications (as main author) in major international peer-reviewed multidisciplinary scientific journals, or in the leading international peer-reviewed journals of their respective field. They may also demonstrate a record of invited presentations in well-established international conferences, granted patents, awards, prizes etc.

Consolidator Grant profile

Objectives

ERC Consolidator Grants are designed to support excellent Principal Investigators at the career stage at which they **may still be consolidating their own independent research team or programme.** Applicant Principal Investigators must demonstrate the ground breaking nature, ambition and feasibility of their scientific proposal.

A competitive Consolidator Grant Principal Investigator **must have already shown** research independence and evidence of maturity. **For example,** it is expected that applicant Principal Investigators will have produced **several important publications without the participation of their PhD supervisor.** Applicant Principal Investigators should also be able to demonstrate a promising track record of early achievements appropriate to their research field and career stage, including significant publications (as main author) in major international peer-reviewed multidisciplinary scientific journals, or in the leading international peer-reviewed journals of their respective field. They may also demonstrate a record of invited presentations in well-established international conferences, granted patents, awards, prizes etc.

Advanced Grant profile

Objectives

Advanced Grants are designed to support excellent Principal Investigators at the career stage at which they are already established research leaders with a recognised track record of research achievements. Applicant Principal Investigators must demonstrate the ground breaking nature, ambition and feasibility of their scientific proposal.

Principal Investigators for the prestigious ERC Advanced Grant are expected to be active researchers and to have a track record of significant research achievements in the last 10 years which must be presented in the application. There is little prospect of an application succeeding in the absence of such a record, which identifies investigators as exceptional leaders in terms of originality and significance of their research contributions.

Thus, in most fields, Principal Investigators of Advanced Grant proposals will be expected to demonstrate a record of achievements appropriate to the field and at least matching one or more of the following benchmarks:

2. Principal Investigator

Intellectual capacity, creativity and commitment

Starting and Consolidator

Intellectual capacity and creativity

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

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

To what extent have the achievements of the PI typically gone beyond the state of the art?

Commitment

To what extent does the PI demonstrate the level of commitment to the project necessary for its execution and the willingness to devote a significant amount of time to the project (min 50% for Starting and 40% for Consolidator of the total working time on it and min 50% in an EU Member State or Associated Country) (based on the full Scientific Proposal)?

Advanced

Intellectual capacity and creativity

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

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

To what extent have the achievements of the PI typically gone beyond the state of the art?

To what extent has the PI demonstrated sound leadership in the training and advancement of young scientists?

Commitment

To what extent does the PI demonstrate the level of commitment to the project necessary for its execution and the willingness to devote a significant amount of time to the project (min 30% of the total working time on it and min 50% in an EU Member State or Associated Country) (based on the full Scientific Proposal)?

Per i giovani:

- Pubblicazioni senza il proprio PhD supervisor
- Primo nome (se è pratica) o nome singolo
- Titolarità di grants (anche «nei fatti»)
- Inviti a conferenze
- Premi
- Autonomia nel percorso di carriera (sia sedi fisiche sia ambiti di ricerca sia esperienze formative)

Per la tipologia di ricerca:

- Cogliere opportunità traslazionali o di ibridazione
- Individuare nicchie o percorsi «off track»

Budget (cenni)

Cost Category			Total in Euro	
Direct Costs ²	Personnel	PI		
		Senior Staff		
		Postdocs		
		Students		
		Other		
	<i>i. Total Direct Costs for Personnel (in Euro)</i>			
	Travel			
	Equipment			
	Other goods and services	Consumables		
		Publications (including Open Access fees), etc.		
		Other (please specify)		
<i>ii. Total Other Direct Costs (in Euro)</i>				
A – Total Direct Costs (i + ii) (in Euro)				
B – Indirect Costs (overheads) 25% of Direct Costs (in Euro)				
C1 – Subcontracting Costs (no overheads) (in Euro)				
C2 – Other Direct Costs with no overheads (in Euro)				
Total Estimated Eligible Costs (A + B + C) (in Euro)				
Total Requested EU Contribution (in Euro)				

E' bene suddividere questa sezione creando i seguenti paragrafi:

- **C1 The team:** dettagliare la composizione del team, anche individuando key persons o staff members; indicare eventuali coinvolgimenti di esperti esterni o altre istituzioni
- **C2 Budget table:** riempire la tabella dei costi – per progetti che prevedono un **Additional Participant** si dovranno preparare **due tabelle distinte per ciascuna istituzione più una tabella riepilogativa dei costi di entrambe**
- **C3 Budget details:** prevedere una sezione che dettagli voce per voce i costi relativi a ciascuna categoria di spesa

Budget (cenni)

Cost Category		Total in Euro	
	Personnel	PI (tipicamente un advanced si può inquadrare al livello di Dirigente di Ricerca)	Inserire costo in base alle tabelle stipendiali Infn (allegato in cartella) e in proporzione al commitment dichiarato sul progetto
		Senior Staff	E' possibile caricare parte di costi di personale INFN staff che collaborerà al progetto
		Postdocs	Costi per art. 23 o assegnisti da assumere al 100% sul progetto
		Students	L' Infn non può rilasciare certificati di dottorato, prevedere studenti nel progetto è possibile ma implica varie difficoltà (accordi con Università)
		Other	Contratti di collaborazione e eventuali costi per tecnici e amministrativi
Direct Costs¹	<i>i. Total Direct Costs for Personnel (in Euro)</i>		

PI CoG: indicativamente Primo ricercatore II fascia

PI StG: indicativamente Primo ricercatore I fascia

Budget (cenni)

<p>Travel</p>	<p>Spese di missione inerenti il progetto o per dissemination</p>
<p>Equipment</p>	<p>Beni inventariabili sono soggetti ad ammortamento (che resta a carico dell'INFN per la parte eccedente il periodo temporale del progetto)</p> <p>Possibilità di connotare gli acquisti come "prototipo" (in tal caso l'equipment afferisce alla categoria consumables rimborsabile al 100%)</p>

<p>Other goods and services</p>	<p>Consumables</p>	<p>Beni di consumo per il progetto</p>
	<p>Publications (including Open Access fees), etc.</p>	<p>Eventuali costi di pubblicazioni</p>
	<p>Other (please specify)</p>	<p>Cfs costs(audit I livello obbligatorio), spese per collaborazioni o visiting scientist comprensivi dei loro costi di missione</p>