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7 years of Excellence in the European Research Area 2007-2013

the case of GREECE

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This publication belongs to the series of special reports and studies issued by the National Documentation Centre, with empirical data, analyses and indicators that highlight important aspects of national research activity and illustrate the results of research entities in the Greek Research and Development System.

The data used are drawn from official sources of the European Commission as well as from empirical data collected by the National Documentation Centre through its function as National Contact Point for FP7 and its exercise of various activities in the field of Research, Development and Innovation.

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It is with great pleasure that we introduce the 2nd edition of the Intelligence Report for the ERC Programme from 2007 to 2013 which is being produced as part of the activities that the National Documentation Centre of Greece (EKT) undertakes as a National Contact Point for the 7th Framework Programme for Research and Technological Development (FP7) of the European Commission. With this report we aim to present empirical data derived from institutional experience and expertise and contribute to the process of highlighting research activity and excellence in Greece.

Based on its statutory role for the collection, organization and distribution of scientific data and information, EKT undertakes a broad range of projects and activities which aim to enable open access to, and dissemination of, research results and support the needs of policy makers as well as the academic and research community in the Greek area of Research and Innovation (R&I). To this end, our strategic priorities are based on 3 axes: Content – Metrics – Knowledge Transfer.

In the "content" domain, our activities aim at providing access and improving the quantity and quality of reliable digital content, as well as the reuse of reliable knowledge in development initiatives for research, the economy, education and culture.

In the "metrics" area we produce the official national statistics for Reseasch and Innovation along with a wide range of indicators for research, technology, development and innovation in Greece so as to make them available to international organisations and to support the generating of evidence based policies.

Finally, EKT fosters innovation and sustainable development by supporting Greek entrepreneurship, especially the knowledge-intensive creative industries, as well as their interconnection with research and innovation, through knowledge transfer activities.

Since 1998, EKT has been acting as a National Contact Point from the Fifth to the Seventh FPs, providing comprehensive information and support to Greek research teams. EKT disseminates findings and results which emerge in the course of European projects, through regular Intelligence Reports which aim to present the objectives, results, impact, activities, assessments and achievements as well as the technical and policy implications of the actions which are either completed or in progress. This realm covers EU-supported research as well as key research activities at the national level in the European Research Area, and other European projects. The present report belongs to this set of publications.

The IDEAS Programme of the European Research Council, commonly known as the Programme of Excellence, has been recognized as the success story of FP7. This Programme provided the focus for the first of our series of "intelligence reports" on FP7 - a valuable tool for the exploitation and analysis of data which emerges from the implementation of the European projects in Greece. The IDEAS Programme supports investigator-driven, frontier research that may be carried out in any field of research across the entire spectrum of disciplines. Excellence is the sole criterion for funding. The Programme is being implemented by the European Research Council (ERC) according to the principles of scientific excellence, autonomy, efficiency, transparency and accountability.

The 2nd edition of the report, entitled "7 years of excellence in the European Research Area 2007-2013: the case of Greece" provides a detailed analysis of the ERC and the IDEAS Programme under the 7th Framework Programmes, their achievements and their impact on the European Research Area. It focuses on the Greek case, demonstrating results on the Greek Research and Innovation landscape. Findings are indicative of the excellence of the Greek scientific and academic community in terms of ERC success.

In a remarkably short time, the ERC has gained widespread recognition as a world-class research funding agency and it has been a catalyst of change for the member states, setting high standards for the development of national and institutional research strategies, policies and practices. The first part of the report introduces the European Research Council and its vision of placing excellent, bottom-up, exploratory research at the heart of European research system.

The ERC has also gained a central place in the Europe 2020 strategy for growth and in the Innovation Union Strategy for promoting Europe's economic recovery, global competiveness and social prosperity. Boosting the budget dedicated to top-rate researchers, and especially younger talents, is a key instrument for stimulating the competiveness and growth needed for Greece's economic recovery.

The second part presents detailed information and statistics (success rates, distribution of funds) regarding the proposals submitted to the ERC in response to ERC Calls. In the third part, the focus is on the evidence and indicators of excellence which describe the landscape for Research & Innovation in Greece. Data obtained from the IDEAS Programme (such as patterns of mobility, gender distribution) are distributed along with charts, tables and figures which point to the major achievements of the ERC in the European Research Area and particularly those achievements that concern Greece. Attention is given to ERC operational performance, its direct and structural impact in terms of effects on research actions, research policies and funding structures.

Lastly, the report highlights the role of the National Documentation Centre of Greece as a National Contact Point for the 7th Framework Programme, its activities and achievements, and finishes with the future of the ERC in the frame of Horizon 2020.

This report is based on data collected by EKT, as the Programme's National Contact Point, from documents and information available on the ERC website http//erc.europa.eu (such as ERC annual reports and press releases) and statistics kindly provided by the European Research Council Executive Agency (ERCEA). Special thanks should be given to Dr Theodore Papazoglou (Head of UNIT A1- Support to the ERC Scientific Council of the ERCEA) for his constant support and guidance and to all ERC grantees and evaluators in Greece for sharing their invaluable expertise with potential Greek ERC applicants at relevant information days and workshops.

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1. ERC & the IDEAS Programme

The IDEAS programme supports investigator-driven, frontier research that may be carried out in any field of research across the entire spectrum of disciplines (apart from nuclear energy research), without predetermined priorities. Projects are implemented by "individual teams" led by a "principal investigator" (PI). Excellence is the sole criterion for funding, and the peer review criteria are the excellence of the PI and the excellence of the research project. The IDEAS programme is implemented by the European Research Council (ERC) according to the principles of scientific excellence, autonomy, efficiency, transparency and accountability.

The ERC (1) is the first pan-European funding agency for investigator-driven frontier research and has been a member of the Global Research Council since its inception in May 2012. The ERC was set up in 2007 under the EU's 7th Framework Programme for Research & Development (FP7) - the main instrument for funding research in Europe, running from 2007 to 2013. The total budget of the ERC is 7.5 billion €, spread over a period of seven years, representing 15% of the entire FP7 budget.

The ERC was the newest pioneering component of FP7 (2) and displayed notable differences with other EU R&D programmes. ERC funding schemes are not based on traditional policy-driven priorities of the European Research Area such as transnational cooperation, thematic priorities, or national and geographical quotas, and supports research of a qualitatively different nature by encouraging excellent bottom-up projects at the cutting edge of science.

Today there is no clear distinction between 'basic' and 'applied' research due to the fact that emerging areas of science and technology often cover substantial elements of both. Even the boundaries between advancing the frontier of knowledge and solving practical problems are blurred. As a result, the term 'frontier" was coined to define the nature of research supported by the European Research Council. ERC activities are directed towards encouraging outstanding researchers to go beyond the established frontiers of knowledge and the boundaries of disciplines. They comprise the funding of projects not only designed around fundamental research questions but also those developed around well-defined technological challenges.

The ERC aims to increase the attractiveness of Europe for the best researchers worldwide and for industrial research investment and to strengthen the EU's capacity to generate new knowledge that will feed back into the economy and society, improving Europe's global competitiveness, prosperity and well-being. Ultimately, the ERC aims to make the European research base better prepared to respond to the needs of a knowledge-based society and provide Europe with the capabilities in frontier research necessary to meet global challenges. In this sense, the ERC represents a decisive instrument towards achieving the objectives of the 2020 Innovation Union (3).

The operational principles of the ERC are that of a Europe-wide competitive funding structure for frontier research executed by individual teams, complementing and not replacing national funding. Competition is open to the very best creative researchers across all scientific domains, irrespective of age, gender or nationality, who want to conduct their research in an EU Member State or Associated Country. The ERC offers substantial funding to senior research leaders (Advanced Grants) as well as to early career top researchers (ERC Starting Grants). It also provides for flexibility and portability of the funding. The ERC supports the brightest ideas through calls that encourage curiosity-driven, innovative, risk-taking interdisciplinary research of the highest quality at the frontiers of knowledge. The competitive review process - based on peer-review panels that are highly recognised and respected - is based on the sole criterion of scientific excellence.

History & Governance Bodies during FP7

All major research policy stakeholders recognise that frontier research is a key driver of technological and social innovation. To succeed, any innovation system needs to reinforce its science base which

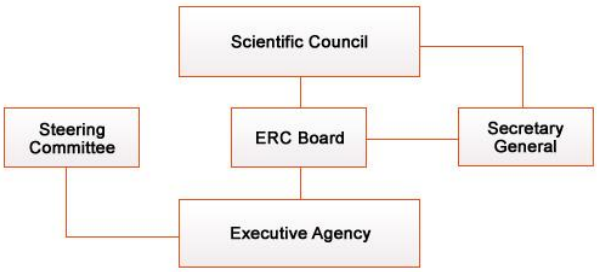
produces new knowledge and opens up radically new research venues. However, an impact assessment of previous FPs identified the lack of dedicated mechanisms to support and strengthen excellent frontier research in Europe. Indeed, prior to the ERC, this type of research was funded mainly at national level, while the focal point of EU R&D programmes laid mainly in pre-competitive cooperative applied research. The ERC was then created in order to address the key weaknesses of the European Research Area (4), to broaden the traditional funding instruments of the Framework Programme, and to expand their target audience to reach even more outstanding researchers.

In this sense, for many years the European scientific community - under the active leadership of the Commissioner for Research - has sought to create a novel approach to EU research funding dedicated to investigator-initiated “frontier” research. The European Research Council (ERC) officially came into existence on 2 February 2007 by a Decision of the Commission (5), in accordance with the Decisions of the Council and Parliament on the Seventh Framework Programme (6), the Rules for Participation (7), and the Decision of the Council on the Specific Programme "Ideas" (8).

During FP7, the ERC had a dual structure with an independent Scientific Council setting the scientific strategy, and an autonomous Executive Agency in charge of implementing the operational management. The ERC operates with autonomy and integrity, and is guaranteed by the European Commission, to which it is accountable.

Between February and July 2009 a comprehensive Review (9) of the ERC’s structures and mechanisms was undertaken by an independent panel of experts appointed by the European Commission. The overall conclusion of the Review was that the ERC has become a recognised success story of the 7th Framework Programme, having established itself as an indispensable component of the European Research Area with a high reputation for the quality and efficiency of its operations. Nevertheless, concerns were expressed about the long-term sustainability of the ERC’s legal and administrative structure, and the need to further adapt the governance bodies, mechanisms, administrative rules and practices to the ERC’s mission to become a truly world-class funding agency in frontier research. Following the recommendations set by the review panel to streamline governance and to couple the two constituents of the ERC – the Scientific Council and The Executive Agency – two integrative mechanisms were developed: the Secretary General and the ERC Board. In addition, 2 standing committees were set up, one on the “Selection of evaluation panelists” and one on “Conflict of interest, Scientific misconduct & Ethical issues – CoIME” (adopti the scientific misconduct strategy for identifying and addressing misconduct concerning ERC applicants and projects by ScC in October 2012).

In December 2010, the Commission established an ERC Task Force (10) with the mandate to provide options for a long-lasting legal and organisational structure of the ERC. The Task Force, in agreement with the 2009 review, concluded that an improved structure of the Executive Agency was needed, in view of the forthcoming Framework Programme for Research and Innovation for 2014-2020, Horizon 2020. Its major recommendation was to increase the ERC’s operational autonomy, i.e. to reduce the powers of the Commission concerning the ERC’s governance, and to have better arrangements for the supervision of ERC scientific, administrative and financial operations.



ERC Scientific Council (ScC)

The ScC is the decision-making body of the ERC. The Chair of the Scientific Council is the President of the ERC who acts as the formal representative of the ERC as well as of its Scientific Council before the European Commission and other bodies.

The Scientific Council’s role is to set up the ERC’s overall scientific strategy and the Work Programme, to monitor and control quality and performance, and to establish a communication strategy. From a scientific perspective, it is also responsible for establishing positions on the implementation and

management of calls for proposals and evaluation criteria, peer review processes and proposal evaluation.

The ERC Scientific Council is composed of 22 eminent scientists and scholars, including a number of Nobel Prize winners that have been appointed by the Commission on the basis of their undisputed reputation as leaders - independent and committed to research. Additionally, in 2009, an "Identification Committee" was set up by the Commission in order to identify new members to fill vacant posts in the Scientific Council and make recommendations on a method for the renewal of its members.

In addition to plenary sessions, members of the Scientific Council meet in Working Groups (WGs) to address specific issues such as: examining the ERC's relationship with the industrial/business sector and the impact of ERC-funded research on innovation (WG Relations with Industry); develop an ERC position on open access (WG on Open Access); explore suitable mechanisms to boost the participation of non-European researchers in the ERC schemes (WG on Strengthening International Participation), particularly Brazil, Russia, India and China (the BRIC countries); ensure that the ERC is at the forefront of best practice regarding the gender balance of grantees (WG on Gender Balance); increase the participation of researchers from the EU's lesser research-performing regions (WG on Widening European Participation); and develop a roadmap for monitoring and evaluating the ERC's accomplishment of its mission and to support the short, medium and long term policies of the Scientific Council (WG on Key Performance Indicators).

The first ERC President was Prof Dr. Fotis C. Kafatos who has since been elected Honorary President. Prof Dr. Helga Nowotny replaced him from 1st March 2013 until December 2013. Since the Horizon 2020 launch, the ERC has been headed by a full-time Brussels-based ERC President, Prof Dr Jean Pierre Bourguignon. During FP7, the ERC President chaired the ERC Board and Scientific Council meetings and prepares the agenda. The president was assisted by two Vice-Presidents who also served as the Vice-Chairs of the Scientific Council.

ERC Executive Agency (ERCEA)

Based in Brussels and with 379 staff by the end of 2013 (11), the Executive Agency implements the Specific Programme IDEAS according to the strategies and methodologies established by the independent ERC Scientific Council. At the launch of the ERC in February 2007, there was a dedicated implementation structure that operated under the Research Directorate-General as part of the European Commission. It was legally established as an executive agency by the Commission in December 2007 in accordance with decision N°2008/37/EC (12), obtaining administrative autonomy in July 2009 (13).

Since its administrative autonomy was granted in 2009, the Agency has been responsible for all aspects of administrative implementation and programme execution, as provided for in the Work Programme. In particular, it implements the evaluation procedures, peer-review and selection processes according to the principles established by the Scientific Council and ensures the proper financial and scientific management of grants.

The Executive Agency operates on the basis of the powers delegated to it by the European Commission, which has the ultimate political responsibility for the implementation of the specific programme IDEAS. In that sense, the Commission exercises its supervisory responsibilities over the activities of the ERC Agency through a Steering Committee.

The Director of the ERC Executive Agency (currently Pablo Amor) is responsible for the implementation of the ERC strategy as established by the Scientific Council and for the management of the Agency and its staff.

ERC Secretary General

The ERC Secretary General has a key role in ensuring the integrated operation of the ERC, based on the strategy and programme of activities prepared by the ERC's Scientific Council. The Secretary General is appointed by the Scientific Council and is its permanent representative in Brussels. The Secretary General ensures an effective cooperation with the Executive Agency and the European Commission on a day-to-day basis. The post of ERC Secretary General has been abolished with the launch of Horizon 2020. Until December 2013, the ERC Secretary General was Professor Donald Dingwell who has been a great ambassador for the ERC and for science during his tenure. With a view to increase the ERC's visibility and to attract more applicants from overseas, he led the international awareness-raising campaign, "ERC goes Global" and visited over 50 cities in 16 countries.

ERC Board

To streamline governance and further assure the liaison of the Scientific Council with the European Commission and the Executive Agency, the Chair- and Vice-Chairpersons of the Scientific Council and the Secretary General, together with the Director of the Agency, meet regularly as the ERC Board. These meetings are also attended by the senior management of the Agency and take place to oversee the implementation of the ERC strategy and Work Programme prepared by the Scientific Council.

Steering Committee

The Steering Committee of the ERCEA is the body that supervises the operations of the agency. It adopts the agency´s annual work programmes, administrative budget and annual reports. It is composed of five members appointed by the EC and one observer, the ERC Secretary General. The Steering Committee, in office until the end of 2013, was chaired by Robert-Jan Smits, Director General of Directorate General G Research & Innovation, and comprised two representatives of the EC and two members of the ERC Scientific Council.

ERC Funding Schemes

ERC funding schemes are open to top researchers of any nationality, gender, or age who are engaged in pioneering research at the frontier of knowledge in their field and who are working or moving to work in Europe (EU Member States & Associated Countries). ERC Grants are awarded and managed through open competition and according to simple procedures that maintain the focus on scientific excellence, encourage creativity and interdisciplinarity, and combine flexibility with accountability.

The ERC Grants, although given to research organisations, are 'personalised': researchers (Principal Investigators) can, at any time, move to another host institution and take the grant with them. This «grant portability» provides leverage to researchers in the negotiations of their working conditions and promotes competition amongst host institutions which should lead to the improvement of the European research environment.

Two grant schemes designed by the Scientific Council form the core of ERC activities:

- ERC Starting Independent Research Grants (ERC Starting Grants) targeted at early-career excellent researchers and
- ERC Advanced Investigator Grants (ERC Advanced Grants) for already established research leaders in their field

Two additional funding initiatives with a significantly smaller budget were launched in 2011:

- The ERC Synergy Grants for small groups of excellent researchers
- The ERC "Proof of Concept" targeted at ERC grantees.

ERC Starting Grants (ERC-StG & ERC-CoG)

support top researchers with 2 to 12 years of experience after their PhD. Grants of up to 1,5 Mio € (up to 2 Mio € under certain circumstances) are awarded for up to five years. The ERC Starting Grant scheme aims to boost the career and performance of the next generation of research leaders by supporting their early scientific independence. The ERC "Starting Grants" address the gap in funding opportunities for researchers in the early stages of their careers. Through this scheme, outstanding researchers are assisted in establishing or consolidating their own team with a view to a transition from working under a su- pervisor to becoming independent researchers. Prospective grantees will need to make proposals of exceptional quality. ERC Grants require the scientific independence of grantees to be guaranteed by host institutions.

Since the 2013 ERC Work Programme, the ERC Starting Grants have been divided into two different ERC funding schemes: the ERC Starting Grants and the ERC Consolidator Grants. The new ERC Starting funding scheme aims to support promising researchers who have the proven potential of becoming independent research leaders, with 2 to 7 years of experience after their PhD, and grants of up

to 1,5 Mio € (in some situations up to 2 Mio €) for up to five years. The ERC Consolidator funding scheme is designed to support researchers who are consolidating their own independent research team or programme, with 7 to 12 years of experience after their PhD, and grants of up to 2 Mio € (in some circumstances up to 2,75 Mio €) for up to five years.

ERC Advanced Grants (ERC-AdG)

are aimed at excellent established investigators. Grants can be up to 2,5 Mio € (under certain circumstances up to 3,5 Mio €) for up to five years. The ERC Advanced Grants support researchers of whatever age who have already established themselves as exceptional leaders in their field. The Advanced Grants are intended to fund highly innovative and ambitious projects and the most talented experienced investigators that display a recent outstanding track record (last 10 years) and a leadership profile in terms of originality and impact of research achievements.

ERC Synergy Grants (ERC-SyG)

are aimed at small groups of excellent researchers (2 to 4) to carry out an ambitious project with high synergy effects. Grants of up to 15 Mio € are awarded for up to six years. In recent years, small research groups of Principal Investigators and their teams, frequently organised around interdisciplinary problems and shared facilities, have emerged as an increasingly productive unit of research. In 2011, the ERC Synergy scheme was introduced on a pilot basis to enable small groups of two to four Principal Investigators (with a designated Lead Principal Investigator) and their teams to bring together complementary skills, knowledge, and resources, in order to jointly address research problems at the frontier of knowledge going beyond what the individual PIs could achieve alone. The Synergy Grant scheme also adopts an investigator-driven approach with the research priorities and the configuration of the group determined by the PIs alone. It is open to exceptional independent researchers regardless of their career stage, age, gender and nationality, and proposals are evaluated on the sole criterion of excellence. As indicated in the ERC Annual Report of 2011 (14), the Scientific Council will assess the Synergy Grant pilot over two calls (ERC-2012-SyG and ERC-2013-SyG) before deciding whether to cancel, retain or strengthen this type of funding in the future.

ERC Proof of Concept (ERC-PoC)

is open only to ERC Grant holders. Grants of up to 150.000 € are awarded for up to 12 months. The blue sky research that the ERC has been supporting since its launch in 2007 often generates new discoveries, but also unexpected opportunities for commercial and societal applications. The ERC is committed to ensure the full exploitation of the excellent ideas it funds and in 2011 it introduced the “Proof of Concept” top-up grants to reduce the funding gap referred to as the “valley of death” that exists between frontier research and the earliest stage of a (marketable) innovation. This targeted new funding scheme will capture the maximum value of frontier research by getting good ideas one step closer to being utilised by the market and by society.

The PoC Grant scheme is open to all Principal Investigators who already hold or recently finished an ERC project. ERC Grant holders can apply for additional funding to establish the innovation potential of ideas arising from their ERC-funded projects and to bring them to a pre-demonstration stage where potential commercialisation opportunities have been identified. Successful applicants will have additional funding to prepare a dossier for potential investors (venture capitalists or companies) that could take the innovative idea (technology etc.) through the early commercialisation phase. The PoC Grant supports activities such as: viability studies; technical validation; market research; clarifying intellectual property rights issues and strategies; investigating potential business opportunities; establishing pathways to later-stage funding; and covering the initial expenses for establishing a company.

ERC Coordination & Support Actions (CSAs)

and the calls for tender are not regular ERC Grants, but instead are projects for the monitoring, assessment and evaluation of ERC activities. These include projects, studies, expert groups, seminars, data access and dissemination, as well as information and communication activities on the ERC. The CSAs or calls for tender do not support research, technological development or demonstration activities.

ERC Grant Schemes: a Learning Process

Since the beginning of the ERC and the launch of the first ERC call, fine-tuning measures have been applied to the grant schemes. These were based on ERC policies, lessons learned (past experiences), feedback from applicants and review panels (evaluators).

• Based on the lessons learned during previous calls – more specifically, the extremely high number of applications in the first Starting Grant call (ERC-2007-StG) – the application procedure has been changed from a two-stage submission process to one where the full application is submitted in a single stage process, re-submission restrictions have been established, and benchmark features regarding the profile of the applicant (Principal Investigator) have been incorporated in order to encourage proposals and researchers at the right level of ambition and competitivity.

• In line with the ERC' s main objective to attract & repatriate researchers, in addition to the relatively attractive funding conditions, both ERC Starting and Advanced Grant schemes offer incentives to encourage researchers of any nationality to move from countries outside the European Research Area (ERA) to an EU or Associated Country. Those applicants can request additional financial resources to cover "start-up" costs such as the purchase of major equipment they may not have in their new research environment (500.000 € for a Starting Grant and 1 Mio € for an Advanced Grant). Clearer indications of the expected commitment to the ERC-funded activity by the selected PIs have also been included. In this sense, both types of grantees are expected to spend 50% of their time in Europe whereas Starting and Advanced grantees have to dedicate at least 50% and 30% of their time to the ERC project, respectively.

• In compliance with the strategy of the ERC Scientific Council to target and support the next generation of research leaders in Europe, there has been a significant budgetary strengthening of the Starting Grant scheme which has led to an extension of the eligibility window for Starting grantees (3-9 years post-PhD in the ERC-2007-StG call; 2-10 years post-PhD in the ERC-2009-StG call and, from 2010, 2-12 years post-PhD). It should be noted that since the 2010 Work Programme, there is an approximate 50/50 split in the funding for both main schemes, the Starting and the Advanced Grants.

• Following feedback from applicants and reviewers (evaluators), the ERC evaluation criteria have been adjusted to take into account justified career gaps and/or unconventional research career paths. In addition, and in order to ensure that the ERC is at the forefront of best practices regarding the gender balance of grantees, since 2010 women researchers have been awarded with an increased extension of the Starting Grant eligibility window of 18 months per child born before or after the award of a PhD. Finally, there has also been fine-tuning measures to the ERC Grants such as a simplification of the proposal structure (no self-evaluation) and the recognition of two streams of applicants to the Starting Grant scheme ("starters" and "consolidators"). In this sense, in the 2013 ERC Work Programme the ERC Starting Grants have been divided into two separate funding schemes, named ERC Starting Grants and ERC Consolidator Grants.

• In order to attract and repatriate more top talents from non-ERA countries, the Scientific Council's Working Group on the 'ERC Internationalisation Strategy' has proposed further simplification of the ERC Work Programme, with a specific focus on applicants from outside the ERA, by giving emphasis to the possibility for non-ERA grantees to obtain additional financial resources to cover 'start-up' costs (already included in the Work Programme), for flexibility in implementing the requirement that 50% of working time must be spent on an ERC project, as well as the possibility of involving additional team members from outside the ERA as an opportunity to recruit researchers from the best research institutions worldwide. In this context, an initiative (27) was launched in July 2012 to help top young talent, based in the USA and pre-selected by the National Science Foundation (NSF), to spend some time in Europe, hosted as members of ERC grantees' teams. A second agreement of this kind was launched on 8 November 2013 to boost opportunities for early-career Korean scientists to come to Europe and join the research teams of ERC grantees (11).

2. ERC Calls: Information & Statistics

The current report depicts a comprehensive analysis of all ERC calls launched under FP7. From 2007 to 2013, the ERC launched 18 calls for proposals (see Table 1). The ERC also launched 4 calls for Co-ordination and Support Actions (CSAs) as well as Calls for Tender which are for projects or services on the functioning of the ERC, so are not of interest to most researchers. The statistical data provided in this section refers to the Starting & Advanced Grant calls. In this sense, the data of the ERC Consolidator Grant call (ERC-2013-CoG) has been processed under the Starting funding scheme.

- **Table 1: Information on ERC calls launched**

	Call Identifier (ID)	Publication Date	Deadlines & Links to the Participant Portal (15)
Starting Grant 2007	ERC-2007-StG	22/12/2006	25/04/2007 [(a)]
Advanced Grant 2008	ERC-2008-AdG	30/11/2007	28/02/2008 (PE) [(b)] 18/03/2008 (SH) 22/04/2008 (LS)
Starting Grant 2009	ERC-2009-StG	24/07/2008	29/10/2008 (PE) [(b)] 19/11/2008 (SH) 10/12/2008 (LS)
Advanced Grant 2009	ERC-2009-AdG	19/11/2008	25/03/2009 (PE) [(b)] 15/04/2009 (SH) 06/05/2009 (LS)
Starting Grant 2010	ERC-2010-StG	30/07/2009	28/10/2009 (PE) [(b)] 18/11/2009 (LS) 09/12/2009 (SH)
Advanced Grant 2010	ERC-2010-AdG	29/10/2009	24/02/2010 (PE) [(b)] 17/03/2010 (LS) 07/04/2010 (SH)
Starting Grant 2011	ERC-2011-StG	20/07/2010	14/10/2010 (PE) [(b)] 09/11/2010 (LS) 24/11/2010 (SH)
Advanced Grant 2011	ERC-2011-AdG	04/11/2010	09/02/2011 (PE) [(b)] 10/03/2011 (LS) 06/04/2011 (SH)
Proof of Concept 2011	ERC-2011-PoC	29/03/2011	16/11/2011 [(c)]
Starting Grant 2012	ERC-2012-StG	20/07/2011	12/10/2011 (PE) [(b)] 09/11/2011 (LS) 24/11/2011 (SH)
Synergy Grant 2012	ERC-2012-SyG	25/10/2011	25/01/2012 [(a)]
Advanced Grant 2012	ERC-2012-AdG	16/11/2011	16/02/2012 (PE) [(b)] 14/03/2012 (LS) 11/04/2012 (SH)
Proof of Concept 2012	ERC-2012-PoC	02/02/2012	03/10/2012 [(d)]
Starting Grant 2013 [(e)]	ERC-2013-StG	10/07/2012	17/10/2012 [(f)]
Advanced Grant 2013	ERC-2013-AdG	10/07/2012	22/11/2012 [(f)]
Synergy Grant 2013	ERC-2013-SyG	10/10/2012	10/01/2013
Consolidator Grant 2013 [(e)]	ERC-2013-CoG	07/11/2012	21/02/2013 [(f)]
Proof of Concept 2013	ERC-2013-PoC	10/01/2013	03/10/2013 [(g)]

(a) Single deadline for all domains; **(b)** Different deadlines per domain; PE = Physical Sciences & Engineering domain; SH = Social Sciences & Humanities domain; LS = Life Sciences domain; **(c)** The ERC-2011-PoC call had an intermediate deadline of 15th June 2011; **(d)** The ERC-2012-PoC call had an intermediate deadline of 3rd May 2012; **(e)** Since the 2013 ERC Work Programme, the ERC Starting Grants have been divided into two different ERC funding schemes: the ERC Starting Grants and the ERC Consolidator Grants; **(f)** Since the 2013 ERC Work Programme, the ERC calls have not had different deadlines per domain but a single deadline for all 3 domains; **(g)** The ERC-2013-PoC call had an intermediate deadline of 24th April 2013; **(h)** The ERC also launched 4 calls for CSAs (Coordination & Support Actions): ERC-2008-Support; ERC-2009-Support; ERC-2012-Support-1, ERC-2013-Support-1.

- **Table 2: Information on global & Greek participation per ERC call**

	Call Budget (Mio €)	Proposals received	Proposals evaluated [a]	Total Grants	Success Rate [b]	Number (& %) of Greek applications [c]	Number (& %) of Greek Grants [d]	Greek Success Rate [b]	Amount in € for Greece	% of the Budget for Greece	Call Statistics [g]	List of Grantees
ERC-2007-StG	335	9.167	8.787	299	3,4%	327 (3,7%)	4 (1,3%)	1,2%	3.868.395	1,15%	Call statistics	Starting Grant 2007 winners
ERC-2009-StG	325	2.503	2.392	245	10,2%	85 (3,6%)	3 (1,2%)	3,5%	3.333.040	1,0%	Call statistics	Starting Grant 2009 winners Additional Researchers selected
ERC-2010-StG	580	2.873	2.767	436	15,8%	36 (1,3%)	3 (0,7%)	8,3%	3.800.459	0,7%	Call statistics	Starting Grants 2010 selected
ERC-2011-StG	670	4.080	4.005	486	12,1%	70 (1,7%)	4 (0,8%)	5,7%	5.887.915	0,9%	Call statistics	Starting Grants 2011 selected
ERC-2012-StG	730	4.741	4.652	566	12,2%	114 (2,5%)	4 (0,7%)	3,5%	4.900.616	0,7%	Call statistics	Starting Grants 2012 selected
ERC-2013-StG	398	3.329	3.255	300	9,2%	36 (1,1%)	2 (0,7%)	5,6%	2.595.167	0,7%	Call statistics	Starting Grants 2013 selected
ERC-2013-CoG	523	3.673	3.604	313	8,7%	67 (1,9%)	2 (0,6%)	3%	2.966.000	0,6%	Call statistics	Starting Grants 2013 selected
Total ERC-StG Calls	**3.561**	**30.366**	**29.462**	**2.645**	**9% [e]**	**735 (2,5%)**	**22 (0,8%)**	**3% [e]**	**27.351.592**	**0,8%**		

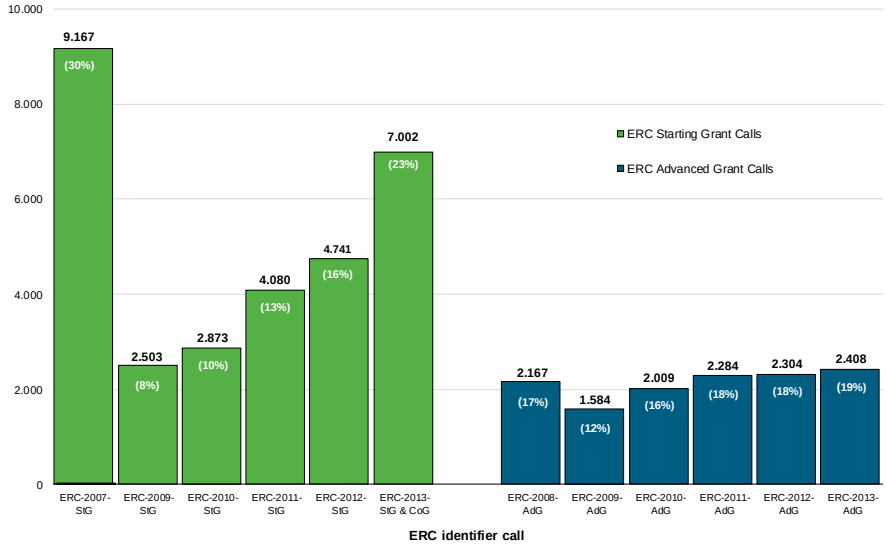
	Call Budget (Mio €)	Proposals received	Proposals evaluated [a]	Total Grants	Success Rate [b]	Number (& %) of Greek applications [c]	Number (& %) of Greek Grants [d]	Greek Success Rate [b]	Amount in € for Greece	% of the Budget for Greece	Call Statistics [g]	List of Grantees
ERC-2008-AdG	553	2.167	2.034	282	13,9%	88 (4,3%)	4 (1,4%)	4,5%	553	2.167	Call statistics	Advanced Grant 2008 winners
ERC-2009-AdG	515	1.584	1.526	245	16,1%	27 (1,8%)	0	0%	0	0%	Call statistics	Advanced Grant 2009 winners
ERC-2010-AdG	590	2.009	1.967	271	13,8%	36 (1,8%)	2 (0,7%)	5,6%	4.245.999	0,8%	Call statistics	Advanced Grants 2010 selected
ERC-2011-AdG	661	2.284	2.245	301	13.4%	51 (2,3%)	4 (1,4%)	7,8%	8.141.211	1,2%	Call statistics	Advanced Grants 2011 selected
ERC-2012-AdG	680	2.304	2.269	319	14,1%	52 (2,3%)	3 (0,9%)	5,8%	5.622.480	0,8%	Call statistics	Advanced Grants 2012 selected
ERC-2013-AdG	662	2.408	2.363	291	12,3%	42 (1,8%)	1 (0,3%)	2,4%	2.590.000	0,4%	Call statistics	Advanced Grants 2013 selected
Total ERC-AdG Calls	**3.661**	**12.756**	**12.404**	**1.709**	**13,8%**	**296 (2,4%)**	**14 (0,8%)**	**4.7%**	**28.357.282**	**0,9%**		
Total ERC Calls	**7.222**	**43.122**	**41.866**	**4.354**	**10,4%**	**1031 (2,5%)**	**36 (0,8%)**	**3.5%**	**55.708.874**	**0,8%**		

(a) Ineligible and withdrawn proposals are not taken into consideration and account for about 2,9% of ERC proposals submitted; **(b)** 'Success Rate' is based on the proposals evaluated and not on the proposals submitted. The Success rate of the StG, AdG & Total ERC calls is calculated by the ERC as the average of the individual call success rates. However, in the present report it is calculated as the ratio of eligible proposals over funded projects; **(c)** 'Greek Applications' refers to proposals submitted by a Principal Investigator (PI) with a Greek Host Institution that have been evaluated. Ineligible and withdrawn proposals have not been taken into consideration; **(d)** 'Greek Grants' refer to grants implemented by the PI in Greek Host Institutions; **(e)** If the ERC-2007-StG is excluded due to oversubscription, then the overall success rate for the Starting Grants rises to 11.3% and the Greek success rate rises to 4,4%; **(f)** Due to the unfortunate death of Prof. Vardavoulias (NTUA) - the PI of the funded proposal MEDIGRA - the budget and duration of the proposal was cut from 2.450.000 euros for five years to 981.600 for three years. The role of the PI was undertaken by a "project supervisor" named Prof Dafalias (NTUA); **(g)** Initial statistics per call, as publicised by the ERC when announcing call results.

Proposals Submitted to the ERC

The ERC has received 43.122 proposals: 30.366 Starting Grant and 12.756 Advanced Grant submissions. The Starting funding scheme has proven more successful than the Advanced Grant scheme in attracting applications: 70% and 30% respectively, out of the total number of ERC proposals submitted. Chart 1 gives a breakdown of the number of proposals submitted to the ERC calls.

- **Chart 1: Number (and percentage) of proposals submitted per ERC call**



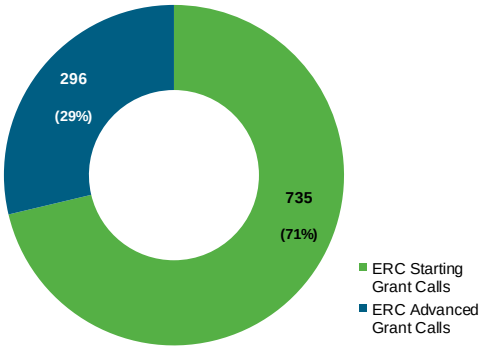
(a) In the last FP7-ERC Work Programme, the ERC Starting Grant call was divided into two different calls - ERC-2013 Starting & Consolidator calls - with 3.329 & 3.673 applicants respectively.

The sharp decline of 73% in the number of applications between the first and the second call of the Starting Grant scheme might be partly explained by the change in application procedures (from two-stage to single-stage, full-proposal submission), the establishment of a set of benchmarks related to the profile of the applicant as well as the lower success rate of the first Starting Grant call. On the other hand, the novelty of the IDEAS programme may explain the extremely large number of applications (9.167) in the first ERC call that represents approximately 30% of the proposals submitted to the Starting Grant scheme and one fifth of the ERC grant applications. From 2010 until 2013, there was an increasing trend in the number of submissions for the Starting Grant scheme with an annual increase of applications compared to the previous year – 15%, 42%, 16% and 48% respectively. This could be partly explained by the significant increase in budget of the ERC Starting Grants. In addition, in the 2013 ERC Work Programme, the ERC Starting Grants were divided into two different ERC funding schemes – the ERC Starting Grants and the ERC Consolidator Grants. The ERC-2013-StG & ERC-2013-CoG calls display a combined budget of 921 Mio euros which is approx. 3 times higher than the budget dedicated to the ERC-2007-StG or the ERC-2009-StG calls.

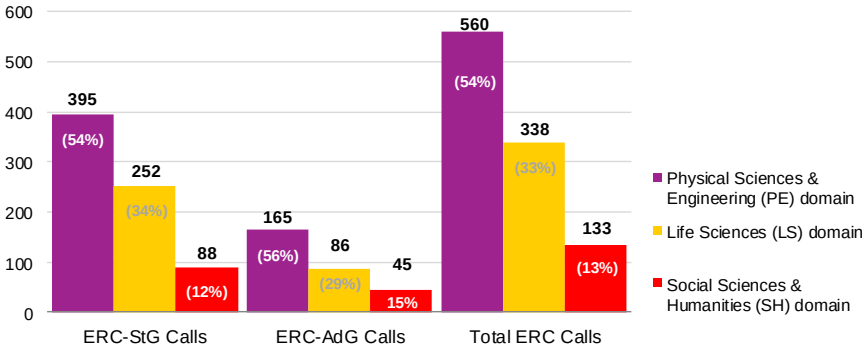
The Advanced Grant scheme follows the same pattern in the number of applicants per call with a drop in the number of submissions between the first and second ERC Advanced Grant call of 27% and an annual increase of applicants from the third till the sixth call of 27%, 14%, 15% & 5% respectively. However it should be noted that in the Advanced funding scheme, participation from the fourth call (ERC-2011-AdG) was already higher than in the first call, whereas in the Starting Grant scheme, the number of applications for the sixth call (ERC-2013-StG) amounted to just 76% of the submissions made for its first call (ERC-2007-StG).

Overall, Greece submitted 1031 proposals that were evaluated, representing 2,5% of the ERC applications reviewed during FP7. 71% (735 proposals) and 29% (296 proposals) of the Greek applications were addressed to the Starting and Advanced funding schemes, respectively (see Chart 2). 560 proposals (54% of Greek applications) were submitted to the Physical Sciences and Engineering domain, 338 (33%) to the Life Sciences and 133 (13%) to the Social Sciences and Humanities domain (see Chart 3). Hereafter, 'Greek Proposals' shall refer to ERC applications submitted by Greek Host Institutions.

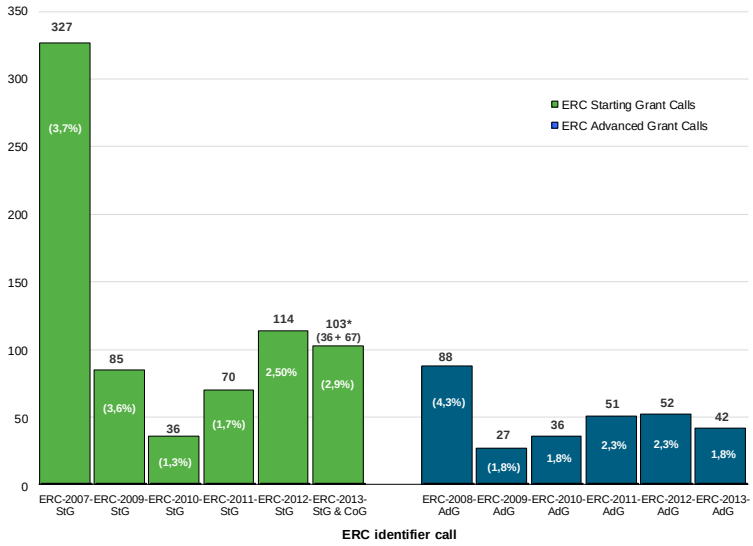
- **Chart 2: Number (and percentage) of Greek proposals submitted & evaluated per ERC funding scheme**



- **Chart 3: Number (and percentage) of Greek proposals submitted & evaluated per domain & ERC funding scheme**



- **Chart 4: Number (and percentage) of Greek proposals submitted & evaluated per ERC call & ERC funding scheme**



(a) 'Greek proposals' refers to proposals submitted by Greek Host Institutions.

Chart 4 shows a different pattern in the evolution of the number and proportion of Greek applications out of all ERC applications per call and grant scheme (Chart 1). As with the rest of the EU & Associated Countries, there is a significant drop in Greek applications between the first and second ERC Starting & Advanced calls – 74% and 69% respectively. There is also a recovery in Advanced Grant applications from 2010 with an increase in Greek submissions between the second and third calls and between the third and fourth calls – 33% and 42% respectively. However, applications to the Starting funding scheme still exhibit a significant decrease of 58% in Greek applications between the second and third calls and the recovery did not materialise until the fourth and fifth call, which saw an annual increase in Greek submissions of 94% & 63% respectively. Both ERC Starting & Advanced funding schemes show a decrease in Greek participation in their final call of 10% & 19% respectively compared to the previous year. The establishment of benchmark features related to the profile of the applicant (Principal Investigator) incorporated in order to encourage ambitious proposals and researchers at the right competitive level, together with the low Greek success rate, seems to have significantly discouraged Greek participation in ERC grant calls.

ERC Competition: Success Rates at First & Second-Stage Evaluation

The competition for ERC grants has been intense, with the selection for funding based on a rigorous high-quality peer review procedure. The overall success rate of the FP7-IDEAS programme is 10%: 14% and 9% in the Advanced and Starting funding schemes, respectively.

Greek success rates are about 5% & 3% in the Advanced and Starting Grants respectively with a Greek ERC success rate of 3,5% (see Chart 7). However, if the first Starting Grant call is not taken into consideration due to oversubscription, the overall and Greek success rates for the Starting Grants rise to 11 % and 4%, respectively. Table 3 provides information on the ERC proposals submitted by Greek Host Institutions per domain as well as their outcome in the first and second stage evaluation procedure.

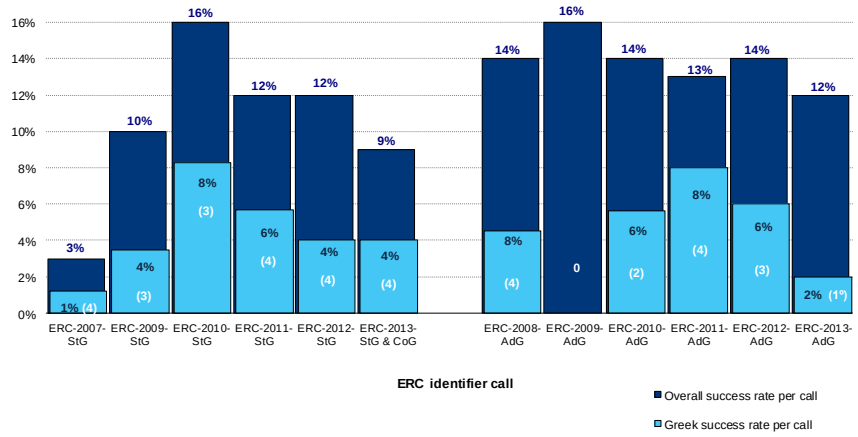
- **Table 3: Results on Greek participation (submission, evaluation & funding) per ERC call, per domain [a]**

	Number & (%) of Greek proposals submitted per domain				Greek proposals going to 2nd stage of evaluation per domain (success rate [b])				Greek Proposals funded per domain (success rate)			
	LS	PE	SH	Total (& % per funding scheme)	LS	PE	SH	Total	LS	PE	SH	Total
ERC-2007-StG	110	187	30	327	3 (3)	6 (3)	1 (3)	10 (3)	1 (1)	3 (2)	0 (0)	4 (1)
ERC-2009-StG	33	43	9	85	2 (6)	6 (14)	1 (11)	9 (11)	1 (3)	2 (5)	0 (0)	3 (4)
ERC-2010-StG	12	21	3	36	2 (17)	3 (14)	0 (0)	5 (14)	2 (17)	1 (5)	0 (0)	3 (8)
ERC-2011-StG	21	37	12	70	3 (14)	5 (14)	0 (0)	8 (11)	2 (10)	2 (5)	0 (0)	4 (6)
ERC-2012-StG	47	50	17	114	5 (11)	7 (14)	0 (0)	12 (11)	2 (4)	2 (4)	0 (0)	4 (4)
ERC-2013-StG	10	19	7	36	0 (0)	1 (5)	1 (14)	2 (6)	0 (0)	1 (5)	1 (14)	2 (6)
ERC-2013-CoG	19	38	10	67	2 (11)	2 (5)	0 (0)	4 (6)	0 (0)	2 (5)	0 (0)	2 (3)
ERC -2013-StG & -CoG	29	57	17	103	2 (7)	3 (5)	1 (6)	6 (6)	0	3 (5)	1 (6)	4 (4)
Total ERC -StG calls	**252** (34%)	**395** (54%)	**88** (12%)	**735** (71%)	**17** (7)	**30** (8)	**3** (3)	**50** (7)	**8** (3)	**13** (3)	**1** (1)	**22** (3)
ERC-2008-AdG	29	51	8	88	4 (14)	10 (20)	0 (0)	14 (16)	2 (7)	2 (4)	0 (0)	4 (5)
ERC-2009-AdG	7	15	5	27	2 (29)	2 (13)	0 (0)	4 (15)	0 (0)	0 (0)	0 (0)	0 (0)
ERC-2010-AdG	11	24	1	36	2 (18)	5 (21)	0 (0)	7 (19)	0 (0)	2 (8)	0 (0)	2 (6)
ERC-2011-AdG	12	28	11	51	2 (17)	6 (21)	0 (0)	8 (16)	1 (8)	3 (11)	0 (0)	4 (8)
ERC-2012-AdG	14	28	10	52	1 (7)	8 (29)	1 (10)	10 (19)	0 (0)	3 (11)	0 (0)	3 (6)
ERC-2013-AdG	13	19	10	42	1 (8)	1 (5)	0 (0)	2 (5)	1 (8)	0 (0)	0 (0)	1 (2)
Total ERC-AdG Calls	**86** (29%)	**165** (56%)	**45** (15%)	**296** (29%)	**12** (14)	**32** (19)	**1** (2)	**45** (15)	**4** (5)	**10** (6)	**0** (0)	**14** (5)
Total ERC -StG & AdG Calls [c]	**338** (33%)	**560** (54%)	**133** (13%)	**1031** (100%)	**29** (9)	**62** (11)	**4** (3)	**95** (9)	**12** **(4)**	**23** (4)	**1** (1)	**36** (3,5)

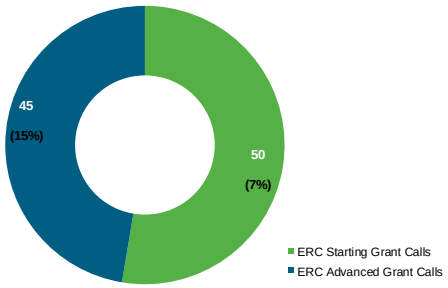
(a) Data kindly provided by the ERCEA (European Research Council Executive Agency); **(b)** Success rates are based on proposals evaluated. Ineligible and withdrawn proposals have not been taken into consideration. Success rates depicted for the Total ERC Starting & Advanced calls and for the Total of ERC calls are not based on the number of proposals submitted and funded but on the average of the corresponding success rates; **(c)** In the ERC-2011-PoC call, 1 Greek proposal was submitted and granted.139 eligible proposals were submitted in total (considering both deadlines). 52 proposals were funded (list of ERC-2011-PoC grantees). The overall success rate was 37% whereas the Greek success rate was 100%; The ERC-2012-PoC call had 120 eligible applications and 60 ERC grantees were funded from 16 countries (overall success rate of 50%). Neither of the 2 ERC grantees applying from Greece were funded (list of ERC-2012-PoC grantees); The ERC-2013-PoC call showed a significant increase in applications with 279 ERC grantees applying from 21 countries, 4 of them from Greece. 67 PIs from 17 countries (1 of them from Greece) were funded. The overall success rate was 24% whereas the Greek success rate was 25% (list of ERC-2013-PoC grantees). In the 3 ERC-PoC calls 179 proposals have been funded (26 Mio € or 0,34% of FP7-ERC budget); **(d)** The two ERC-2012-SyG & ERC-2013-SyG calls do not have any PI from Greek HI (list of ERC-2012-SyG funded projects & list of ERC-2013-SyG funded projects). 24 projects (11 & 13 respectively) have been funded (274 Mio € or 3,5% of FP7-ERC budget).

Chart 5 compares the overall and Greek success rates per ERC call and shows their evolution. In the Starting Grant calls, the overall and Greek success rates displayed a significant increase from the first to the third call where both success rates reached their maximum of 15% and 8%, respectively. In the Advanced Grant calls, the overall and Greek success rates do not follow the same pattern: while the overall success rate reached its maximum in the 2nd call (16%), the Greek success rate attained its peak in the fourth call (8%). The Greek success rate (3,5%) is about three times lower than the overall success rate (10,4%) and one of the lowest among ERA countries. It should be noted that the success rate of Greek researchers resident in other ERA countries and applying with a Greek organisation is 5% whereas the success rate of Greek researchers resident in a non-ERA country and submitting with Greek HIs is 10%.

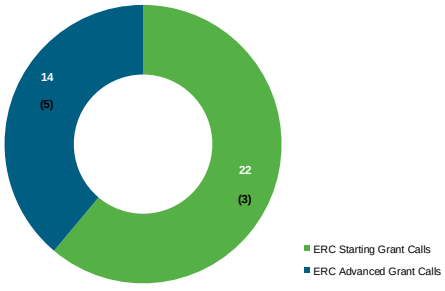
- **Chart 5: Overall & Greek success rates per ERC call (ERC Grants in Greek HIs per call)**



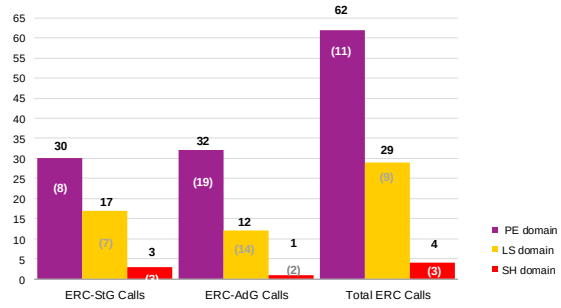
- **Chart 6: Number (& 1st-stage average success rate) of proposals reaching 2nd-stage evaluation per grant scheme**



- **Chart 7: Number (& average success rate) of Greek proposals funded per grant scheme**



• **Chart 8: Number (& 1st-stage average success rate) of Greek proposals reaching 2nd-stage evaluation per domain**



• **Chart 9: Number (& average success rate) of Greek proposals funded per domain**

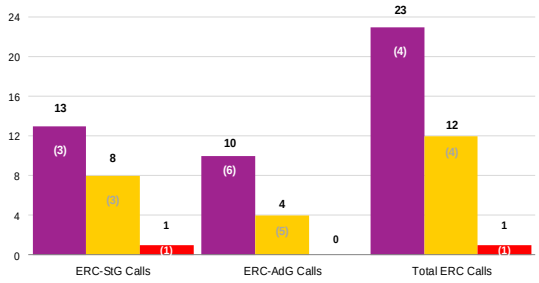


Chart 6 and chart 8 show the number of Greek proposals evaluated that have reached the second-stage of evaluation, where the full proposal is taken into consideration. Of the 1031 proposals submitted by Greek organisations, 95 were successful in stage one of the evaluation procedure, with a success rate of about 9%. 50 of the 735 projects submitted to the Starting Grant scheme went to stage two of the ERC peer review, leading to a first-stage success rate of about 7%. 45 of the 296 applications for the Advanced funding scheme reached full proposal evaluation, leading to a significantly higher first-stage success rate of about 15%.

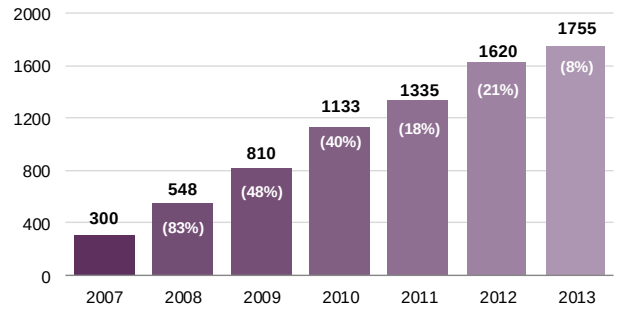
Taking into consideration the proposals' domain, 62 out of 560 projects in Physical Sciences and Engineering (PE) reached the second-stage evaluation with a first-stage success rate of 11%. 29 out 338 proposals submitted to the Life Sciences (LS) domain reached full-proposal evaluation, culminating in a success rate of about 9%. Only 4 of the 133 proposals submitted in the Social Sciences and Humanities' domain (SH) reached the second stage of the ERC peer-review evaluation with a very low first-stage success rate of about 3%. These results are even more striking if the two ERC funding schemes are considered. In this sense, 3 out of the 4 proposals that reached the second-stage of evaluation were submitted to the Starting funding scheme but, disappointingly, only 1 of the Greek advanced applications to the SH domain reached full-proposal evaluation.

Chart 7 and chart 9 depict the number of Greek proposals that have been selected for funding and the success rate per funding scheme and domain. In this sense, Greek proposals submitted in the Life Sciences and the Physical Sciences and Engineering domain display the same success rate of about 4%, much higher than the success rate of the Greek applications submitted to the SH domain (1%).

Distribution of ERC Funds

The ERC budget accounts for 15% of the total budget of the 7th Framework Programme (7,51 billion € out of 50,5 billion €). Chart 10 depicts the ERC annual budget from 2007 to 2013 and the percentage increase with respect to the previous year's budget. It grows from approximately 300 Mio € in 2007 to 1,7 billion € in 2013. The annual Work Programmes of 2007 and 2008 include only one Starting and one Advanced Grant call respectively (first Starting Grant call in 2007 and first Advanced Grant call in 2008) whereas since 2009, each annual Work Programme has included one Starting and one Advanced Grant call and from the last ERC-FP7 Work Programme, the Starting Grant call has been divided into the Starting & Consolidator Grant calls.

- **Chart 10: ERC annual budget in Mio € (and percentage of annual budget increase compared to budget of previous year)**



- **Chart 11: Budget in Mio € for the ERC Starting & Advanced Grant calls launched**

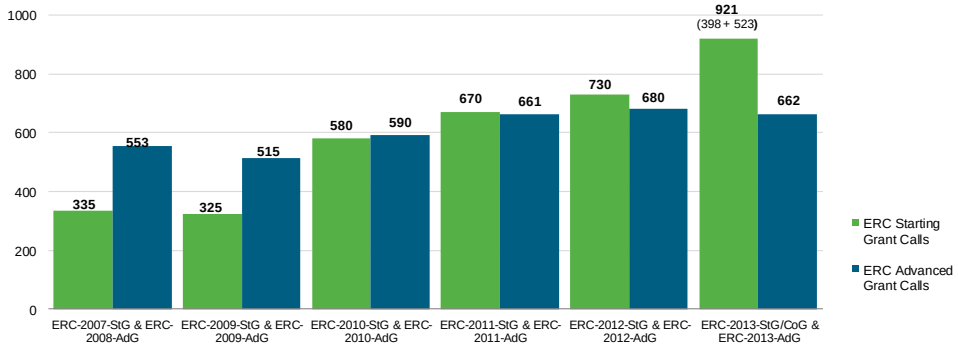
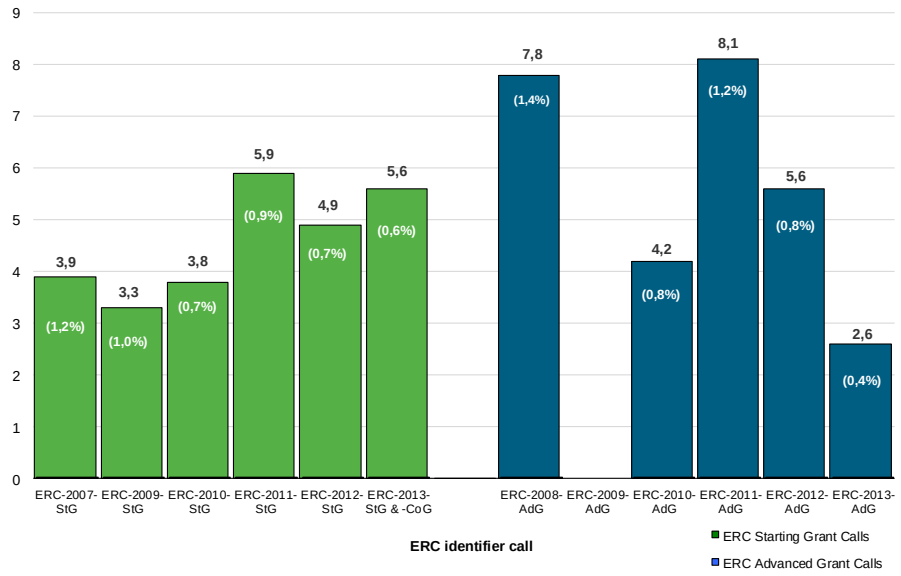


Chart 11 shows the budget per ERC grant call as well as the budget trend in both ERC grant schemes. In this sense, there has been a 3% and 7% decrease (compared to the first calls) in the budget of the second Starting and Advanced Grant calls, respectively. However, from 2010, there was an increase in the budget for the calls of both funding schemes, which was 6 times higher in the Starting than in the Advanced Grant scheme. Indeed, there is a 183% and 29% increase between the second and last call budgets of the starting and advanced funding scheme, respectively. In the first two calls, the Starting Grant scheme had approximately one third of the budget of the Advanced funding scheme. However in the 2010 & 2011 ERC Work Programme both funding schemes had a similar budget and from 2012 the Starting Grant calls displayed a bigger budget than the Advanced Grant calls (7% & 39% increase in the fifth and sixth calls of both funding schemes, respectively). The significant budgetary strengthening of the Starting Grant scheme is in compliance with the new strategy of the ERC Scientific Council to target and support the next generation of research leaders in Europe.

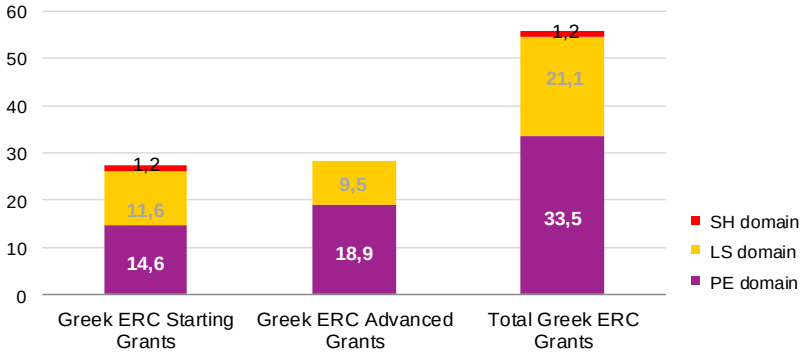
The ERC funds top researchers engaged in pioneering research at the frontier of knowledge in their field. From 2007 to 2013, some 7.4 billion € were granted to ground-breaking excellent projects in frontier research through the ERC Starting (3.673 Mio €; 47,9% of ERC budget) & Advanced Grant schemes (3.700 Mio €; 48,2% of ERC budget). 3,1 billion € in Physical Sciences and Engineering, 2,8 billion € in Life Sciences, about 1,2 billion € in Social Sciences and Humanities and ~250 Mio € to interdisciplinary projects.

The ERC has invested a total of 55.71 Mio € (0,8% of ERC budget) in frontier research in Greece in excellent projects designed around fundamental research or around well-defined technological challenges. Chart 12 shows the distribution of ERC funds dedicated to Greece per call. 27,35 Mio € (49% of the Greek budget) have been granted to emerging top researchers and 28,36 Mio € (51%) to well-established leaders in their field (see Chart 13). In terms of subject domains, 33,47 Mio € went to the Physical Sciences and Engineering and 21,06 Mio € to the Life Sciences. Unfortunately, Greece – the country with such a long tradition in Social Sciences and Humanities – has only received funding (1,18 Mio €) for 1 project in the SH domain (see Chart 13). With regard to the type of Host Institution, 22.99 Mio € (41% of the ERC budget awarded to Greece) went to Greek universities whereas 32,72 Mio € (59% of the ERC budget awarded to Greece) went to Greek research organisations.

- **Chart 12: Amount in Mio € for Greece per ERC call and (& % of ERC budget for Greece)**



- **Chart 13: Amount in Mio € for Greece per ERC funding scheme & domain**



ERC Proposals Funded

Under FP7, the ERC funded 4.354 top researchers working in almost 600 different institutions from 29 countries across Europe: 2.645 (61%) were Starting grantees whereas 1.709 (39%) were Advanced grantees. About 1.900 projects (45% of the total) were funded in the Physical Sciences and Engineering, more than 1.500 (36%) in the Life Sciences, about 800 (19%) in the Social Sciences and Humanities.

The majority of the FP7-ERC Grant holders were hosted by organisations located in the EU (86%), while 14% had a host institution in an FP7 Associated Country (11). The ERC Grant holders list displays 64 nationalities, as specified at the time of the Grant Agreement. Among these nationalities, 29 are outside the European Research Area (ERA). Overall 7% of the ERC grantees are nationals of countries outside ERA. However, 90% of the non-ERA grantees were already resident in an ERA country at the time of their application (11). US nationals with 140 PIs represent 45% of all Third Countries' grantees (311 grantees: 209 StG & CoG grantees & 102 AdG grantees).

Typically, projects are funded for five years. However ERC grantees can request – at least 1 year before

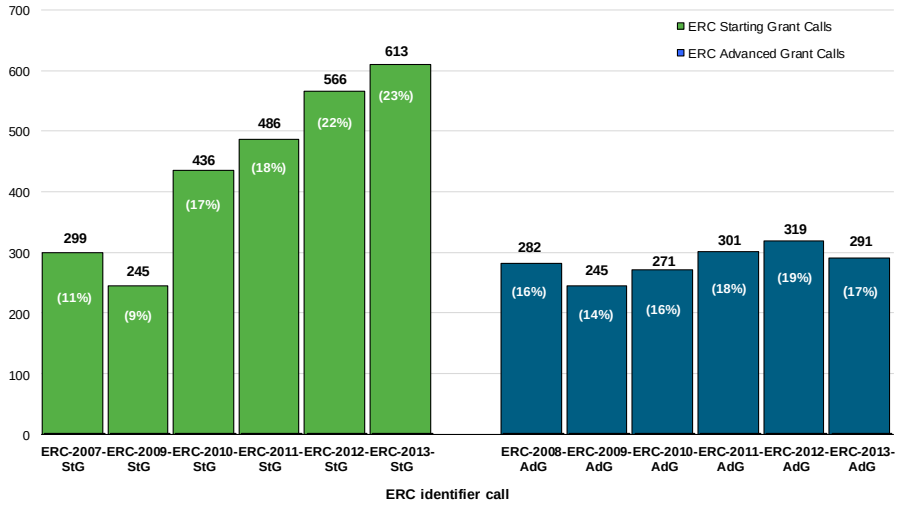
the end of the grant – up to 1 year extension to the grant based on scientific grounds without an increase in budget. When considering the updated duration of those projects that have been extended through an amendment to the grant, projects of at least 5 years account for 94% of all funded projects. Projects between 3 & 4 years account for 4% whereas 0,6% are projects that last less than 3 years. It should be noted that during FP7 the minimum duration of a funded project in the Starting scheme was 2 years whereas in the Advanced Grants it was 1 year.

At the end of 2013 the ERC conducted an analysis of team members for 995 ERC projects that had submitted at least 1 report. On the basis of this large sample, the number of team members on a project varies a great deal and ranges from a sole PI to as many as 25 staff members per grant. The number of team members per ERC project also varies according to the grant schemes (Advanced & Starting grants display 9 and 7 research staff excluding the PI, respectively) and the domain. Indeed, ERC teams in LS grants tend to be larger than in the PE domain, with teams in the SH domain being the smallest.

An average Starting grant size in the Life Sciences and Physical Sciences & Engineering domain is about 1,5 & 1,4 Mio €, respectively, whereas an average Advanced grant size is 2,4 & 2,1 Mio €, respectively. The corresponding figures for Social Sciences and Humanities are 1,2 Mio € and 2 Mio €.

Chart 14 depicts the evolution in the number of proposals funded by the ERC that is in line with the evolution of the budget dedicated to the ERC calls and funding schemes (see Chart 11). In this sense, there is a 125% and 32% budget rise between the second and fourth call of the Starting and Advanced funding scheme, respectively, which corresponds to a 98% and 20% increase in the number of proposals funded.

- **Chart 14: Number (and percentage) of proposals funded per ERC call & funding scheme**



In FP7 the ERC awarded 36 grants to Greece: 22 to ERC Starting grantees and 14 to ERC Advanced grantees (see Chart 7). 23 and 12 proposals have been funded in the Physical Sciences and Life Sciences domains, respectively (see Chart 9). Despite the great heritage of Greece in Social sciences and Humanities, only 1 proposal was funded in the SH domain. A list of successful ERC Greek projects is presented in Table 4.

Only 2 Greek projects were funded for 4 years whereas 33 lasted for five years. It should be noted that although the MEDIGRA project was initially funded for five years, due to the unfortunate death of the Principal Investigator (PI), Professor Vardoulakis, a project supervisor was nominated and the budget as well as the duration of the grant were significantly reduced (see Table 4).

In the Life Sciences, an average Greek grant size was about 1.4 Mio € for a Starting Grant and 2.4 Mio € for an Advanced Grant. In the Physical Sciences and Engineering, the average for a Starting Grant was 1.1 Mio €, and 2.2 Mio € for an Advanced Grant (grants for five years have only been considered)

There is a significant influence of the country's size (in terms of population and number of researchers) and R&D expenditure on the distribution of grants among countries. In this sense, Greece is ranked 15th among EU & Associated Countries when considering the number of proposals funded and hosted by Greek Host Institutions. However it occupies 12th position in terms of nationality of the PI.

- **Table 4: List of 36 Greek funded proposals in the FP7-ERC Programme** [(a)]

Call Identifier	PI Name [(b)]	Host Institution for ERC Grant [(c)]	PI Position at Greek Faculty, School, Institute
ERC-2007-StG	Katerina Aifantis	Aristotle University of Thessaloniki	Polytechnic School - Department Mathematical, Physics & Computational Sciences - Laboratory of Mechanics & Materials - Aristotle University of Thessaloniki
ERC-2007-StG	Popi Syntichaki	Biomedical Research Foundation-Academy of Athens (BRFAA)	Assistant Professor Level - Genetics & Gene Therapy Laboratory - Center of Basic Research -BRFAA
ERC-2007-StG	Dimitris Achlioptas	Computer Technology Institute & Press Diophantus (CTI)	1. Professor - School of Sciences - Faculty of Informatics & Telecommunications - National & Kapodistrian University of Athens 2. Research Unit 1 "Foundations of Computer Science, Relevant Technologies & Applications" - CTI (Athens)
ERC-2007-StG & ERC-2011-PoC	Theodore Peter Rakitzis	Foundation for Research & Technology Hellas (FORTH)	1. Associate Professor - Faculty of Science & Engineering - Department of Physics - University of Crete 2. Institute of Electronic Structure & Laser - FORTH
ERC-2008-AdG	Nektarios Tavernarakis	Foundation for Research & Technology Hellas (FORTH)	1. Professor of Molecular Systems Biology - Medical School - University of Crete 2. Director - Institute of Molecular Biology & Biotechnology - FORTH.
ERC-2008-AdG	George Kordas	National Center for Scientific Research "Demokritos"	Researcher A - Research Director Institute of Nanoscience & Nanotechnology
ERC-2008-AdG	Ioannis Vardoulakis (PI) Ioannis Dafalias (project supervisor)	National Technical University of Athens (NTUA)	Professor & Director of the Laboratory for Geomaterials - School of Applied Mathematical & Physical Sciences-Department of Mechanics - NTUA
ERC-2008-AdG	George Gazetas	National Technical University of Athens (NTUA)	Professor of Soil Mechanics & Director Soil Mechanics Laboratory - School of Civil Engineering- Department of Geotechnical Engineering - NTUA
ERC-2009-StG	Vily Panoutsakopoulou	Biomedical Research Foundation-Academy of Athens (BRFAA)	Investigator - Associate Professor Level -Cellular Immunology Laboratory - Center Basic Research - BRFAA
ERC-2009-StG	Chrysoula Tsogka	Foundation for Research & Technology Hellas (FORTH)	1.Professor - School of Sciences & Technology - Department of Applied Mathematics - University of Crete & 2. Institute of Applied Computational Mathematics -FORTH
ERC-2009-StG	Athanasios Papathanasiou	National Technical University of Athens (NTUA)	Assistant Professor - School of Chemical Engineering - Department II of Department of Process Analysis and Plant Design - NTUA
ERC-2010-StG	Aggelos Kiayias	National & Kapodistrian University of Athens	Assistant Professor - School of Sciences - Faculty of Informatics & Telecommunications - National & Kapodistrian University of Athens
ERC-2010-StG	Georgia Salanti	University of Ioannina	Assistant professor - Medical School - Department of Hygiene & Epidemiology - University of Ioannina
ERC-2010-StG	Georgios Stathopoulos	University of Patras	Assistant Professor - Medical School - Division of Basic Medical Sciences I - Department of General Biology: Molecular Cell Biology Unit - University of Patras
ERC-2010-AdG	Athanasios Konstandopoulos	Centre for Research & Technology Hellas (CERTH)	1. Chairman of the Board and Managing Director CERTH 2. Professor - Polytechnic School Department of Chemical Engineering - Aristotle University of Thessaloniki
ERC-2010-AdG	Spyridon Pandis	Foundation for Research & Technology Hellas (FORTH)	1. Professor - Polytechnic School Department of Chemical Engineering - University of Patras & 2. Collaborating Faculty member at the Institute of Chemical Engineering & High Temperature Chemical Processes (ICE-HT) -FORTH
ERC-2011-StG	Nikos Chronis	National Center for Scientific Research "Demokritos"	Researcher Institute of Nanoscience & Nanotechnology-NCSR Demokritos
ERC-2011-StG	Dimitra-Isidora Roussopoulou	National & Kapodistrian University of Athens	Assistant Professor - School of Sciences - Faculty of Informatics & Telecommunications - National & Kapodistrian University of Athens

Acronym: Title	Main Evaluation Panel [(d)]	Budget (euros)	Duration	Comments
MINATRAN: Probing the micro-nano transition: theoretical and experimental foundations, simulations and applications	PE6 - Computer Science & informatics	1.128.400	01/10/2008 - 30/09/2013	
PAGE: The role of mRNA-processing bodies in ageing	LS3- Cellular & Developmental Biology	1.080.000	01/09/2008 - 31/08/2013	Grant Portability: submission with FORTH
RIMACO: Rigorous Mathematical Connections between the Theory of Computations and Statistical Physics	PE1 - Mathematical Foundations	749.996	01/07/2008 - 30/06/2013	
TRICEPS: Time-resolved ring-cavity-enhanced polarization spectroscopy	PE2 - Fundamental constituents of matter	909.999	01/01/2009- 31/12/2014	Prof Rakitzis has also top-up grant "Proof of Concept " (ERC-2011-PoC call)
NEURONAGE: Molecular basis of neuronal ageing	Interdisciplinary - LS3 (Cellular & Developmental Biology) / LS5 (neurosciences & neural disorders)	2.376.000	01/05/2009 - 30/04/2014	
NANOTHERAPY: A novel nano-container drug carrier for targeted treatment of prostate cancer	LS7 - Diagnostic tools, therapies & public health	2.000.000	01/02/2009 - 31/01/2014	Dr Kordas has top-up grant "Proof of Concept " (ERC-2013-PoC call)
MEDIGRA: Mechanics of energy dissipation in dense granular materials	PE 8 - Products & process engineering	981.600	01/11/2008 - 31/10/2011	Initial funding: 2,45 Mio € for 5 years. Due to death of PI, budget reduced to 981.600 for 3 years.
DARE: Soil foundation structure systems beyond conventional seismic failure thresholds: application to new or existing structures & monuments	PE 8 - Products & process engineering	2.399.992	01/12/2008 - 31/10/2013	
OPN-IMMUNOREGULATION: Immune mechanisms of osteopontin-mediated protection in allergic airway disease	LS6- Immunity & infection	1.511.200	01/12/2009 - 30/11/2014	
ADAPTIVES: Algorithmic Development and Analysis of Pioneer Techniques for Imaging with waVES	PE1- Mathematical foundations	690.000	01/06/2010 - 31/05/2015	
HYDROFAKIR: Roughness design towards reversible non- / full-wetting surfaces: From Fakir Droplets to Liquid Films	PE 8 - Products & process engineering	1.131.840	01/02/2010 - 31/05/2015	
CODAMODA: Controlling Data Movement in the Digital Age	PE6 - Computer science & informatics	1.212.959	01/04/2011 - 31/03/2016	
IMMA: Integrating the Multiple Meta-Analysis: a framework for evaluating and ranking multiple health care technologies.	LS7- Diagnostic tools, therapies & public health	592.500	01/10/2010 - 30/09/2015	
KRASHIMPE: KRas mutation interactions with host immunity in malignant pleural effusion.	LS4- Physiology, Pathophysiology & Endocrinology	1.995.000	01/042011 - 31/03/2016	
ARMOS: Advanced multifunctional Reactors for green Mobility and Solar fuels	PE8- Products & process engineering	1.749.999	01/02/2011 - 31/01/2016	
ATMOPACS: Atmospheric Organic Particulate Matter, Air Quality and Climate Change Studies	PE10 - Earth system science	2.496.000	01/01/2011 - 31/12/2015	
HIVbiochip: A Point-of-Care biochip for HIV monitoring in the developing world	LS9- Applied life sciences, biotechnology bioengineering	1.986.000	01/06/2012 - 31/05/2017	Grant Portability: submission with FORTH
PPP: Protecting and Preserving Human Knowledge for Posterity	PE6- Computer science & informatics	1.032.915	01/10/2011 - 30/09/2016	

Call Identifier	PI Name [b]	Host Institution for ERC Grant [c]	PI Position at Greek Faculty, School, Institute
ERC-2011-StG	Georgios Vassilikogiannakis	University of Crete	Associate Professor - Faculty of Science & Engineering - Department of Chemistry - Division of Organic Chemistry - University of Crete
ERC-2011-StG	Zoi Lygerou	University of Patras	Associate Professor - Medical School - Division of Basic Medical Sciences I - Department of General Biology: Molecular Cell Biology Unit - University of Patras
ERC-2011-AdG	Iannis Talianidis	Biomedical Sciences Research Center Alexander Fleming	Head of Laboratory - Division of Molecular Biology & Genetics - BSRC Fleming
ERC-2011-AdG	Athanasios Dimoulas	National Center for Scientific Research "Demokritos"	Researcher A - Research Director - Institute of Nanoscience & Nanotechnology - NCSR Demokritos
ERC-2011-AdG	Ioannis Dafalias	National Technical University of Athens (NTUA)	Professor Emeritus -School of Applied Mathematical & Physical Sciences - Department of Mechanics - NTUA
ERC-2011-AdG	Manolis Papadrakakis	National Technical University of Athens (NTUA)	Professor - Laboratory of Structural Analysis & Seismic Research - School of Civil Engineering - Department of Structural Engineering - NTUA
ERC-2012-StG	Maria Fousteri	Biomedical Sciences Research Center Alexander Fleming	Head of Laboratory - Division of Molecular Biology & Genetics - BSRC Fleming
ERC-2012-StG	Panayiota Poirazi	Foundation for Research & Technology Hellas (FORTH)	Research Director -Computational Biology Lab - Institute of Molecular Biology & Biotechnology - FORTH
ERC-2012-StG	Vasiliki (Vana) Kalogeraki	Athens University of Economics & Business (AUEB)	Assistant Professor – Department of Informatics - AUEB
ERC-2012-StG	Ioannis Smaragdakis	National & Kapodistrian University of Athens	Associate Professor - School of Sciences - Faculty of Informatics & Telecommunications - National & Kapodistrian University of Athens
ERC-AdG-2012	Costas Soukoulis	Foundation for Research & Technology Hellas (FORTH)	1.Associated Researcher at Institute of Electronic Structure and Laser (IESL -FORTH) 2. Professor at Dept. of Materials Science & Technology, University of Crete
ERC-AdG-2012	Constantine Galiotis	Foundation for Research & Technology Hellas (FORTH)	1. Associated Researcher at Institute of Chemical Engineering Sciences- (ICE-HT/FORTH) 2. School of Engineering, Department of Chemical Engineering, University of Patras
ERC-AdG-2012	Markos Papageorgiou	Technical University of Crete	Professor - School of Production Engineering & Management, Technical University of Crete
ERC-2013-StG	Christos-Xenofon Dimitropoulos	Foundation for Research & Technology Hellas (FORTH)	1. Associated Researcher at Institute of Computer Sciences (ICS-FORTH) 2.Assistant Professor - Computer Science Department - University of Crete
ERC-2013-StG	Eftherpe (Effie) Fokas	Hellenic Foundation for European & Foreign Policy (ELIAMEP)	Research Fellow at ELIAMEP
ERC-2013-CoG	Ioannis Tsamardinos	University of Crete	1.Associate Professor - Computer Science Department - University of Crete 2. Associated Researcher at Institute of Computer Sciences (ICS-FORTH)
ERC-2013-CoG	Andreas Zezas	Foundation for Research & Technology Hellas (FORTH)	1. Researcher(academic) at Institute of Electronic Structure and LASER -FORTH 2. Assistant Professor - Physics Department – University of Crete
ERC-2013-AdG	George Kollias	Biomedical Sciences Research Center Alexander Fleming	Head of Laboratory - Division Immunology - BSRC Fleming

Acronym: Title	Main Evaluation Panel [(d)]	Budget (euros)	Duration	Comments
SINOXYGEN: Advancing the Green Chemistry of Singlet Oxygen and Applying it to Synthetic Challenges	PE5 - Materials & Synthesis	1.338.000	01/10/2011 - 30/09/2016	
DYNACOM: From Genome Integrity to Genome Plasticity: Dynamic Complexes Controlling Once per Cell Cycle Replication	LS3 - Cellular & Developmental Biology	1.531.000	01/02/2012 - 31/01/2017	
SET-NET: Enzymatic and genomic targets of histone modifying enzymes and their role in liver metabolism and hepatocarcinogenesis	LS4- Physiology, Pathophysiology & Endocrinology	2.499.600	01/01/2012 - 31/12/2016	
SMARTGATE: "Smart Gates for the 'Green' Transistor"	PE7- Systems & communication engineering	1.221.611	01/01/2012- 31/12/2015	Duration of ERC Grant: 4 years
SOMEF: Critical State Soil Mechanics Revisited: Fabric Effects	PE8 - Products & process engineering	1.924.000	01/03/2012 - 28/02/2017	
MASTER: Mastering the Computational Challenges in Numerical Modeling and Optimum Design of CNT Reinforced Composites	PE8 - Products & process engineering	2.496.000	01/03/2012 - 28/02/2017	
TRANSARREST : Keeping gene expression in check: eliciting the role of transcription in the maintenance of genome integrity	LS1- Molecular & Structural Biology & Biochemistry:	1.500.000	01/11/2012 – 31/10/2017	
DEMORY: Dissecting the Role of Dendrites in Memory	LS5 - Neurosciences & neural disorders	1.398.000	01/10/2012 – 30/09/2017	Cypriot Nationality of PI
NGHCS: Creating the Next-Generation Mobile Human-Centered Systems	PE6- Computer science & informatics	960.000	01/03/2013 - 28/02/2018	
SPADE: Sophisticated Program Analysis, Declaratively	PE6- Computer science & informatics	1.042.616	01/01/2013 - 31/12/2017	
PHOTOMETA: Photonic Metamaterials: From Basic Research to Applications	PE3 - Condensed matter physics	2.100.000	01/03/2013 - 28/02/2018	
TAILOR GRAPHENE: Tailoring Graphene to Withstand Large Deformations	PE8 - Products & process engineering	2.025.600	01/06/2013 - 31/05/2018	
TRAMAN21: Traffic Management for the 21st Century	PE8 - Products & process engineering	1.496.880	01/03/2013 - 28/02/2017	Duration of ERC Grant: 4 years
NETVOLUTION: Evolving Internet Routing: A Paradigm Shift to Foster Innovation	PE7- Systems & communication engineering	1.410.600	01/01/2014 – 31/12/2018	
GRASSROOTSMOBILE: Directions in Religious Pluralism in Europe: Examining Grassroots Mobilisations in Europe in the Shadow of European Court of Human Rights Religious Freedom Jurisprudence	SH2 - Institutions, values, beliefs & behaviour	1.184.567	01/01/2014 - 31/12/2018	
CAUSALPATH: Next Generation Causal Analysis: Inspired by the Induction of Biological Pathways from Cytometry Data	PE6- Computer science & informatics	1.724.000	01/09/2014 - 31/08/2019	
A-BINGOS: Accreting binary populations in Nearby Galaxies: Observations & Simulations	PE9 - Universe sciences:	1.242.000	01/04/2014 – 31/03/2019	
MCS-INTEST: Mesenchymal Cells of the Lamina Propria in Intestinal Epithelial & Immunological Homeostasis	LS6- Immunity & infection	2.590.000	01/07/2014 – 30/06/2019	

(a) Data available on the ERC website (16) and the CORDIS website (17); **(b)** Link to professional-dedicated website. Only positions at Greek HIs are listed; **(c)** Refers to Host Institution (HI) chosen by Principal Investigator (PI) for implementation of the ERC Grant; **(d)** ERC panel descriptors of 2012 Work Programme

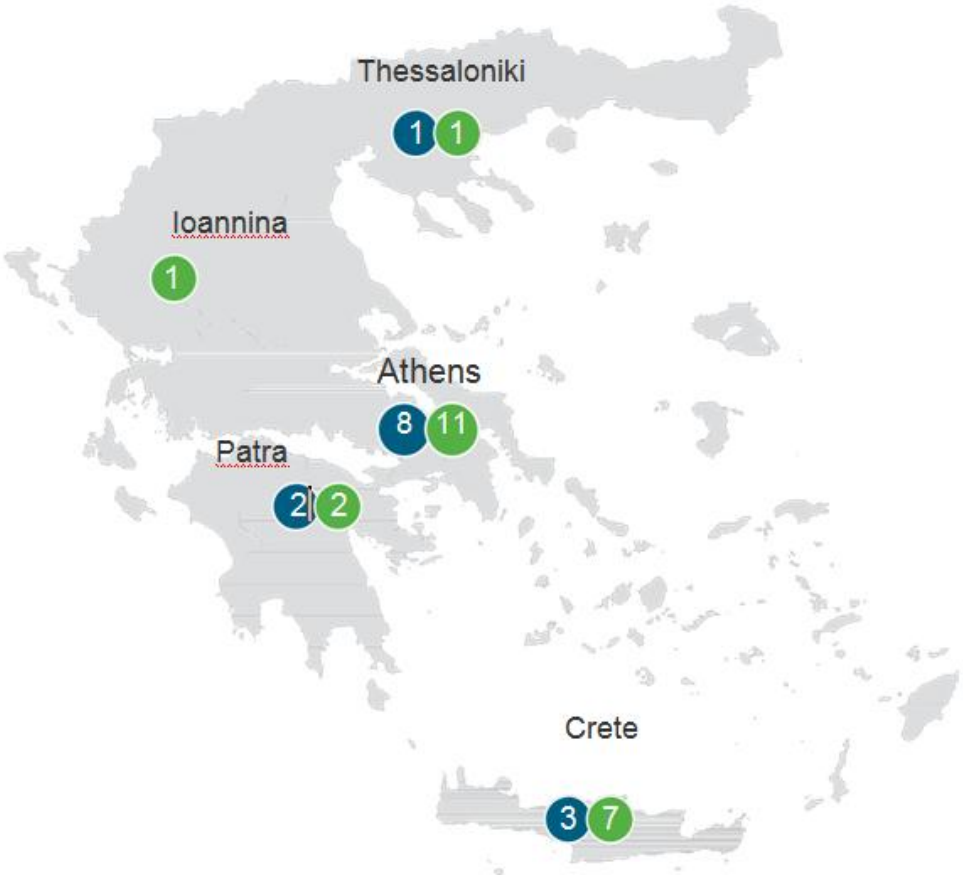
3. Mapping of Excellence in the Greek Research & Innovation Landscape

Until recently, European added value was mainly defined as the European dimension of the problem, priority or policy tackled by research teams in different countries. However, with the establishment of the ERC, a new dimension to European Added-Value (18) has emerged that is based on competition for research funding at European level, assessed purely on the basis of excellence. In this sense, the ERC is a pan-European funding agency for investigator-driven frontier research able to select outstanding researchers and ideas from a wider pool than national schemes would allow. By channeling resources to the best researchers and ideas at the frontier of knowledge and by supporting the development of new centres of excellence in emerging sectors across Europe, the ERC should play a key role in creating a global competitive European Research Area that will increase the quality of the overall European research system and so lead to the knowledge and innovation society envisioned by the Europe 2020 strategy.

The ERC has also significantly contributed to the establishment of new benchmarks of excellence and competitiveness among European research and innovation (R&I) stakeholders that should lead to crucial structural changes in the European Research Area (4). Indeed, new International rankings established on the basis of ERC success have been used to assess the strengths and weaknesses of national research systems and individual institutions and to reform and adapt their strategies, policies and practices in order to increase their effectiveness and attractiveness. In this sense, European universities and research institutions have begun to use their success in ERC calls as a stamp of prestige and excellence and to actively compete for top researchers by offering the most attractive "working" conditions.

The following "Mapping of Excellence" in the Greek R&I landscape is based on the performance of researchers and the attractiveness of Host Institutions in Greece. Hereafter, Greek ERC Grants shall refer to ERC Grants that are implemented in Greek Host Institutions.

It should be noted that a complementary picture of Greek R&I excellence has been provided in a publication of the National Documentation Centre (EKT) entitled "Επιστημονική Αριστεία στις Περιφέρειες Σύγκλισης της ΕΕ, 2007 - 2012: η περίπτωση της Ελλάδας" (19) which analyses the successful applications of Greek organisations submitted to the FP7-REGPOT (Research Potential) calls. In this programme, competition for funding is also on the basis of excellence but among institutions located in EU convergence and outermost regions and equivalent regions in Associated Countries. This programme does not fund research activities per se but aims to improve the research capacities of highest quality and/or promising centres, within the FP7 thematic priorities, by reinforcing their scientific & technological potential.



- **Diagram 1: Geographical distribution of ERC Grants in Greece**

Geographical Distribution of ERC Grants in Greece

The distribution of Greek ERC Grants is totally in line with the distribution of EU R&D funded projects in Greece.

Athens

ERC-2007-StG	LS3 - Cellular & Developmental Biology	PAGE	Popi Syntichaki	Biomedical Research Foundation-Academy of Athens
ERC-2007-StG	PE1 - Mathematical Foundations	RIMACO	Dimitris Achlioptas	Computer Technology Institute & Press Diophantus (Athens branch)
ERC-2009-StG	LS6 - Immunity & Infection	OPN-IMMUNOREGULATION	Vily Panoutsakopoulou	Biomedical Research Foundation-Academy of Athens
ERC-2009-StG	PE 8 - Products & Process Engineering	HYDROFAKIR	Athanasios Papathanasiou	National Technical University of Athens
ERC-2010-StG	PE6 - Computer Science & Informatics	CODAMODA	Aggelos Kiayias	National & Kapodistrian University of Athens
ERC-2011-StG	PE6 - Computer Science & Informatics	PPP	Dimitra-Isidora Roussopoulou	National & Kapodistrian University of Athens
ERC-2011-StG	LS9 - Applied Life Sciences, Biotechnology & Bioengineering	HIVbiochip	Nikos Chronis	National Center for Scientific Research "Demokritos"
ERC-2012-StG	LS1 – Molecular & Structural Biology & Biochemistry	TRANSARREST	Maria Fousteri	Biomedical Sciences Research Center Alexander Fleming
ERC-2012-StG	PE6 - Computer Science & Informatics	NGHCS	Vasiliki (Vana) Kalogeraki	Athens University of Economics & Business
ERC-2012-StG	PE6 - Computer Science & Informatics	SPADE	Ioannis Smaragdakis	National & Kapodistrian University of Athens
ERC-2013-StG	SH2 – Institutions, Values, Beliefs & Behaviour	GRASSROOTSMOBILE	Eftherpe (Effie) Fokas	Hellenic Foundation for European & Foreign Policy
ERC-2008-AdG	LS7 - Diagnostic tools, Therapies & Public Health	NANOTHERAPY	George Kordas	National Center for Scientific Research "Demokritos"
ERC-2008-AdG	PE 8 - Products & Process Engineering	MEDIGRA	Ioannis Vardoulakis (PI) Ioannis Dafalias (project supervisor)	National Technical University of Athens
ERC-2008-AdG	PE 8 - Products & Process Engineering	DARE	George Gazetas	National Technical University of Athens
ERC-2011-AdG	LS4 - Physiology, Pathophysiology & Endocrinology	SET-NET	Iannis Talianidis	Biomedical Sciences Research Center Alexander Fleming
ERC-2011-AdG	PE7 - Systems & Communication Engineering	SMARTGATE	Athanasios Dimoulas	National Center for Scientific Research "Demokritos"
ERC-2011-AdG	PE8 - Products & Process Engineering	SOMEF	Ioannis Dafalias	National Technical University of Athens
ERC-2011-AdG	PE8 - Products & Process Engineering	MASTER	Manolis Papadrakakis	National Technical University of Athens
ERC-2013-AdG	LS6 – Immunity & Infection	MCS-INTEST	George Kollias	Biomedical Sciences Research Center Alexander Fleming

Thessaloniki

ERC-2007-StG	PE6 - Computer Science & Informatics	MINATRAN	Katerina Aifantis	Aristotle University of Thessaloniki
ERC-2010-AdG	PE8 - Products & Process Engineering	ARMOS	Athanasios Konstandopoulos	Centre for Research & Technology Hellas

Ioannina

ERC-2010-StG	LS9 - Applied Life Sciences, Biotechnology & Bioengineering	IMMA	Georgia Salanti	University of Ioannina

Patras

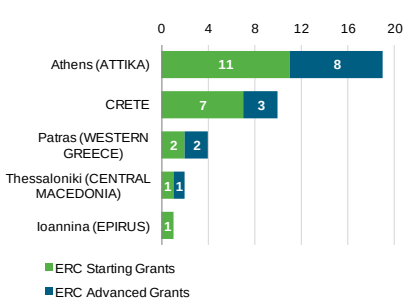
ERC-2010-StG	LS4 - Physiology, Pathophysiology & Endocrinology	KRASHIMPE	Georgios Stathopoulos	University of Patras
ERC-2011-StG	LS3 - Cellular & Developmental Biology	DYNACOM	Zoi Lygerou	University of Patras
ERC-2010-AdG	PE8 - Products & Process Engineering	ATMOPACS	Spyridon Pandis	Foundation for Research & Technology Hellas
ERC-2012-AdG	PE8 - Products & Process Engineering	TAILOR GRAPHENE	Constantine Galiotis	Foundation for Research & Technology Hellas

Crete

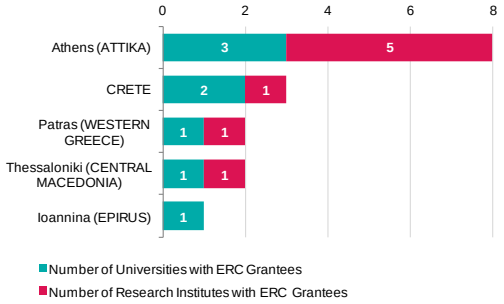
ERC-2007-StG	PE2 - Fundamental Constituents of Matter	TRICEPS	Theodore Peter Rakitzis	Foundation for Research & Technology Hellas
ERC-2009-StG	PE1 - Mathematical Foundations	ADAPTIVES	Chrysoula Tsogka	Foundation for Research & Technology Hellas
ERC-2011-StG	PE5 - Materials & Synthesis	SINOXYGEN	Georgios Vassilikogainnakis	University of Crete
ERC-2012-StG	PE7 - Systems & Communication Engineering	NETVOLUTION	Christos-Xenofon Dimitropoulos	Foundation for Research & Technology Hellas
ERC-2012-StG	LS5 – Neurosciences & Neural Disorders	DEMORY	Panayiota Poirazi	Foundation for Research & Technology Hellas
ERC-2013-CoG	PE6 - Computer Science & Informatics	CAUSALPATH	Ioannis Tsamardinos	University of Crete
ERC-2013-CoG	PE9 - Universe Sciences	A-BINGOS	Andreas Zezas	Foundation for Research & Technology Hellas
ERC-2008-AdG	Interdisciplinary LS3 & LS5	NEURONAGE	Nektarios Tavernarakis	Foundation for Research & Technology Hellas
ERC-2012-AdG	PE3 - Condensed Matter Physics	PHOTOMETA	Costas Soukoulis	Foundation for Research & Technology Hellas
ERC-2012-AdG	PE8 - Products & Process Engineering	TRAMAN21	Markos Papageorgiou	Technlcal University of Crete

The Athens Urban area accounts for 19 Greek ERC Grants (50%) that are being implemented in 8 different host institutions (HIs) (see Chart 16). Indeed, 11 out of the 22 Greek Starting grantees and 8 out of 14 Greek Advanced grantees are located in the Attica region (see Chart 15). These data are directly related to Athens' population size, the number of researchers and the potential HIs. In this sense, Athens accounts for about 40% of the Greek population and 45,4% FTEs Researchers (EKT, Eurostat – 2011). The island of Crete is ranked second with 7 Starting and 3 Advanced grantees located in 3 distinct organisations and 3 cities (Heraklion, Rethimno & Chania). Crete accounts for 28% of the ERC Grants which represents a significantly higher proportion than its share in terms of population, researchers (10% FTEs Researchers) and potential HIs. Patras is in third position, with 2 Starting and 2 Advanced Grants being implemented in 2 different organisations. Other Greek cities exhibiting ERC Grants are Thessaloniki and Ioannina (see Chart 15 & Chart 16)

- **Chart 15: Geographical distribution of ERC Grants in Greece per funding scheme**



- **Chart 16: Number of Greek HIs with ERC grantees per type of organisation, per area**



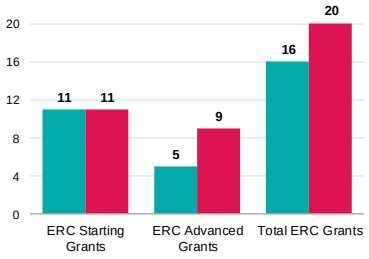
Greek Organisations Hosting ERC Grants & ERC Reviewers

ERC competitions are primarily competitions among individual outstanding researchers that submit a proposal on a cutting-edge scientific topic of their choice and choose their research environment. However the host institutions are another important factor in the ERC Grants since they compete not only for the best researchers but also for funds to increase their research budget and perform excellent frontier research.

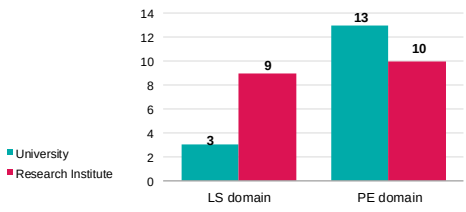
The vast majority of ERC Grants are implemented in universities and public research organisations of the EU and associated countries. The ERC Starting & Advanced projects involved more than 5100 organisations of which 74% are universities and 25% are research organizations. A very small percentage of the ERC applications, about 1%, concerns projects that are hosted by a private organisation and only 38 ERC Grants are currently being implemented in private research organisations or in industry.

In Greece, there are no ERC Grants hosted by private organisations. Sixteen of the Greek ERC Grants are implemented in universities whereas the other 20 are hosted by public research organisations. It should be noted that 10 out of the 12 ERC grantees that display a dual affiliation to a Greek research organisation and university have selected the research organisation to implement their ERC project (see Table 4). Chart 17 depicts the distribution of Greek ERC Grants per type of Host Institution and funding scheme whereas chart 18 shows the number of Greek ERC Grants per type of HI and domain of application. While 75% of the Greek ERC Grants submitted to the Life Sciences domain (9 out of 12) are implemented in Greek research organisations, more than half of the Greek ERC grantees applying to the Physical Sciences and Engineering domain (13 out of 23) are hosted in Greek universities.

• **Chart 17: ERC Grants in Greece per type of Host Institution & funding scheme**



• **Chart 18: ERC Grants in Greece per type of Host Institute, per domain**



During FP7, 4.354 Grant Agreements were signed with almost 600 different Host Institutions. There is a strong concentration of ERC funded projects in a relatively small number of research institutions. Approximately 40% of all grants are implemented in 31 organisations (including the big national centres such as CNRS). New International ranking lists of European research institutions have been developed on the basis of ERC success (i.e. on the number of ERC Grants hosted). They are used to assess and benchmark the performance of European research institutions and can be useful tools for a variety of stakeholders ranging from students, to policy makers or industry/business partners. Table 5 depicts a list of organisations hosting at least 30 ERC PIs by funding scheme.

- **Table 5: Organisations hosting at least 30 ERC grantees (PIs)**

Host Institution - Country	Starting Grants (StG & CoG)	Advanced Grants	Total
National Centre for Scientific Research (CNRS) - France	143	66	209
University of Oxford - UK	64	57	121
University of Cambridge - UK	69	49	118
Max Planck Society - Germany	66	45	111
University College London - UK	55	30	85
Swiss Federal Institute of Technology Zurich (ETH Zurich) - Switzerland	35	46	81
Swiss Federal Institute of Technology Lausanne (EPFL) - Switzerland	44	36	80
Weizmann Institute - Israel	51	28	79
Hebrew University of Jerusalem - Israel	44	30	74
Imperial College - UK	34	27	61
National Institute of Health and Medical Research (Inserm) – France	39	18	57
University of Leuven - Belgium	30	15	45
University of Edinburgh - UK	23	21	44
French Alternative Energies and Atomic Energy Commission - France	34	9	43
University of Bristol - UK	18	21	39
Spanish National Research Council (CSIC) - Spain	24	15	39
University of Munich - Germany	14	24	38
University of Amsterdam - The Netherlands	21	17	38
Radboud University Nijmegen - The Netherlands	24	12	36
Utrecht University - The Netherlands	22	13	35
Leiden University - The Netherlands	19	15	34
Technion - Israel Institute of Technology - Israel	25	8	33
University of Zurich - Switzerland	18	15	33
Free University & Medical Center Amsterdam (VU-VUmc) - The Netherlands	20	12	32
University of Geneva - Switzerland	14	17	31
Tel Aviv University - Israel	17	14	31
Nat. Inst. for Res. in Computer Science and Automatic Control (INRIA) – France	19	12	31

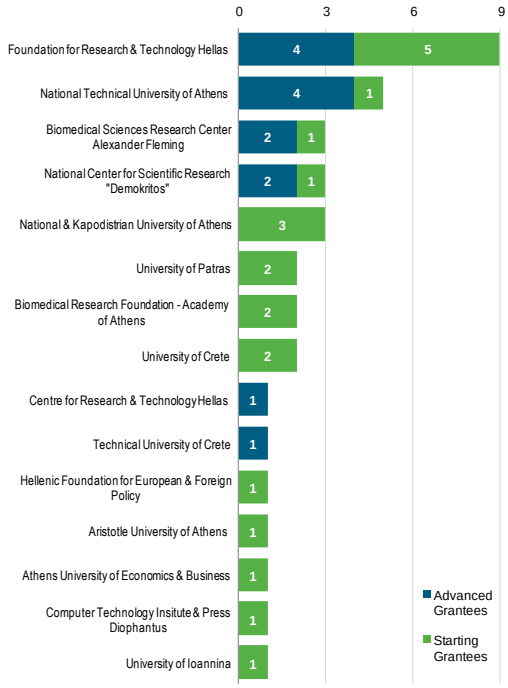
This concentration of grants on few organisations is a key feature of competitive research funding on the basis of excellence and it is also observed in Greece, with 4 organisations – the Foundation for Research & Technology Hellas (FORTH), the National Technical University of Athens (NTUA), the Biomedical Sciences Research Centre Alexander Fleming and the National Centre for Scientific Research "Demokritos" – hosting 56% of the Greek ERC grantees (20 out of 36 PIs) and 64% (35,4 Mio €) of the ERC funding received by Greece (see Table 6).

• **Table 6: Greek organisations hosting ERC grantees (PIs) by grant scheme and ERC funding (ranked by ERC funding)**

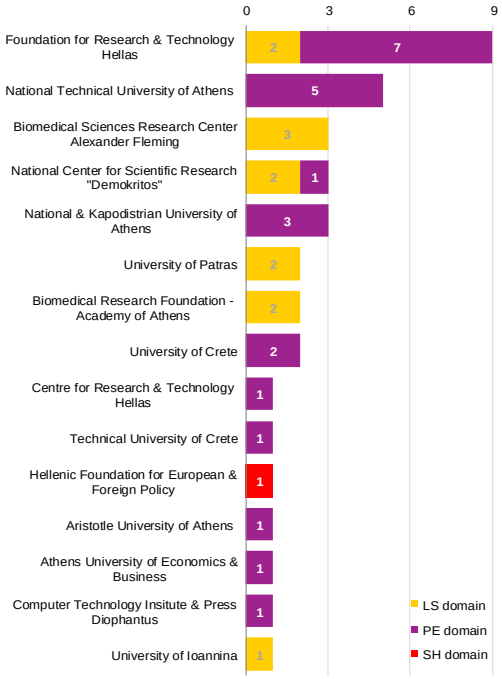
Host Institution	Starting Grants (StG & CoG)	Advanced Grants	Total	ERC Funding in € (% ERC Greek Funding)
Foundation for Research & Technology Hellas -	5 (1 CoG)	4	9	14.648.199 (26,3%)
National Technical University of Athens	1	4	5	8.933.432 (16%)
Biomedical Sciences Research Centre A. Fleming	1	2	3	6.589.600 (11,9%)
National Centre for Scientific Research "Demokritos"	1	2	3	5.207.611 (9,3%)
University of Patras	2	0	2	3.526.000 (6,3%)
National & Kapodistrian University of Athens	3	0	3	3.288.490 (5,9%)
University of Crete	2 (1 CoG)	0	2	3.062.000 (5,6%)
Biomedical Research Foundation Academy of Athens	2	0	2	2.591.200 (4,7%)
Center for Research & Technology Hellas	0	1	1	1.749.999 (3,1%)
Technical University of Crete	0	1	1	1.496.880 (2,7%)
Hellenic Foundation for European & Foreign Policy	1	0	1	1.184.567 (2,1%)
Aristotle University of Thessaloniki	1	0	1	1.128.400 (2%)
Athens University of Economics & Business	1	0	1	960.000 (1,7%)
Computer Technology Institute Diophantus	1	0	1	749.996 (1,3%)
University of Ioannina	1	0	1	592.500 (1,1%)

Chart 19 shows the 15 Greek institutions that host Principal Investigators, per funding scheme, whereas chart 20 lists the Greek organisations implementing ERC Grants, per domain. FORTH and the National Centre for Scientific Research “Demokritos” are the only Greek organisations that currently host successful applicants in both the Life Sciences and the Physical Sciences and Engineering domains.

- **Chart 19: Greek organisations hosting ERC grantees per funding scheme**



- **Chart 20: Greek organisations hosting ERC grantees per domain of application**



In the ranking list of Greek institutions based on ERC success, first is FORTH with 9 PIs (4 StG, 1 CoG & 4 AdG grantees) followed by the National Technical University of Athens with 5 ERC grantees (4 AdG & 1 StG PIs) (see Table 6). In addition, when considering the HI of submission and not of implementation, FORTH displays 11 successful ERC applications. Indeed, 2 successful PIs that submitted with FORTH requested grant portability and are currently implementing their frontier research at another organisation.

As regards the Advanced funding scheme, NTUA & FORTH lead with four Advanced grantees each followed by the National Centre for Scientific Research “Demokritos” & Biomedical Sciences Research Centre A. Fleming, with two ERC Advanced Grants each. On the other hand, NTUA only hosts one Starting grantee. The ERC Starting funding scheme represents the future of excellence by supporting the next generation of research leaders in Europe. In this regard, the NTUA could consolidate its leading role as a centre of excellence in Greece by placing more emphasis on attracting and retaining promising top research leaders, thereby encouraging their early independence.

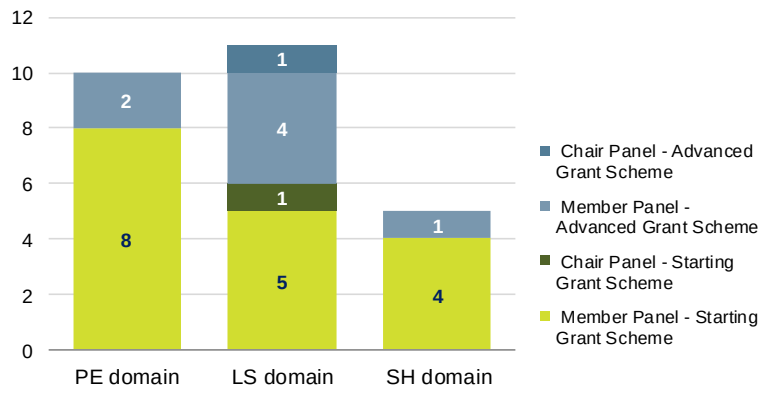
FORTH is the leading organisation in terms of ERC Starting grantees, hosting five. They are followed by the National & Kapodistrian University of Athens with 3 Starting grantees and then the University of Patras, the Biomedical Research Foundation Academy of Athens and the University of Crete, with 2 ERC Starting Grants each. However, the University of Crete actually plays a more significant role in the Greek mapping of excellence if the dual affiliation of some Principal Investigators is taken into consideration. In this sense, 8 Principal Investigators hold a professorship at the University of Crete (see Table 4).

Greek ERC Reviewers as an Indicator of Excellence

The chair and members of the ERC panels involved in the evaluation of applications submitted to the ERC calls for proposals are high-level scientists and/or scholars that have been proposed by the ERC Scientific Council on the basis of their scientific reputation and therefore should also be considered in the mapping of excellence. Hereafter, 'Greek ERC reviewers' shall refer to ERC reviewers hosted by Greek research institutions.

Table 7 shows the 25 researchers located in Greek host institutions that have acted as chair or panel members in the evaluation of ERC Starting, Consolidator or Advanced Grant calls during FP7-ERC calls. Ten researchers were ERC reviewers in the PE domain, ten in the LS domain and five in the SH domain (see Chart 21). In addition, 23 acted as panel members whereas two were chair of one of the ERC panels. The Greek ERC reviewers are located in Host Institutions where ERC grantees are already based, with the exception of most of the organisations that have panel members of the SH domain since there has been only 1 grantee in this domain. The National & Kapodistrian University of Athens boasts 6 ERC panel members followed by FORTH with 5. If we consider the double affiliation of some researchers, FORTH is the only organisation that has reviewers in all 3 domains.

- **Chart 21: ERC reviewers in Greek organisations per funding scheme, per domain**



- **Table 7: Researchers in Greek organisations that are members of an ERC evaluation panel**

ERC Evaluation Panels – Descriptors	ERC Evaluation Panels			
	Chair Panel - Starting Grant Scheme	Panel Member - Starting Grant Scheme	Chair Panel - Advanced Grant Scheme	Panel Member - Advanced Grant Scheme
PE1 = Mathematics: all areas of mathematics, pure & applied, plus mathematical foundations of computer science, mathematical physics & statistic				
PE2 = Fundamental constituents of matter: particle, nuclear, plasma, atomic, molecular, gas & optical physics		Dimitrios Charalambidis (FORTH - Institute of Electronic Structure & Laser; & University of Crete - Physics Department)		
PE3 = Condensed matter physics: structure, electronic properties, fluids, nanosciences		Nikolaos Stefanou [(b)] (National & Kapodistrian University of Athens - Faculty of Physics, Department of Solid State Physics)		
PE4 = Physical & analytical chemical sciences: analytical chemistry, chemical theory, physical chemistry/chemical physics				
PE5 = Synthetic chemistry & materials: materials synthesis, structure-properties relations, functional & advanced materials, molecular architecture, organic chemistry				
PE6 = Computer science & informatics: informatics & information systems, computer science, scientific computing, intelligent systems				Pavlos Spirakis (Computer Technology Institute; & University of Patras - Engineering School, Department of Computer Engineering & Informatics)
PE7 = Systems & communication engineering: electronic, communication, optical & systems engineering		Hercules Avramopoulos (National Technical University of Athens - School of Electrical & Computer Engineering, Photonics Communications Research Laboratory) Ioannis Pitas [(b)] (Aristotle University of Thessaloniki – Department of Informatics)		
PE8 = Products & processes engineering: product design, process design & control, construction methods, civil engineering, energy systems & material engineering		Dimitris A. Saravanos [(b)] (University of Patras -Department of Mechanical Engineering & Aeronautics) George Gazetas (National & Technical University of Athens - School of Civil Engineering) (ERC panel member & AdG grantee)		
PE9 = Universe sciences: astro-physics/chemistry/biology: solar system; stellar, galactic and extragalactic astronomy, planetary systems, cosmology; space science, instrumentation				Kanari Tsinganos (National & Kapodistrian University of Athens – Faculty of Physics, Department of Astrophysics & Astronomy)

ERC Evaluation Panels – Descriptors	ERC Evaluation Panels			
	Chair Panel - Starting Grant Scheme	Panel Member - Starting Grant Scheme	Chair Panel - Advanced Grant Scheme	Panel Member - Advanced Grant Scheme
PE10 = Earth system science: physical geography, geology, geophysics, atmospheric sciences, oceanography, climatology, ecology, global environment change, biogeochemical cycles, natural resources management		Euripides Stephanou (University of Crete - Chemistry Department, Division of Environmental and Analytical Chemistry) Maria Kanakidou (University of Crete - Chemistry Department, Division of Environmental and Analytical Chemistry; FORTH – Institute of Chemical Engineering Science)		
LS1 = Molecular & structural biology & biochemistry: molecular biology, biochemistry, biophysics, structural biology, biochemistry of signal transduction		Iannis Talianidis (BSRC Fleming - Division of Molecular Biology & Genetics) (ERC panel member & AdG grantee)		Dimitrios Thanos (Biomedical Research Foundation Academy of Athens - Basic Research Center)
LS2 = Genetics, genomics, bioinformatics & systems biology: genetics, population genetics, molecular genetics, genomics, transcriptomics, proteomics, metabolomics, bioinformatics, computational biology, biostatistics, biological modeling & simulation, systems biology, genetic epidemiology				
LS3 = Cellular & developmental biology: cell biology, cell physiology, signal transduction, organogenesis, developmental genetics, pattern formation in plants & animals				
LS4 = Physiology, pathophysiology & endocrinology: organ physiology, pathophysiology, endocrinology, metabolism, ageing, regeneration, tumorigenesis, cardiovascular disease, metabolic syndrome		Nektarios Tavernarakis (FORTH - Institute of Molecular Biology & Biotechnology & University of Crete – Medical School) (ERC panel member & AdG grantee)		
LS5 = Neurosciences & neural disorders: neurobiology, neuroanatomy, neurophysiology, neurochemistry, neuropharmacology, neuroimaging, systems neuroscience, neurological disorders, psychiatry				Leonidas Stefanis (National & Kapodistrian University of Athens - Medical School; Biomedical Research Foundation Academy of Athens - Clinical, Experimental Surgery, & Translational Research Center)
LS6 = Immunity & infection: immunobiology, aetiology of immune disorders, microbiology, virology, parasitology, global & other infectious diseases, population dynamics of infectious diseases, veterinary medicine	George Kollias (BSRC Fleming - Division of Immunology) (ERC panel member & Panel Chair in 2013 & AdG grantee)	George Kollias (BSRC Fleming - Division of Immunology) (ERC panel member & Panel Chair in 2013 & AdG grantee) Haralampos Moutsopoulos (National & Kapodistrian University of Athens - Faculty of Medicine, Department of Pathophysiology)		
LS7 = Diagnostic tools, therapies & public health: aetiology, diagnosis & treatment of disease, public health, epidemiology, pharmacology, clinical medicine, regenerative medicine, medical ethics		Klea Katsougianni [(a)] (National & Kapodistrian University of Athens - Faculty of Medicine, Department of Social Medicine, Psychiatry & Neurology, Hygiene & Epidemiology)	Dimitrios Boumpas (FORTH -Institute of Molecular Biology & Biotechnology; University of Crete - Medical School, Laboratory of Autoimmunity & Inflammation; BRFAA - Clinical, Experimental Surgery, & Translational Research Center)	Dimitrios Trichopoulos (c) (National & Kapodistrain University of Athens - Faculty of Medicine, Department of Hygiene, Epidemiology & Medical Statistics) Manolis Kogevinas (c) (National School of Public Health - Department of Nutrition and Chronic Diseases)

ERC Evaluation Panels – Descriptors	ERC Evaluation Panels			
	Chair Panel - Starting Grant Scheme	Panel Member - Starting Grant Scheme	Chair Panel - Advanced Grant Scheme	Panel Member - Advanced Grant Scheme
LS8 = Evolutionary, population & environmental biology: evolution, ecology, animal behaviour, population biology, biodiversity, biogeography, marine biology, ecotoxicology, prokaryotic biology				
LS9 = Applied life sciences & biotechnology: agricultural, animal, fishery, forestry and food sciences; biotechnology, chemical biology, genetic engineering, synthetic biology, industrial biosciences, environmental biotechnology & remediation				
SH1 = Individuals, institutions & markets: economics, finance & management		Aikaterini Kyriazidou[(a)] (Athens University of Economics & Business - Department of Economics)		
SH2 = Institutions, values, beliefs & behaviour: sociology, social anthropology, political science, law, communication, social studies of science & technology		Gerasimos Makris (Panteion University of Social & Political Sciences - Department Social Anthropology)		
SH3 = Environment, space & population: environmental studies, demography, social geography, urban & regional studies				Anna Triandafyllidou[(c)] (Democritus University of Thrace; and Hellenic Foundation for European & Foreign Policy)
SH4 = The human mind & its complexity: cognition, psychology, linguistics, phylosophy & education				
SH5 = Cultures & cultural production: literature, visual & performing arts, music, cultural & comparative studies				
SH6 = The study of the human past: archaelogy, history & memory		Maria Christina Chatziioannou (National Hellenic Research Foundation - Institute of Historical Research) Apostolos Sarris (FORTH - Institute of Mediterranean Studies-Laboratory of Geophysical - Satellite Remote Sensing and Archaeo-environment)		

(a)- ERC reviewers that have acted as panel member for the ERC Starting & Consolidator Grants; **(b)** ERC reviewers that have acted as panel member for the ERC Consolidator funding scheme; **(c)** ERC reviewers with double affiliation: Prof Triandafyllidou was based in Greece until end of 2012 and now she is in Italy; Prof. Kogevinas is based in Greece & Spain; Prof Trichopoulos in Greece and USA. Unfortunately, Prof Trichopoulos has deceased. Only positions at Greek HIs are depicted.

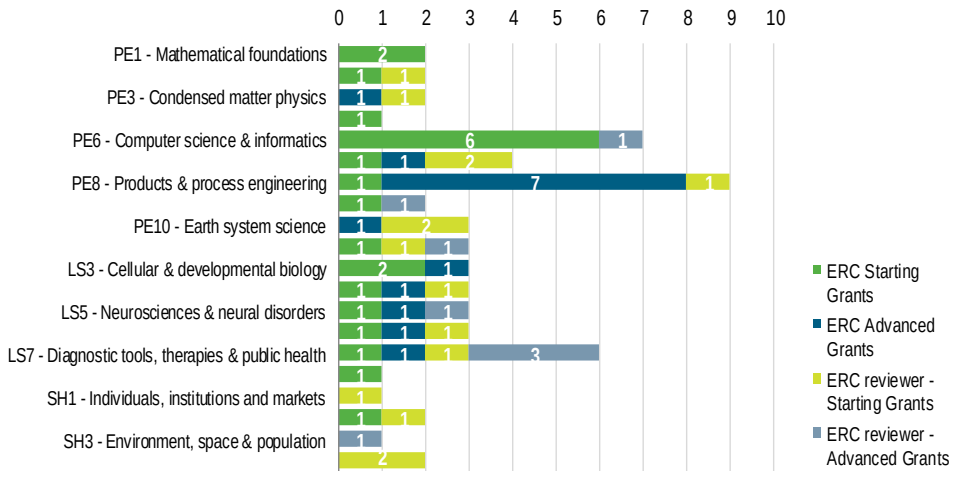
ERC Panel of Application & the Field of Research of ERC Grantees in Greece

The ERC supports investigator-driven frontier research through a competitive review process greatly recognized and highly respected by the entire scientific community, based on the sole criterion of scientific excellence. In this sense, the ERC does not only support and strength European leading research institutions but also excellent research teams in smaller institutions facilitating the emergence of new centres or research units of excellence all over Europe.

The applications to the ERC calls must be submitted to the appropriate primary ERC panel (i.e. the panel which covers the main scientific areas of the proposed research). The peer review evaluation (20) of the ERC Grant proposals is in the hands of 25 peer review evaluation panels, also called ERC panels, covering all fields of science, engineering and scholarship. For operational reasons the panels are subdivided into 3 main research domains (the Physical Sciences & Engineering domain, the Life Sciences domain and the Social Sciences & Humanities domain) that have 10, 9 & 6 panels respectively. The panel chair and members are high-level scientists and/or scholars and make recommendations for funding either autonomously or based on the feedback of external specialists who are not on the panel – the remote referees.

Chart 22 depicts the Greek ERC Grants per main ERC panel of submission, as well as ERC evaluators in Greece. Based on the results of the FP7-ERC calls, Greece displays outstanding expertise in panel PE8 "Products & process engineering" with 8 ERC grantees: 1 Starting & 7 Advanced grantees and 1 ERC reviewer, 5 of them located at the National Technical University of Athens. Greece excels at International level in the research area covered by the ERC panel PE6 "Computer science & informatics" with 6 Starting grantees (3 PIs located at the National & Kapodistrian University of Athens) and 1 ERC panel member. Another ERC panel where Greek researchers excel is LS7 "Diagnostic tools, therapies & public health" with 1 Advanced and 1 Starting grantee as well as 3 ERC reviewers - 2 in the Advanced and 1 in the Starting funding scheme. It is worth noting that this is one of the 2 ERC panels that has a researcher located in Greece (Prof Boumpas), acting as chair of the panel.

- **Chart 22: ERC Grants & ERC reviewers in Greece per ERC evaluation panel** [(a)]



(a) Cases where the ERC grantee has also acted as the ERC reviewer in the same panel are counted as 1

Each ERC panel is accompanied by a list of panel descriptors and covers quite a broad field of research. In addition, most of the Greek organisations hosting ERC grantees are large universities or major research organisations comprising numerous schools, faculties or institutes that range in quality and research performance. Therefore, in order to have a better insight into the emerging and established centres/ research units of excellence in Greece in terms of ERC success, the scientific expertise of the principal investigators and ERC reviewers located in Greece together with their affiliation at faculty, school and even departmental level has been taken into consideration (see Table 8).

Research Centres / Units of Excellence in Physical Sciences & Engineering (based on ERC success)

- The National Technical University of Athens - and in particular the School of Civil Engineering (Prof Gazetas & Prof Papadrakakis) and the School of Applied Mathematical & Physical Sciences (Prof Dafalias & Prof Vardoulakis & team), with two Advanced grantees each - constitutes one of the Greek units of excellence, displaying international leadership in PE "Products & processes engineering" in the areas of seismic research, geotechnical engineering, structural engineering, soil mechanics and geomaterials.
- The Faculty of Informatics and Telecommunications of the National Kapodistrian University of Athens is a research unit of excellence with top expertise in PE6 "Computer Science & Informatics" in the fields of cryptography, computer security, digital preservation, networking, and mobile computing, among others. In this sense, the above-mentioned faculty hosts 3 Starting grantees (Prof Roussopoulou Prof Kiayias & Prof Smaragdakis) and a fourth PI (Prof Achlioptas) who, while implementing his ERC Grant at the Computer and Technology Institute "Diophantus", also has a teaching position (Professorship) at the same faculty. The Department of Informatics and Telecommunications has been constantly ranked among the 100 most important research institutes in the field of Computer Science, according to the Academic Ranking of World Universities (ARWU).
- The Institute of Electronic Structure and Laser of the Foundation for Research & Technology Hellas, with one panel member (Prof Charalambidis), 1 Advanced Grantee (Prof Soukoulis) and 2 Starting grantees (Prof Rakitzis & Prof Zezas), displays high-level expertise in the area of Laser interactions & Photonics in fields ranging from polarization spectroscopy, photonic Metamaterials, astrophysics & attosecond science. The four researchers hold a professorship at the Physics department of the University of Crete.
- The Institute of Nanoscience & Nanotechnology of the National Centre for Scientific Research "Demokritos", with two Advanced grantees (Dr Kordas & Dr Dimoulas) and one Starting grantee (Dr Chronis), is internationally acknowledged in the field of material sciences and in particular in nano- and micro- technologies.
- The University of Crete and specifically the Chemistry Department, with one Starting grantee (Prof Vassilikogiannakis) and two ERC reviewers (Prof Stephanou & Prof Kanakidou), exhibits high-level expertise in the field of synthetic organic chemistry and environmental chemical processes.
- The Institute of Chemical Engineering & High Temperature Chemical Processes (ICE-HT FORTH) hosts 2 Advanced Grantees: Prof Spyridon excels in environmental/clean technologies (atmospheric chemistry, atmospheric pollution modeling, aerosol science, global climate change, environmental public policy analysis) whereas Prof Galiotis excels in material sciences (composite materials, graphene & carbon nanotubes, polymers & non-destructive testing of materials). Both PIs are Professors at the Chemical Engineering Department of the University of Patras.
- The Computer Sciences Department of the University of Crete has 1 Consolidator grantee Prof Tsamardinos (Artificial Intelligence, Machine Learning, Bioinformatics, Applications of Machine Learning in Biomedical Informatics) and 1 Starting grantee Prof Dimitropoulos (network monitoring, software-defined networking, privacy, and security topics) who are excellent young researchers in Information & Communications Technologies. Both professors are associated researchers at the Institute of Computer Science (ICS-FORTH).
- The Computer Technology Institute Diophantus, with one Starting grantee (Prof Achlioptas) and one ERC reviewer (Prof Spirakis), displays high-quality research in informatics and computational mathematics in fields such as Algorithms and complexity, Computer systems and networks, Threshold phenomena in random graphs and random formulas, Applications of embeddings and spectral techniques in machine learning, as well as Algorithmic analysis of massive networks.

Research Centres/Units of Excellence in Life Sciences (based on ERC success)

- The Institute of Molecular Biology and Biotechnology (IMBB) of the Foundation for Research & Technology Hellas (FORTH) – with 1 Advanced & ERC reviewer (Prof Tavernarakis), 1 Starting grantee (Dr Panayiota Poirazi) and 1 chair of an ERC review panel (Prof Boumpas) – constitutes a centre of excellence in the Health & Biotech themes with multidisciplinary expertise ranging from computational biology to molecular systems biology, ageing, neurosciences and medical inflammation, among other fields. In addition, the IMBB has played and continues to play a significant training role. In this regard, other outstanding scientists such as Dr Talianidis (Advanced grantee, BSRC A. Fleming), Dr Thanos (ERC panel member, BRFAA) and Dr Popi Syntichaki (ERC Starting grantee, BRFAA) were previously professionally linked to this institute.

- The Medical School of the National and Kapodistrian University of Athens and in particular the Divisions of Social Medicine-Psychiatry-Neurology and of Pathophysiology, with 3 and 1 ERC reviewers respectively, displays high-level expertise in the Health theme. In this regard, the Laboratory of Hygiene & Epidemiology (of the above mentioned department) has two ERC reviewers, Prof Trichopoulos and Prof Katsougianni, which are internationally recognised experts in the field of statistics and epidemiology. The 2nd department of Neurology hosts another ERC reviewer, Prof Stefanis – affiliated investigator at the BRFAA – with top expertise in the pathogenesis of neurodegenerative disorders. Finally, Prof Haralampos Moutsopoulos at the Department of Pathophysiology stand outs in the field of immunity and infection and particularly in autoimmune diseases.

- The Centre of Basic Research of the Biomedical Research Foundation, Academy of Athens (BRFAA), with two Starting grantees (Dr Syntichaki & Dr Panoutsakopoulou) and one member of an ERC panel (Dr Thanos), displays high-level expertise in molecular biology, biochemistry and molecular biophysics, genetics and ageing as well as in mechanisms of autoimmunity.

- The Medical School of the University of Patras and in particular the Molecular Cell Biology Unit of the Department of General Biology has two Starting grantees (Prof Lygerou and Prof Stathopoulos) and constitutes an emerging research unit of excellence in the Health-Biotech themes with internationally-recognised expertise in molecular cell biology.

- The Division of Molecular Biology and Genetics at the Alexander Fleming Biomedical Sciences Research Centre has one Advanced grantee (Dr Talianidis) that has also acted as a member of an ERC panel, and 1 Starting grantee (Dr Fousteri). At the Immunology Division, the ERC panel chair and Advanced grantee (Dr Kollias) excels in the field of immunology.

- **Table 8: Centres & research units of excellence located in Greek organisations**

Organisation name	Faculty , School, Deparment or Institute	PIs & ERC reviewers hosted	ERC panel [a]	Research expertise [b]	Comments
National Technical University of Athens (NTUA)	School of Civil Engineering	George Gazetas (Advanced grantee & Member ERC panel PE8 - Starting funding scheme)	PE 8 - Products & process engineering	Geotechnical earthquake engineering (seismic research); Soil mechanics & foundations	
		Manolis Papadrakakis (Advanced grantee)	PE 8 - Products & process engineering	Development & application of the latest computer methods & technology to structural engineering analysis & design; Seismic research	
	School of Applied Mathematical & Physical Sciences	Ioannis Vardoulakis & PI's team (Advanced grantee)	PE 8 - Products & process engineering	Soil mechanics; Geotechnical engineering; Geomaterials; Seismic research	
		Ioannis Dafalias (Advanced grantee)	PE 8 - Products & process engineering	Soil mechanics; Geomechanics, seismic research	
National Technical University of Athens (NTUA)	School of Chemical Engineering	Athanasios Papathanasiou (Starting grantee)	PE 8 - Products & process engineering	Physical Chemistry: Addressable superhydrophobic surfaces; Electrowetting in microfluidics; Mechanisms of magneto-hydrostatic instabilities; Spatiotemporal addressing of catalytic activity & pattern formation	
National Technical University of Athens (NTUA)	School of Electrical & Computer Engineering	Hercules Avramopoulos (Member ERC panel PE7 - Starting funding scheme)	PE7 - Systems & communication engineering	ICT - Material Sciences: Photonics communication (Optical techniques to telecom & datacom environments)	
National Centre for Scientific Research "Demokritos"	Institute of Nanoscience & Nanotechnology	Athanasios Dimoulas (Advanced grantee)	PE7 - Systems & communication engineering	Material Sciences - Micro/Nano devices: Advanced microelectronic & Composite materials	
		George Kordas (Advanced grantee)	LS7 - Diagnostic tools, therapies & public health	Material Sciences - Nanotechnologies: Nanocontainers for medical & corrosion applications	
		Nikos Chronis (Starting grantee)	LS9 - Applied life sciences, biotechnology bioengineering	Health/Biotech - Micro/Nano devices (Biomedical engineering): Bio-MicroElectroMechanical Systems (Bio-MEMS); Lab-On-A-Chip Systems; Microfluidics & Micro-optics; Polymer Micromachining; Bio-imaging & Neural Networks;	

Organisation name	Faculty , School, Deparment or Institute	PIs & ERC reviewers hosted	ERC panel [a]	Research expertise [b]	Comments
Foundation for Research & Technology Hellas	Institute of Molecular Biology and Biotechnology	Dimitrios Boumpas (Chair ERC panel LS7 -Advanced funding scheme)	LS7 - Diagnostic tools, therapies & public health	Health/Biotech: Medical inflammation in the context of autoinflammatory / autoimmune rheumatic diseases	Professor at the Medical School of the University of Crete; BRFAA - Clinical, experimental surgery & translations research centre
		Nektarios Tavernarakis (Advanced grantee & LS4 panel member – Starting funding scheme)	LS3 - Cellular & Developmental Biology & LS5 - Neurosciences & neural disorders	Health/Biotech: Molecular Systems Biology; Ageing & energy metabolism; Sensory transduction & integration; Neurodegeneration & necrotic cell death	Professor at the Medical School of the University of Crete
		Panayiota Poirazi (Starting grantee)	LS5 - Neurosciences & neural disorders	ICT & Health: Computational neuroscience & bioinformatics	
Foundation for Research & Technology Hellas	The Institute of Electronic Structure and Laser	Dimitrios Charalambidis (Member ERC panel PE2- Starting funding scheme)	PE2 - Fundamental constituents of matter	Laser interactions & Photonics - Strong Field Physics: Attosecond science	Professor at the Physics Department of the University of Crete
		Costas Soukoulis (Advanced grantee)	PE3 - Condensed matter physics	Wave propagation in complex media, left-handed materials, random lasers, random magnetic systems, nonlinear systems & amorphous semiconductors	Professor at the Physics Department of the University of Crete
		Theodore Peter Rakitzis (Starting grantee)	PE2 - Fundamental constituents of matter	Laser interactions & Photonics - Chemical Physics: Polarisation spectroscopy	Associate Professor at the Physics Department of the University of Crete
		Andreas Zezas (Consolidator grantee)	PE9 - Universe sciences	Astronomy & Astrophysics – High energy source populations in galaxies; evolution & dependence on galactic properties	Assistant Professor at the Physics Department of the University of Crete
Foundation for Research & Technology Hellas	Institute of Chemical Engineering & High Temperature Chemical Processes (ICE-HT)	Spyridon Pandis (Advanced grantee)	PE10 - Earth system science	Environment & Climate Change: Atmospheric chemistry; Atmospheric pollution modeling; Aerosol science; Global climate change; Environmental public policy analysis	Professor at the Chemical Engineering Department of the University of Patras
		Constantine Galiotis (Advanced grantee)	PE8 - Products & process engineering	Material Sciences: composite materials, graphene & carbon nanotubes, polymers & non-destructive testing of materials	Professor at the Chemical Engineering Department of the University of Patras
Foundation for Research & Technology Hellas	Institute of Mediterranean Studies	Apostolos Sarris (Member ERC panel SH6 – Starting funding scheme)	SH6 - The study of the human past	Applied Geophysics & Remote Sensing. Geophysical Prospection of Archaeological Sites. Digital archaeological maps. Cultural Resources Management (CRM). Environmental research.	
Foundation for Research & Technology Hellas	Institute of Applied Computational Mathematics	Chrysoula Tsogka (Starting grantee)	PE1- Mathematical foundations	Computational Mathematics: Numerical & mathematical modeling of wave propagation phenomena; Imaging & time reversal in random media	Professor at the Applied Mathematics Department of the University of Crete

Organisation name	Faculty , School, Deparment or Institute	PIs & ERC reviewers hosted	ERC panel [a]	Research expertise [b]	Comments
Technical University of Crete	School of Production Engineering & Management	Markos Papageorgiou (Advanced grantee)	PE8 - Products & process engineering	Dynamic Systems, Automatic Control, Optimization	
University of Crete	Computer Science Department	Ioannis Tsamardinos (Consolidator grantee)	PE6 - Computer science & informatics	ICT & Health: Artificial Intelligence and Philosophy of AI, Artificial Intelligence in Biomedicine, Machine Learning, Bioinformatics, Applications of Machine Learning in Biomedical Informatics.	Associate researcher at the Institute of Computer Sciences (ICS-FORTH)
		Christos-Xenofon Dimitropoulos (Starting grantee)	PE7 - Systems & communication engineering	ICT: Network monitoring, software defined networking, privacy, and security topics	Associate researcher at the Institute of Computer Sciences (ICS-FORTH)
University of Crete	Faculty of Science & Engineering - Department of Chemistry	Euripides Stephanou (Member ERC PE10 panel - Starting funding scheme)	PE10 - Earth system science	Environmental & analytical chemistry	
		Maria Kanakidou (Member ERC PE10 panel - Starting funding scheme)	PE10 - Earth system science	Environmental& analytical chemistry	
		Georgios Vassilikogiannakis (Starting grantee)	PE5 - Materials and Synthesis	Synthetic Organic Chemistry: Singlet Oxygen & Cascade Reaction Sequences; Biomimetic Syntheses	
The Computer Technology Institute Diophantus		Dimitris Achlioptas (Starting grantee)	PE1 - Mathematical Foundations	ICT (computational mathematics): Threshold phenomena in random graphs & random formulas; Applications of embeddings & spectral techniques in machine learning; Algorithmic analysis of massive networks	
		Pavlos Spirakis (Member ERC PE6 panel - Advanced funding scheme)	PE6 - Computer science and informatics	ICT (computational mathematics): Algorithms & complexity; Computer systems & networks; Threshold phenomena in random graphs & random formulas	
Centre for Research & Technology Hellas	Chemical Process Engineering Research Institute- Aerosol Particle Laboratory	Athanasios Konstandopoulos (Advanced grantee)	PE8 - Products & process engineering	Green Technologies (Energy, Transport): Aerosol science - Combustion aerosols & nanoparticles (Monolithic reactors & emission control systems)	Professor at the Chemical Engineering Department of the Aristotle University of Thessaloniki
Aristotle University of Thessaloniki	Polytechnic School- Dpt Mathematical, Physics and Computational Sciences -Laboratory of Mechanics and Materials	Katerina Aifantis (Starting grantee)	PE6 - Computer Science & informatics	Material Sciences - Nanotechnology: Micro/Nano applications	
Aristotle University of Thessaloniki	School of Informatics	Ioannis Pitas (Member ERC panel PE7 - Consolidator funding scheme)	PE6 - Computer Science & informatics	ICT: Digital media; Image and video processing; Medical imaging; Mining and retrieval of multimedia documents; Computational intelligence	

Organisation name	Faculty , School, Deparment or Institute	PIs & ERC reviewers hosted	ERC panel [a]	Research expertise [b]	Comments
National School of Public Health	Department of Nutrition & Chronic Diseases	Manolis Kovеginas (Member ERC panel LS7- Advanced funding scheme)	LS7 - Diagnostic tools, therapies & public health	Health: Environmental epidemiology (environmental & occupational exposures and their interaction with genetic factors)	
University of Ioannina	Medical School - Department of Hygiene & Epidemiology	Georgia Salanti (Starting grantee)	LS7 - Diagnostic tools, therapies & public health	Health: Epidemiology, Statistics (Statistical modeling; Multiparameter evidence synthesis; Meta-analysis)	
The National & Kapodistrian University of Athens	The Faculty of Medicine - Social Medicine-Psychiatry-Neurology: Department of Hygiene, Epidemiology & Medical Statistics	Dimitrios Trichopoulos (Member ERC panel LS7- Advanced funding scheme)	LS7 - Diagnostic tools, therapies & public health	Health: Epidemiology, Statistics	
		Klea Katsougianni (Member ERC panel LS7 - Starting & Consolidator funding schemes)	LS7 - Diagnostic tools, therapies & public health	Health: Epidemiology, Statistics	
	The Faculty of Medicine - Social Medicine-Psychiatry-Neurology: 2nd Department of Clinical Neurology	Leonidas Stefanis (Member ERC panel LS5 - Advanced funding scheme)	LS5 - Neurosciences & neural disorders	Health: Neurosciences - Pathology of neurodegenerative disorders	Affiliated researcher at BRFAA Clinical, experimental surgery & translations research centre
	The Faculty of Medicine - Department of Pathophysiology	Haralampos Moutsopoulos (Member ERC panel LS6 - Starting funding scheme)	LS6 - Immunity & Infection	Health: Autoimmune diseases	
The National & Kapodistrian University of Athens	The Faculty of Informatics and Telecommunications	Aggelos Kiayias (Starting grantee)	PE6 - Computer science and informatics	ICT: Digital content distribution - Cryptography & Computer security	
		Dimitra-Isidora Roussopoulou (Starting grantee)	PE6 - Computer science and informatics	ICT: Distributed systems; Networking; Mobile computing; & Digital preservation	
		Ioannis Smaragdakis (Starting grantee)	PE6 - Computer science and informatics	ICT: Applied programming languages & software engineering	
The National & Kapodistrian University of Athens	Faculty of Physics	Kanari Tsinganos (Member ERC panel PE9 - Advanced funding scheme)	PE9 - Universe sciences	Astronomy & astrophysics: Plasma Astrophysics - Magnetohydrodynamics -Cosmic Jets; Cosmical Magnetic Fields - Solar and Heliospheric Physics - Solar and Stellar Winds; Accretion Disks - Star Formation - Active Galactic Nuclei Quasars - Black Holes; Plasma Equilibrium and Stability - Nonlinear Differential Equations - Space Instrumentation	
		Nikolaos Stefanou (Member ERC panel PE3 - Starting funding scheme)	PE3 - Condensed matter physics	Solid state physics: Photonic & Phononic Crystals; Optical Metamaterials; Electronic Structure & Properties of Solids.	

Organisation name	Faculty , School, Deparment or Institute	PIs & ERC reviewers hosted	ERC panel [a]	Research expertise [b]	Comments
University of Patras	Medical School - Division of Basic Medical Sciences I - Department of General Biology -Molecular Cell Biology Unit	Zoi Lygerou (Starting grantee)	LS3 - Cellular & Developmental Biology	Health/Biotech: Molecular Cell Biology - Molecular mechanisms of cell cycle control & DNA replication in health and disease	
		Georgios Stathopoulos (Starting grantee)	LS4 - Physiology, Pathophysiology & Endocrinology	Health/Biotech: Human physiology - Molecular Respiratory Carcinogenesis & Host-tumor interactions in thoracic malignancies	
University of Patras	Department of Mechanical Engineering & Aeronautics	Dimitrs A.Saravanos (Member ERCpanel PE8 - Consolidator funding scheme)	PE8 - Products & process engineering	Material sciences: Computational structural mechanics & dynamics, smart materials & structures, mechanics of composite materials & structures, nanomechanics and nanocomposites	
Biomedical Research Foundation Academy of Athens	Basic Research Center	Dimitrios Thanos (Member ERC LS1 panel - Advanced funding scheme)	LS1 - Molecular & structural biology & biochemistry	Health/Biotech: Molecular biology; Biochemistry; Molecular Biophysics	
		Popi Syntichaki (Starting grantee)	LS3 - Cellular & Developmental Biology	Health/Biotech: Genetic & gene therapy; Ageing	
		Vily Panoutsakopoulou (Starting grantee)	LS6 - Immunity & infection	Health/Biotech: Cell biology - Genetic regulation in Immunity (Asthma & Autoimmunity)	
Biomedical Sciences Research Centre Alexander Fleming	Division of Immunology	George Kollias (Advanced grantee; Member & Chair ERC LS6 panel - Starting funding scheme)	LS6 - Immunity & infection	Health/Biotech: Molecular and cellular mechanisms of chronic inflammation and cancer	
	Division of Molecular Biology & Genetics	Iannis Talianidis (Advanced grantee & Member ERC LS1 panel - Starting funding scheme)	LS4 - Physiology, Pathophysiology & Endocrinology	Health/Biotech: Molecular biology & genetics - Molecular mechanisms governing the transcriptional regulation of liver-specific genes	
		Maria Fousteri (Starting grantee)	LS1 - Molecular & structural biology & biochemistry	Heatlh/Biotech: Molecular, genetic and cellular dissection of genome maintenance mechanisms in humans	

Organisation name	Faculty , School, Deparment or Institute	PIs & ERC reviewers hosted	ERC panel [a]	Research expertise [b]	Comments
Athens University of Economics & Business	Department of Economics	Aikaterini Kyriazidou (Member ERC SH1 panel - Starting & Consolidator funding scheme)	SH1 - Individuals, institutions & markets	Economics: Econometrics	
	Department of Informatics	Vasiliki (Vana) Kalogeraki (Starting grantee)	PE6 - Computer Science & informatics	ICT: Distributed systems, participatory sensing systems, mobile systems, peer-to-peer, real-time, fault tolerance, scalability and resource management.	
Hellenic Foundation for European & Foreign Policy (unitl October 2012)		Anna Triandafyllidou (Member ERC SH3 panel - Advanced funding scheme)	SH3 - Environment, space & population	Social & Political Sciences: Migration; Nationalism; European integration; Media & discourse studies covering Southern, Western & Central Eastern Europe including comparative highlights with the US	Democritus University of Thrace (until October 2012)
Hellenic Foundation for European & Foreign Policy		Effie Fokas (Starting grantee)	SH2 - Institutions, values, beliefs & behaviour	Religion and politics EU; the relationship between religion, national identity and nationalism; and the sociology of religion in a European perspective, with a special focus on Islam and on Christian Orthodoxy.	
Panteion University of Social & Political Sciences	Department Social Anthropology	Gerasimos Makris (Member ERC panel SH2 - Starting funding scheme)	SH2 - Institutions, values, beliefs & behaviour	Social Anthropology of Islamic Societies and the Greater Middle East Area	
National Hellenic Research Foundation	Institute of Historical Research	Maria Christina Chatziioannou (Member ERC panel SH6 – Starting funding scheme)	SH6 - The Study of the human past	Neohellenic research: Social & Economic history of the Mediterranean world; Social & Economic history of the Greek state;Diaspora studies 18th-20th c; Trade history (institutions, education and agents); Biography and Entrepreneurs; Italian history 19th c. (Risorgimento)	

(a) ERC panel descriptors of 2012 Work Programme
(b) Field of expertise as described at the professional webpage of the researcher. Only positions at Greek HIs are depicted

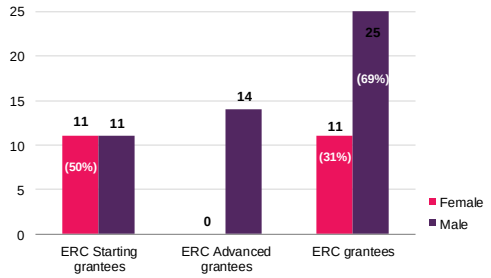
Gender Distribution among ERC grantees in Greece

About a fifth of the ERC Grant holders in Europe are women whereas in Greece the share of female grantees is higher and accounts for 30% of the ERC successful applicants. However, based on grant reports, about 38% of ERC team members are women. The gender distribution of ERC Grants in Greece displays a significant discrepancy between the two ERC Funding schemes. During FP7, 50% of the ERC Starting grantees located in Greek Host Institutions (HIs) are women whereas the share of female Starting grantees in Europe is only 25%. On the other hand, there are no female Advanced grantees in Greek HIs whereas the share of female Advanced grantees in Europe is 13% (see Chart 23). As regards the domain of application, there is the same share of women PIs in Greek Host Institutions (HIs) compared to their male counterparts in the Life Sciences domain (6 out of 12 young excellent researchers in the LS domain are female) whereas only 4 out of 23 PIs in Greek HIs that successfully applied to the PE domain are women. Finally, there is only 1 grantee in the SH domain, who is female (see Chart 24). Concerning ERC reviewers, 5 of the 25 panel or chair members hosted by Greek institutions (20%) are women – one in the PE, one in the LS and 3 in the SH domains.

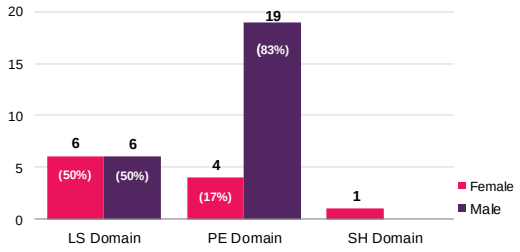
The relatively low percentage of female grantees in European and associated countries – including Greece – is partly due to the low submission rates of women, accounting for 30% and 15% of all applicants for the Starting and Advanced funding schemes. Broadly speaking, although the ERC application ratios reflect the proportion of women at different stages of a research career in Europe, the ERC Scientific Council is concerned about the gender imbalance in many fields of research. In this sense, in 2010, the ERC Scientific Council adopted a gender equality plan (21) that aimed to consider and confront structural gender differences, so that the ERC can fulfil its mission to support excellent frontier researchers across Europe, irrespective of nationality, gender or age. The gender equality plan exhibits three central goals: to raise awareness among potential women scientists in order to improve the number of female applicants submitting ERC proposals in all research fields, to ensure fairness and equal treatment in the ERC Grant competitions, and to improve the gender balance within the ERC's peer review system. In this regard, the ERC evaluation criteria were adjusted in the ERC Work Programme 2010 in order to emphasize that career breaks and/or unconventional research career paths among Principal Investigators (PIs) shall be taken into account, and to offer female PIs an increased extension to the Starting Grant eligibility window of 18 months per child born before or after the awarding of their PhD.

It should be noted that the National Documentation Centre supported and promoted the European policy on Gender Equality through its participation in the European projects GENDERA: Gender Debate in the European Research Area and SHEMERA: Euro-Mediterranean research cooperation on gender and science. To this end, EKT has developed a Database of good practices for equal opportunities of genders in research (practices related to recruitment, selection and promotion); Guidelines for integration of gender issues in research organisations; Study on policies for women's career development in research; National task forces on gender issues in research; and completed a mapping survey about Greek women researchers in 2007.

- **Chart 23: Number (and percentage) of female of ERC grantees in Greece per funding scheme**



- **Chart 24: Number (and percentage) of female ERC grantees in Greece per domain**



Attractiveness of the Greek R&I Landscape Based on the Results of ERC Calls

One of the main objectives of the ERC is to enhance the ability of Europe to retain and repatriate the best researchers in Europe as well as to attract talents from abroad. To meet this objective the Scientific Council has delineated a strategy based on the reduction of mobility barriers as well as on the empowerment of researchers by offering attractive funding conditions, the possibility of grant portability and by supporting the early independence of emerging top talents. In addition to this, the 3 ERC funding schemes (Starting, Consolidator & Advanced Grants) encourage researchers that reside outside the ERA to move to an EU or Associated Country by offering financial incentives and flexible project implementation conditions. As such, non-ERA resident researchers can request additional funding to cover "start-up" costs such as the purchase of major equipment necessary in their new research environment (500.000 € for Starting Grant, 750.000 € for Consolidator Grant and 1 Mio € for Advanced Grant) and the 3 funding schemes request researchers to spend at least 50% of their working time in an ERA country and 50% (Starting & Consolidator Grants) / 30% (Advanced Grants) of their working time on the project.

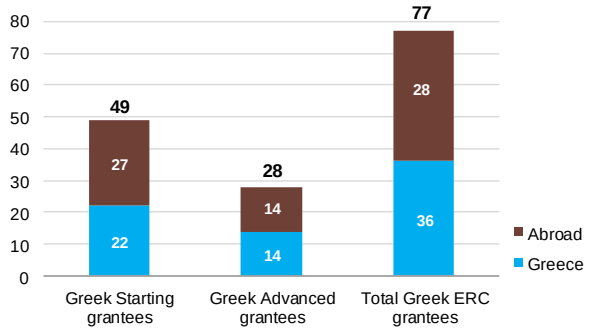
The ERC website (16) includes detailed statistics of each ERC completed call, including detailed analysis of mobility patterns and flows of researchers between countries, and provides an overall picture of the relative attractiveness of national research systems in Europe based on the results of ERC calls. However, these data should not be over-interpreted since many factors influence the mobility of researchers and not only the attractiveness of national research systems. In the case of Greece, the deep crisis that the country is going through is another relevant aspect that has to be taken into consideration.

Patterns of Mobility Based on ERC Statistics

Generally, most of the ERC Grant holders are nationals of the country of their host institution. This is the case for countries such as Israel (3% of foreign ERC grantees), Hungary (8%) and Italy (9%) with a very small proportion of foreign researchers in contrast with countries such as Switzerland (74%), Austria (71%) and the UK that have a significant proportion of foreign ERC grantees out of the total hosted. Until now, ERC grantees have rarely chosen to move to a country different from where they were already conducting their research activities at the moment of submitting the proposal. Finally, although 2/3 of grantees are nationals working in their home countries, there are some nationalities that tend to work abroad rather than in their home country. Indeed a significant share of Austrian, Italian, Irish, German, Polish and Greek grantees work in other EU countries (11).

Greece does host 1 PI of another nationality (from Cyprus). It occupies 15th position in terms of ERC grantees hosted in Greek Host Institutions but is ranked 12th by nationality of the Principal Investigator. In total, 77 promising and established top Greek researchers in their field have been funded through the ERC programme: 49 in the Starting and 28 in the Advanced funding scheme. Chart 25 shows the distribution of ERC grantees in Greece and abroad per funding scheme. More than half of the Greek grantees successfully applied through a foreign host institution. In this sense, 55% and 50% of the Greek Starting and Advanced grantees, respectively, implement their excellent research at the frontier of knowledge outside of Greece.

- **Chart 25: Share of Greek ERC grantees in Greece and abroad**



The 41 ERC grants led by Greek researchers hosted outside Greece account for a total budget of 64,17 Mio euros. Six out of the 41 Greek PIs are female (15%). 17 of them are located in UK (41% – 4 PIs at the Imperial College, 4 at the University of Oxford, 3 at the University of Cambridge), 12 in Switzerland (4 ERC grantees at Swiss Federal Institute of Technology of Zurich, 4 at the Institute of Technology of Lausanne), 6 in Germany and 6 in other countries (France (3), Austria, Italy & Cyprus). 21 of the ERC grants implemented abroad are in the PE, 9 in the SH and 8 in the LS domains and 3 are interdisciplinary projects. The ERC panels “PE6 - Computer Science & informatics” & “PE8 - Products & process engineering” have 6 projects each whereas “LS2 - Genetics, genomics, bioinformatics & systems biology” & “SH4 - The human mind & its complexity” each have 3 ERC grants implemented abroad (see Table 9).

- **Table 9: List of Greek PIs hosted in non-Greek Host Institutions 2007-2013**

Call Identifier	PI Name	Acronym	HI for ERC Grant /country	Main Panel Evaluation	Budget (euros)
ERC-2007-StG	Dimitrios Sakellariou	R-EVOLUTION-M-R	COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES -FRANCE	ERC-SG-PE6	1758844
ERC-2007-StG	Michail Dafermos	MPGR	THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE - UK	ERC-SG-PE1	500000
ERC-2008-AdG	Vasilis Ntziachristos	MSOT	TECHNISCHE UNIVERSITAET MUENCHEN - GERMANY	ERC-AG-LS7	1907738
ERC-2008-AdG	Efstratios Pistikopoulos .	MOBILE	IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE - UK	ERC-AG-ID1	1782925
ERC-2008-AdG	Angelos Chaniotis	EMOTIONS	THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF OXFORD - UK	ERC-AG-SH6	1593945
ERC-2009-StG	Christina Fragouli	NOWIRE	ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE - SWITZERLAND	ERC-SG-PE7	1771520
ERC-2009-StG	Achilleas Frangakis	JTOMO	JOHANN WOLFGANG GOETHE UNIVERSITAET FRANKFURT AM MAIN -GERMANY	ERC-SG-LS1	1724400
ERC-2009-StG	Athina Markaki	AFFINITY	THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE - UK	ERC-SG-PE8	1442756
ERC-2009-StG	Ioannis Vailakis	DCFM	THE UNIVERSITY OF EXETER - UK	ERC-SG-SH1	156538
ERC-2009-AdG	Demetrios Christodoulou	PDECP	EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZUERICH - SWITZERLAND	ERC-AG-PE1	1278000
ERC-2009-AdG	Sotirios Pratsinis	FLAMENANOMANUFACTURE	EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZUERICH - SWITZERLAND	ERC-AG-PE8	2500000
ERC-2009-AdG	Stylianos Antonarakis	HUCNC	UNIVERSITE DE GENEVE-SWITZERLAND	ERC-AG-LS2	2353920
ERC-2009-AdG	Adamantios Ioannis Gafos	STIMOS	UNIVERSITAET POTSDAM - GERMANY	ERC-AG-SH4	1085462
ERC-2009-AdG	Serafim Kalliadasis	CIF	IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE -UK	ERC-AG-PE8	1273788
ERC-2010-AdG	John Mylopoulos	LUCRETIUS	UNIVERSITA DEGLI STUDI DI TRENTO - ITALY	ERC-AG-PE6	2462095
ERC-2010-AdG	Charalampos Anastasiou	ITERQCD	EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZUERICH - SWITZERLAND	ERC-SG-PE2	995300,4
ERC-2010-AdG	Victor Michael Panaretos	COMPLEXDATA	ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE - SWITZERLAND	ERC-SG-PE1	681145,6
ERC-2010-AdG	Michail Vlachos	MININEXACT	IBM RESEARCH GMBH - SWTIZERLAND	ERC-SG-PE6	1499998,8
ERC-2010-AdG	Eleftherios Goulielmakis	ATTOELECTRONICS	MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. – GERM ANY	ERC-SG-PE2	1262000
ERC-2010-AdG	Nikolaos Paragyios	DIOCLES	ECOLE CENTRALE DES ARTS ET MANUFACTURES - FRANCE	ERC-SG-ID1	1500000

Call Identifier	PI Name	Acronym	HI for ERC Grant /country	Main Evaluation Panel	Budget (euros)
ERC-2010-AdG	Emmanouil Dermitzakis	POPRNASEQ	UNIVERSITE DE GENEVE - SWITZERLAND	ERC-SG-LS2	1500000
ERC-2010-AdG	Achillefs Kapanidis	POLMACHINE	THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF OXFORD - UK	ERC-SG-ID1	1493413
ERC-2010-AdG	Emmanouil Tsakiris	PLASTICSELF	ROYAL HOLLOWAY AND BEDFORD NEW COLLEGE UK	ERC-SG-SH4	1444460
ERC-2010-AdG	Ioannis Papadogiannakis	DEBIDEM	KING'S COLLEGE LONDON UK	ERC-SG-SH2	1194002,64
ERC-2011-StG	Thomas Anthopoulos	AMPRO	IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE -UK	ERC-SG-PE5	1497798
ERC-2011-StG	Eleftheria Zengini	SEPI	GENOME RESEARCH LIMITED - UK	ERC-SG-LS2	1477931,6
ERC-2011-StG	Aikaterini Charvati	PAGE	EBERHARD KARLS UNIVERSITAET TUEBINGEN - GERMANY	ERC-SG-SH6	1288200
ERC-2011-AdG	Athanassios Dimitrios Halazonetis	ONIDDAC	UNIVERSITE DE GENEVE - SWITZERLAND	ERC-AG-LS4	2499351
ERC-2012-StG	Iordanis Kerenidis	QCC	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE - FRANCE	ERC-SG-PE6	980640
ERC-2012-StG	Thomas Sotiriou	CGR2011TPS	THE UNIVERSITY OF NOTTINGHAM - UK	ERC-SG-PE2	1217837
ERC-2012-StG	Petros Ligoxygakis	DROSO-PARASITE	THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF OXFORD - UK	ERC-SG-LS6	1110126
ERC-2012-StG	Dr Aikaterini Fotopoulou	BODILY SELF	UNIVERSITY COLLEGE LONDON - UK	ERC-SG-SH4	1453284
ERC-2012-AdG	Prof Elias Koutsoupias	ALGAME	THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF OXFORD -UK	ERC-AG-PE6	2160999
ERC-2012-AdG	Prof Manolis Pasparakis	EPINFLAM	UNIVERSITAET ZU KOELN - GERMANY	ERC-AG-LS6	2500000
ERC-2013-StG	Dr Georgios Katsaros	SPAJORANA	UNIVERSITAT LINZ -AUSTRIA	ERC-SG-PE3	1675020
ERC-2013-StG	Mr Nikolaos Geroliminis	METAFERW	ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE - SWITZERLAND	ERC-SG-SH3	1242162
ERC-2013-StG	Dr Triantafyllos Stylianopoulos	REENGINEERINGCANCER	UNIVERSITY OF CYPRUS - CYPRUS	ERC-SG-PE8	1440360
ERC-2013-StG	Dr Christos Lynteris	VR3PP	THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE - UK	ERC-SG-SH5	1494262,8
ERC-CoG-2013	Prof Anastasia Ailamaki	VIDA	ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE - SWITZERLAND	ERC-CG-PE6	1976762,4
ERC-AdG-2013	Prof Petros Koumoutsakos	FMCOBE	EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZUERICH - SWITZERLAND	ERC-AG-PE8	2498800
ERC-AdG-2013	Prof Athanasios Mantalaris	BIOBLOOD	IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE - UK	ERC-AG-PE8	2498903

Mobility of PIs due to Grant Portability

Although the ERC agreements are signed with research organisations, they are personalised. ERC Grants are portable, allowing researchers to change institution and take their grant with them to a new research organisation located in the same or in a different country. A small percentage of researchers choose this option – mainly when a better working environment or a permanent position is offered to them. Based on latest trends, most changes of Host Institution (over 80%) occur in the first two years of the project, with almost 80% of these changes concerning Starting grantees and around 53% are national transfers (i.e. transfers to another organisation in the same country).

In Greece, two FP7-ERC Starting Grant holders requested grant portability and that was to another Greek institution.

Mobility in the Career Paths of Excellent Researchers & the Relevance of the USA

Mobility plays an important role in individual research careers and is one of the main drivers in the competitive development of the ERA. First analyses of the career paths of Greek ERC Grant holders provide interesting observations. As such, the career paths of the 21 Greek Starting grantees hosted by Geek research institutions show that 20 out of 21 had obtained a degree, a PhD and/or had a post-doc position abroad. At least 16 out of 21 were hosted by two different foreign research institutions, located in the same or different countries. For 17 out of the 21 Starting Grant holders, one or more of these 3 steps were completed in a US research institution.

Repatriation rather than Attraction of Non-ERA Researchers

ERC competitions are open to any researcher anywhere in the world who wants to conduct a research project in an EU Member State or FP7 Associated Country. Indeed, ERC efforts have been focused on attracting researchers from countries outside the ERA (European and non-European). Despite this, the number of applications and ERC grantees from non-ERA countries is still quite limited. Overall, 7% of the ERC grantees are nationals of countries outside the ERA and 3% are non-ERA residents. In total, the ERC has funded 311 researchers with a non-ERA nationality (140 or 45% with USA nationality): 209 (or 67%) and 102 (33%) have been funded by the Starting and Advanced funding scheme, respectively, but 90% was already resident in an ERA country. The Starting Grants seem to be an adequate instrument to attract young researchers for a research position in Europe, particularly if the host institution can offer additional incentives (i.e. a permanent position, family support mechanisms, etc.). In contrast, typical Advanced Grant holders already have a fixed position, are settled in their environment and scientific network, and thus are less mobile. It should be noted that most of the non-ERA residents that have been funded in the FP7-ERC calls (about 75%) are nationals of EU Member States and of Associated Countries and therefore we should mainly talk about repatriation rather than the attraction of non-ERA nationals to the European research system (11).

Greece has repatriated 5 Greek researchers, all of them ERC Starting Grant holders that were abroad at the time of the Grant Agreement (4 in a non-ERA country and 1 in an ERA country). More than 400 Greek researchers have applied together with a non-Greek HI and 41 have been funded, leading to an average success rate of 10%. About 90% were resident abroad (90% in an ERA-country, 8% in Greece, with 2% resident outside the ERA). Greece is suffering a brain-drain due to the crisis. In this regard, 4 of the 33 researchers resident in Greece that applied together with a non-Greek HI were funded (success rate of 12%) and they subsequently left Greece.

4. Impact & Major Achievements of the ERC in the ERA & particularly in Greece

Since its launch in 2007, the ERC has introduced three types of performance indicators to monitor the implementation of the IDEAS Programme:

- Quantitative and qualitative indicators charting the course of scientific and technical progress (publications, index of quotations, patents, etc.);
- Management indicators to monitor performance internally and support senior management decision-making (implementation of the budget, setting time limits for the signature of contracts, setting payment deadlines, etc.); and
- Outcome indicators to assess the overall effectiveness of the research in relation to the headline goals of the European Union (EU).

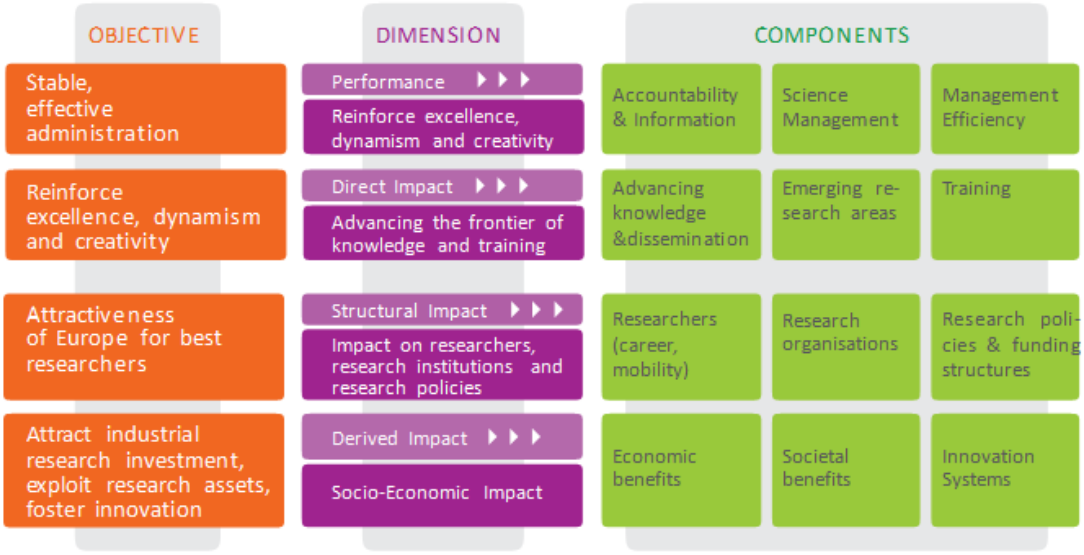
In addition, in June 2009 the Scientific Council adopted the ERC Monitoring & Evaluation (M&E) Strategy to monitor the performance of its operations and the impact of its funding activities, to take corrective actions if necessary and to provide comprehensive and reliable information on ERC activities and their impacts. The ERC M&E Strategy is being implemented by the ERC Executive Agency – using internal resources to analyse ERC calls, teams and outputs (bibliometrics) – and also by external experts through the Coordination and Support Action (CSAs) instruments (22 & 23). In this regard, four projects (CSAs) started in 2009:

- "EURECIA" analyses the impact of the ERC on researchers, research organisations, funding institutions and policy structures. The two-year project is coordinated by the Manchester Institute of Innovation Research and has eight participants.
- "MERCI" investigates the impact on career development, on the host institutions, on research structures and on research output. The five-year project is coordinated by the Humboldt University in Berlin.
- "DBF" is a 3-year project that provides bibliometric monitoring for the peer-review process of the first Starting and Advanced Grant calls. The project participants are the Austrian Research Centres and the CNRS Institute for Scientific and Technical Information in Nancy.
- Finally, "ERACEP" identifies emerging research areas and analyses to what extent the ERC funding contributes to these novel fields of research. This five-year project is implemented by the Fraunhofer Institute ISI in Karlsruhe and the University of Leuven.

Finally, a Working Group on "Key Performance Indicators" was established in 2013 with the task of monitoring the quality of operations, evaluating programme implementation & achievements, and making recommendations for corrective or future actions but also to support the short-, medium- and long-term policies of the Scientific Council.

The ERC M&E Strategy is based on four evaluation dimensions that correspond to the ERC objectives as defined by legislation: direct impact, structural impact, socio-economic impact, and operational performance. Each dimension has three basic components as depicted below in Diagram 2.

- **Diagram 2: ERC Monitoring & Evaluation Strategy**



ERC Operational Performance: Stable & Effective Administration

Accountability & Information

- The ERC operates according to the principles of scientific excellence, autonomy, and efficiency. It also puts particular emphasis on the principles of transparency and accountability by establishing a timely and comprehensive information strategy with all relevant stakeholders on the activities and achievements of the ERC as well as on how and where the money goes. This communication and information strategy should be regarded as a best practice that has allowed for a significant increase in ERC visibility as well as in the trust and credibility of the European Scientific community towards the ERC. The ERC has intensified its awareness-raising activities about its funding opportunities, thanks to its involvement in major international research conferences and exhibitions, as well as career fairs and workshops, both within and outside of Europe. It has also developed a new extremely attractive and highly-visited ERC website (16) that provides comprehensive information on the ERC, including strategy documents, annual activity reports, summarized minutes of the Scientific Council, in-depth information on each ERC call launched, etc.

Science Management & Management Efficiency

- The ERC has become a recognised success story of the 7th Framework Programme, having established itself as an indispensable component of the European Research Area with a high reputation for the quality and efficiency of its operations. During FP7, the ERC has launched 13 calls for the Starting, Consolidator and Advanced Grant schemes. The ERC schemes, which have been designed for and adapted to frontier research, have been well received and fully supported by

the research community, with over 43.000 applications submitted from 2007 to 2013. Meanwhile, the ERC's evaluation system is widely accepted as the gold standard in finding and funding the best researchers from all over the world. In May 2012, Prof Nowotny (last FP7-ERC president) together with the leaders of major funding organisations endorsed a high-level statement of principles for scientific merit review, which confirms the value of the ERC highly recognised peer review procedure. They also launched the Global Research Council, a virtual organisation that fovused its activitieson issues of general international interest to funding agencies.

- The ERC Executive Agency has set up efficient and fast grant management, which compares favourably with other International funding agencies. The efficient operation of the Starting and Advanced Grant calls as well as the additional funding initiatives entitled 'Proof of Concept' and the ERC Synergy grants underlines the successful organisational development of the ERC Executive Agency, created to implement the IDEAS programme as an integrated constituent of the ERC. During FP7, it has served a population of more than 4300 excellent scientists and scholars from all over the world to carry out their research in around 580 prestigious research institutions in Europe and has acquired a considerable experience in the management of grants. By the end of 2011, the Executive Agency had managed to consolidate its key performance indicators in relation to grant implementation and had largely met its targets, with the exception of the "time to grant" (the time from the call deadline to the signature of grants) which was short of the target established by the ERC in consideration of international benchmarks. The target was to sign Grant Agreements for at least 75% of grants within 365 days. However, the "time to pay" remained a record with an average of 10 days for pre-financing and 14 days for interim payments (14 & 24).
- Nevertheless, concerns were expressed about the long-term sustainability of the ERC's legal and administrative structure. In this sense, the ERC 2009 Review (9) and the Task Force (10) recommended that the ERC grant application process be simplified, as well as the procedures related to the way grants are administrated and accounted for (timesheets, audit strategy…), following a funding and a science management philosophy more in accordance with frontier research. Although host institutions are expected to provide adequate support to PIs on grant management without compromising the scientific independence of grantees, following the Task Force recommendations, in 2010 the ERCEA established a PI Helpdesk and started to offer training to both HIs and PIs on grant preparation and grant management, including financial and audit issues.

In 2011, Athens hosted two International Workshops on ERC grant management for HIs and for PIs located in Greece and the surrounding countries (Balkan countries & Cyprus).

Direct Impact: Reinforce Excellence, Dynamism & Creativity

Advancing Knowledge

- With the establishment of the ERC, a new meaning for 'European Added-Value' (18) has emerged that is founded on the competition for research funding at European level, solely on the basis of excellence. In this regard, the ERC has provided excellence with a leading role across the European Research Area by detecting, encouraging and channelling resources to the best ground-breaking ideas and the very best promising and established researchers irrespective of age, gender and nationality and from a wider pool than national schemes would allow. A European benchmark of excellence has also been developed that is expected to increase the quality, attractiveness and competitiveness of the European research system and transform Europe into a world-leading knowledge society.
- The ERC-funded strategy is generating new scientific and technological advances by promoting creativity through an investigator-driven, bottom-up approach, allowing outstanding researchers to identify new opportunities and directions in any field of research with a greater degree of flexibility,

and by placing emphasis on the quality and innovative nature of the idea rather than the research area. In this regard, some 7,4 billion € have been granted to groundbreaking, excellent projects in blue-sky research in all fields of science and scholarship, with already more than 29.000 publications acknowledging ERC funding in high-impact journals (including 446 publications in Nature and Science up to the end of 2013). These articles represent significant scientific and technological advances made in different fields of research.

Up until September 2014 around 2316 ERC grants had submitted at least one scientific report and, of these, 16 are based in Greece. The number of reported publications was 39.552, of which 29.079 have a digital object identifier (DOI). Table 10 provides detailed information on reported publications for all reporting projects and for those projects based in Greece. Table 11 depicts reported publications for those projects based in Greece per domain (PE & LS since Greece has only 1 ERC grant in the SH domain and it has just started).

- **Table 10: Reported publications for all ERC reporting projects & for those projects based in Greece**

	All reporting projects	Projects based in Greece
Reported publications having a DOI [(a)]	29.079	271
No. of reporting projects [(b)]	2.316	16
Reported publications with a DOI per project	13	14
Publications from completed projects	10.796	42
No. of completed projects	312	2
No. of publications per completed project	35	21
Reported publications indexed in Scopus [(c)]	16.756	177
No. of reporting projects	2.008	16
No. of publications indexed in Scopus per project	8	11
Articles and reviews indexed in Scopus	14.589	152
No. of articles and reviews per project	7	10
Articles and reviews in top 1% most cited [(d)]	1.335	6
Share of top 1% publications	9%	4%
No. of projects with at least one publication in top 1%	624	3
Share of projects reporting a top 1% publication	31%	19%

(a) Identification of an authorized authentication code in progress for a further 10,000 (approx.) reported items; **(b)** of which overall only 312 projects submitted the final report; **(c)** based on a simple DOI match; publication years 2007-2013 considered; **(d)** in their year of publication and scientific field (based on 27 Scopus categories)

- **Table 11: Publications reported by 16 ERC grants hosted in Greece**

	LS Domain	PE domain	Total
Reported publications indexed in Scopus	75	102	177
Articles and reviews indexed in Scopus	65	87	152
Those in top 1% most cited	5	1	6
Share of top 1% publications	8%	1%	4%
No. of reporting projects	5	11	16
No. of projects with at least one publication in top 1%	2	1	3
Share of projects reporting a publication in top 1%	40%	9%	19%

Dissemination

- The ERC continues its efforts not only to raise awareness of its funding opportunities in the research community, but also to increase the visibility of the ERC and its research projects among the general public and the media. To this end, in 2010 the Executive Agency set up a Dissemination Working Group to monitor and detect interesting projects and good communicators among grant holders. The dissemination of ERC research results is undertaken through all possible communication channels such as the publication of success stories on the ERC website, press releases, institutional journals, videos, the NCP dissemination tools and the new quarterly electronic newsletter entitled "ideas". Concerning the presence of the ERC on social media, Facebook and Twitter accounts were launched in 2012.
- In addition, the ERC fully supports the European policy on Open Access in Research (25) and stresses the attractiveness of policies mandating the public availability of research results – in open access repositories – reasonably soon after publication (ideally, 6 months, and in any case no later than 12 months). The Scientific Council has also established a working group on Open Access to issue specific guidelines for the mandatory deposition into open access repositories of research results that have been obtained thanks to ERC grants. The Special Clause 39 depicting the conditions for the deposition of an electronic copy of scientific publications generated through ERC projects in an institutional or subject-based repository is applicable to ERC projects funded under the 2012 and 2103 calls.

The National Documentation Centre is a key stakeholder in developments in Open Access to research at the European level. EKT was coordinator of the project MEDOANET and currently coordinates PASTEUR4OA, both aimed at facilitating coordinated Open Access strategies and policies. EKT is a partner in the OpenAIRE, OpenAIRE+ as well as in the RECODE project on Policy Recommendations for Open Access to Research Data in Europe. The National Documentation Centre operates the National Open Access Desk of OpenAIRE for Greece, assisting Greek ERC grantees in depositing publications resulting from ERC funding in appropriate repositories, thus fulfilling the relevant obligation undertaken in their Grant Agreement. It also develops and maintains the Greek portal on open access, and organises a biennial international conference on the subject. The National Documentation Centre provides large-scale interoperable Open Access content e-Infrastructures to the research and academic community through "The National Information System for Research and Technology", its main developmental funding instrument.

Emerging Research Areas

- The ERC has also given European exploratory research a more attractive status and image. Indeed, the ERC activities are directed towards encouraging outstanding researchers to be adventurous, take risks and go beyond the established frontiers of knowledge and the boundaries of disciplines. They comprise the funding of projects not only designed around fundamental research questions but also those developed around well-defined technological challenges. The ERC intends to place European research at the forefront of scientific progress by channelling funds into the emerging, most promising research fields that will be critical for the knowledge society of the future and by supporting the development of centres of excellence in new sectors closely related to world-leading innovation.

Training Excellent Researchers

- The ERC funds also play a significant role in training graduates and the next generation of excellent researchers in frontier research including novel research methods, advanced instrumentation and groundbreaking techniques. On average, 70% of an ERC grant is dedicated to personnel costs. In this sense, each ERC grantee has on average a team of 6 members, 5 of which are PhD and postdoctoral researchers. During FP7, more than 4300 ERC grants have been awarded and the ERC will therefore have funded and trained around 28500 researchers (excluding PIs) in interdisciplinary & multinational teams led by outstanding emerging and established researchers. This has and will continue to contribute to the ERC's strategic goals towards internationalisation and a wider participation. It will also strengthen Europe's knowledge base in emerging areas undergoing rapid development, and increase European research competitiveness and leadership in key innovation sectors.

  At the end of 2013 the ERC conducted an analysis of team members for 995 ERC projects that had submitted at least 1 report. The 995 projects account for about 6800 team members of which 2/3 are people in the training phase of their career (~ 2400 are post-docs, ~1700 PhD students, ~600 students). Around half of all ERC team members hold a nationality that is different from that of their PI. In addition, 67% of ERC team members are from the EU, 12% from Associated Countries and 18% (~ 1200) are from 55 non-ERA countries. It should be noted that China, USA, India and Russia provide 53% of the non-ERA team members.

  Based on ERC team members' reports, about 38% of grants' staff are women (close to 50% in LS and SH grants and 23% in PE projects). This percentage is higher than the share of female PIs (20%) and reveals the significant contribution of the ERC towards gender balance through the participation of young female scientists in cutting-edge research projects led by outstanding researchers (11).

Thirteen of the 995 ERC reporting grants analysed at the end of 2013 were based in Greece: 5 in the LS (3 in the StG and 2 in the AdG funding scheme) and 8 in the PE domains (6 StG and 2 AdG grants). The number of team members excluding PIs funded through these 13 projects is 111: 45% are postdocs, 21% PhD students and 17% undergraduate students (see Table 12 and 13). On average an ERC Starting grant hosted by a Greek organisation has 9 staff members whereas an ERC Advanced grant has 7. This is just the opposite case compared to the average over all 995 projects which is 9 team members per AdG grant and 7 per StG grant (11).

- **Table 12: Number of team members per category for 13 Greek ERC grants per funding scheme**

Team members' category	Total	No. of team members in 9 ERC StG grants	No of team members in 4 ERC AdG grants	Average no. of team members per ERC grant	Average no. of team members per ERC StG grant	Average no. of team members per ERC AdG grant
Student	19	14	5	1.5	1.6	1.3
PhD student	24	15	9	1.8	1.7	2.3
Post doc	50	39	11	3.8	4.3	2.8
Senior staff	11	7	4	0.8	0.8	1.0
Other	7	7		0.5	0.8	0.0
Total for 13 Greek ERC Grants	**111**	**82**	**29**	**8.5**	**9.1**	**7.3**

- **Table 13: Number of team members per category for 13 Greek ERC grants per domain**

	No of team members in 9 Greek ERC StG grants		No of team members in 4 Greek ERC AdG grants		No of team members in 13 Greek ERC grants	
Team members' category	LS (3 ERC grants)	PE (6 ERC grants)	LS (2 ERC grants)	PE (2 ERC grants)	LS (5 ERC grants)	PE (8 ERC grants)
Student	5	9		5	5	14
PhD student	4	11	6	3	10	14
Post doc	12	27	4	6	16	33
Senior staff		7	3	2	3	9
Other	4	3			4	3
Total	**25**	**57**	**13**	**16**	**38**	**73**

Structural Impact: Attractiveness of Europe for Best Researchers

Researchers: Career & Mobility

- ERC competitions are key instruments in improving researchers' career prospects. They are open to any researcher anywhere in the world who wants to conduct research in an EU Member State or FP7 Associated Country. ERC efforts in this context have focused on retaining top talents and repatriating and attracting outstanding researchers (European and non-European) located in non-ERA countries in order to transform Europe into a world-leading knowledge society. To meet this objective the Scientific Council has delineated a strategy based on the reduction of mobility barriers as well as on the empowerment of researchers by offering attractive funding conditions, the possibility of grant portability and by supporting the early independence of emerging top scientists and scholars.
- In this sense, the ERC Work Programme was modified, with a specific focus on applicants from outside the ERA, by putting emphasis on the possibility for non-ERA grantees to obtain additional financial resources to cover 'start-up' costs (already included in the Work Programme), for flexibility in implementing the requirement that 50% of working time must be spent on an ERC project, as well as the possibility of involving additional team members from outside the ERA as an opportunity to recruit researchers from the best research institutions worldwide. In this context, an initiative (26) was launched in July 2012 to help young top talent, based in the USA and pre-selected by the National Science Foundation (NSF), to spend some time in Europe, hosted as members of ERC grantees' teams and a similar arrangement for cooperation between ERC & the National Research Foundation of Korea was signed in November 2013.
- A glance at the lists of prestigious research prize laureates provides a good example of how ERC funding schemes attract top researchers. Many ERC grantees have received prestigious international scientific prizes and awards. The FP7 ERC grantees currently include 8 Nobel Laureates and 5 Field Medallists, as well as the winners of 30 other internationally recognised prizes. One example is the Nobel Prize for Physics awarded to Serge Haroche in 2012 for ground-breaking experimental methods that enable the measurement and manipulation of individual quantum systems.
- During FP7 there was a real but modest success in attracting researchers from third countries. However, this mainly involved the repatriation, rather than attraction, of non-ERA nationals to the European research system. In addition, the number of applications and ERC grantees from non-ERA countries is still quite limited. Overall 7% of the ERC grantees are nationals of countries outside the ERA and 3% are non-ERA residents. To redress this situation, the ERC Scientific Council established a working group to delineate new strategies to attract more top researchers from third countries and the ERC Executive Agency (ERCEA) has significantly increased the promotion of ERC funding opportunities in countries outside the European Research Area.

Effects on Research Organisations, Research Policies & Funding Structures

- As a new pan-European competitive funding structure, the ERC has significantly contributed to the establishment of new benchmarks of excellence and competitiveness among European research and innovation stakeholders that should lead to crucial structural changes in the European Research Area. Indeed, it has catalysed changes in strategies, policies, research funding mechanisms and practices of national research systems and individual institutions that should create a more attractive and competitive European research environment and should ultimately lead to the convergence of quality standards across the ERA. Several countries have introduced reforms to their national systems based on the ERC model. In addition, national and regional authorities are analysing their performance on the ERC calls and improving their policies and practices accordingly.

Greece has introduced two funding schemes, named “ΑΡΙΣΤΕΙΑ” (“Excellence”: “ΑΡΙΣΤΕΙΑ” & “ΑΡΙΣΤΕΙΑ ΙΙ”) & “ΕΝΙΣΧΥΣΗ ΜΕΤΑΔΙΔΑΚΤΟΡΩΝ ΕΡΕΥΝΗΤΩΝ ΚΑΙ ΕΡΕΥΝΗΤΡΙΩΝ” (“Support to Postdoctoral researchers”) inspired in the funding strategy and the proposal structure of the ERC grant schemes.

- The ERC has also stimulated research organisations to invest more in the support of excellent researchers and in particular in promising new talents as the next generation of research leaders in Europe. In this sense, European universities and research institutions actively use their success in ERC calls as a stamp of prestige and excellence and to actively compete for top researchers by offering the most attractive “working” conditions. This is the case at organisations such as Ghent University, Tuebingen Medical Hospital and the Swiss Federal Institute of Technology Zurich, which offers incentives for ERC grant holders.

In Greece, while there are some organisations that have difficulty with the independence of Starting grantees due to institutional laws, the strategy of the Biomedical Research Foundation at the Academy of Athens should be considered a best practice in supporting promising top talents. In this case, both Starting grantees hosted by the Greek organisation have been offered upgraded positions.

- The ERC's evaluation procedure (20) carried out by top-level international peer reviewers has achieved a high and widespread reputation and constitutes a gold standard for numerous national systems. In this sense, several countries (Finland, Ireland, Poland, Norway, Sweden, Spain etc.) have established national initiatives that are complementary to the ERC schemes in that they fund the runners-up in the ERC calls. Most initiatives reduce the funding and the project duration compared to that originally requested from the ERC. Some of the national schemes such as the Irish initiative support applicants in order to increase their chance of success in future ERC calls (11).

Since 2011, Greece has launched a national scheme that funds ERC applicants that applied together with a Greek HI, went to second-stage evaluation, reached the quality threshold but were not funded due to budget limitations. The novel initiative uses structural funds and has so far been applied to both funding schemes (Advanced and Starting Grants) of the ERC-2010, ERC-2011 & ERC-2012 calls.

Derived Socio-economic Impact: Attract Industrial Research Investment, Exploit Research Assets, Foster Innovation

Economic Benefits, Societal Benefits & Innovation Systems

- The ERC has established itself as an important component of the European research funding mechanism that is expected to play a central role in the new European Innovation Union initiative. As such, the ERC is fully committed to improving the attractiveness of Europe for industrial research investment by rewarding high-risk innovative proposals of the very highest quality that are likely to generate new and unpredictable major scientific and technological discoveries that can form the basis for new industries and markets.
- The excellent exploratory research that the ERC has been supporting since its launch often generates new discoveries, but also unexpected opportunities for commercial and societal applications. The ERC is committed to ensuring the full exploitation of the excellent ideas it funds but also to capturing the maximum value from frontier research. To this end, the ERC is currently looking at the patents submitted by ERC grantees and at the licensing of spin-offs. The patent application is an indicator of innovative research and is also one of the benchmark features included in the profile of a competitive ERC applicant. From 2011, the ERC has also introduced the "Proof of Concept" top-up grants to support the novel ideas generated by ERC projects in their first steps towards the market. Thanks to this unprecedented initiative, the ERC is totally in harmony with the Innovation Union initiative (3) by supporting every link in the innovation chain, from blue sky research (ERC Starting, Advanced and Synergy Grants) to the early commercialization phase of a novel idea (Proof of Concept Grants).

  Overall, 20% of completed ERC grants in the LS & PE domains (53 out of 263 projects) reported at least one patent and on average there are 2 patents reported per project (see table 14). In addition, from 2011 to 2013, three ERC-PoC calls were launched and 179 novel projects in their first steps towards the market were funded which account for 26 Mio € (0,34% of FP7-ERC budget). In this sense, 50% of the first 50 completed PoC grants have reported at least one patent.

- **Table 14: Number of patents out of 263 ERC grants completed in the LS & PE domains**

	LS ERC grants completed	LS Projects with at least one patent	Total Patents	PE ERC grants completed	PE Projects with at least one grant	Total Patents
ERC-2007-StG	68	12		88	21	
ERC-2008-AdG	39	7		68	13	
Total	**107**	**19**	**30**	**156**	**34**	**68**

- The ERC's ultimate aim is to fully develop a knowledge and innovation society in Europe and ensure Europe's global competitiveness and prosperity through the generation of research results that will significantly advance the frontiers of knowledge, help address societal changes and feed into the innovation chain, thus leading to economic growth, the creation of business in emerging sectors, and a better quality of life for European citizens.

5. The National Documentation Centre as the Greek National Contact Point for the ERC

Established in 1980 with the mission of concentrating and disseminating scientific information, the National Documentation Centre (EKT) has evolved into a **research e-Infrastructure** for collecting, aggregating, organizing, documenting, disseminating and perpetually preserving **the Greek national scientific and digital cultural production, content and data.**

EKT's nation-wide e-Infrastructure provides a **stack of integrated, data-centric services** ranging from the long-term preservation and documentation of e-content, data-stores, repositories and e-publishing to e-learning, knowledge-bases, e-helpdesk, e-training and legal support services. It also provides reliable knowledge-based resources, unique facilities, equipment and e-services through standardised processes and competent human capital. It **fosters excellence** in the academic and research communities, ensures open access to the national scientific output and allows the development of evidence-based policies using accurate **RDI metrics**, while promoting and supporting **innovation in the private and business sector**.

Since 1998, EKT has been acting as National Contact Point for the Framework Programmes of the EU (FP5, FP6, FP7, Horizon 2020) as well as other European and National RTD programmes, providing comprehensive information and support to Greek research teams. Furthermore, through its capacity as the Coordinator of the Enterprise Europe Network-Hellas, EKT serves as a strong liaison for businesses, especially SMEs, seeking to become involved in research projects. With a view to promote research results and facilitate innovation, EKT maintains more than 30 web portals, electronic editions and newsletters dedicated to "Innovation, Research and Technology" as well as a widely circulated print magazine.

EKT operated as National Contact Point for the following programmes of FP7: Health, Information & Communication Technologies, Energy, Socio-economic Sciences and Humanities, IDEAS, PEOPLE, Research Infrastructures, Regions of Knowledge and Research Potential. Specialised services were provided for the academic, scientific & business communities, such as:

- Up-to-date information on a website dedicated to FP7 with more than 370 webpages that accounted for more than 4.000 unique users and more than 7.000 visits per month.
- Efficient problem-solving through an e-Helpdesk
- Information and consultation through information days and bilateral face-to-face meetings
- Pre-screening of proposals
- Partner-searching across Europe.

Activities & achievements

As National Contact Point for the European Research Council and the IDEAS programme. EKT's activities and major achievements during the period 2007-2013 were:

Support for applicants of the FP7-ERC calls:

- More than 2300 queries were submitted to EKT
- More than 200 bilateral meetings between the ERC NCP team and potential Greek applicants took place
- Through its ERC NCP services and activities, EKT assisted at least 19 out of the 36 applicants that ultimately received ERC funding in Greece

The organisation of information days and workshops. During FP7, EKT organised numerous events (information days and workshops) that took place all over Greece (Athens, Patras, Chania, Heraklion, Ioannina, Volos, Thessaloniki, Xanthi, Alexandropouli, Mitilini) in collaboration with major Greek R&I stakeholders including information on the ERC calls. 14 of these events were fully dedicated to the ERC and the IDEAS programme (see Table 10).

- The first dedicated ERC event was organised in January 2007 at the National Hellenic Research Foundation and was graced with the presence of Prof F. Kafatos (first ERC president) as keynote speaker. The event promoted and informed about the first ERC call launched (ERC-2007-StG) and had more than 350 participants.
- Since 2010, EKT has organised dedicated workshops for the IDEAS programme with the major involvement of the Greek ERC community consisting of evaluators, successful applicants, National Representatives and Dr Theodore Papazoglou of the European Research Council Executive Agency (ERCEA).
- In collaboration with the ERCEA, EKT organised on its premises two International workshops on Grant Management, one for Principal Investigators (13/10/2011) and one for Institutions hosting grantees of the IDEAS Programme (14/10/2011). Greek ERC grantees attended the PI workshop to learn how to efficiently and effectively implement their grants whereas the legal & financial departments of the Greek institutions hosting ERC grantees were provided in-depth information on grant preparation, financial management and audit issues.
- In December 2013 EKT, together with GSRT & ERCEA, organised the first information day on the ERC in Horizon 2020 at the National Hellenic Research Foundation (Athens) with 600 participants, of which 270 followed the event through EKT's webstreaming services.
- EKT follows an open access information strategy on the events organised/co-organised. All events taking place at the National Hellenic Research Foundation are videotaped and live-broadcasted, with the presentations and videos (where applicable) made available from the repository of the National Hellenic Research Foundation. In this regard, a significant archive of presentations and videos with advice on how to write a successful proposal for the ERC Programme has been built up over the years and is available for future applicants.

Continuous communication and collaboration with the ERC National Representatives and experts in Greece. EKT organised and/or assisted 20 meetings with ERC National Representatives, experts and other relevant R&I stakeholders in Greece in order to provide feedback on the ERC NCP Meetings organised by ERCEA, information on past and future calls, annual reports on activities and services as the Hellenic ERC NCP as well as a detailed report including an overview of Greece's participation from 2007 to 2011 entitled "5 years of Excellence in the European Research Area, 2007-2011, The case of Greece" (27), which has been updated through the current report. As major outcomes of this collaboration, the National Documentation Centre:

- Provided detailed feedback and comments on the draft ERC Grant Agreement at the beginning of FP7,

- Was actively involved in the development of the national calls for proposals using structural funding to fund the runners-up of the 3rd and fourth call of the ERC Starting and Advanced Schemes
- Supported ERC grantees. Special mention should be made of the assistance requested by the MEDIGRA team upon the unfortunate death of Professor Vardoulakis. In collaboration with the National Representatives and the General Secretariat for Research and Technology, EKT requested that the ERCEA provide a transitional solution so as to avoid the sudden termination of the grant.

Awareness and communication activities among the general public and the media. Since the launch of FP7, EKT has intensified its awareness-raising activities all over Greece, not only through the organisation of ERC information days but also through the publication of numerous articles in EKT's electronic newsletter «Ερευνα & Καινοτομία» (Research & Innovation, published every two weeks) and EKT's bimonthly magazine «Καινοτομία, Έρευνα και Τεχνολογία» (Innovation, Research & Technology). Particularly noteworthy items are: the interview with the first president of the European Research Council, Prof F. Kafatos; a cover article on the European Research Council; the article on the first Starting grantees in Greece; and the promotion of the new ERC funding scheme 'Proof of Concept', among others.

Thanks to the efforts of previous years, the ERC's visibility has considerably increased, as witnessed by a growing number of articles in the media (printed and electronic press), and the number of visits to the ERC website made from Greece. Press activities have resulted in a good number of articles in both the scientific and more general press and in many press releases and updates disseminated to the media on ERC activities and achievements including information on funding schemes, calls, ERC funded projects, and ERC grantees hosted in Greek research institutions.

Εκδηλώσεις για το ευρωπαϊκό πρόγραμμα «Ιδέες»

Συναντήσεις εργασίας για το ειδικό πρόγραμμα «Ιδέες» στις 14 και 15 Σεπτεμβρίου 2010, στην Πάτρα (Συνεδριακό και Πολιτιστικό Κέντρο) και την Αθήνα (**Εθνικό Ίδρυμα Ερευνών**), αντίστοιχα διοργανώνει το **Εθνικό Κέντρο Τεκμηρίωσης (ΕΚΤ)** εθνικό σημείο επαφής για το 7ο πρόγραμμα πλαίσιο έρευνας της ΕΕ. Σημειώνεται ότι οι Ευρωπαίοι ερευνητές υποδέχτηκαν με ενθουσιασμό την ευρωπαϊκή αυτή πρωτοβουλία και τα δυόμισι πρώτα χρόνια υποβλήθηκαν περίπου 15.000 προτάσεις για χρηματοδότηση. Μέχρι σήμερα, έχουν επιλεγεί 800 ερευνητικά έργα άριστων επιστημόνων και έχουν υπογραφεί 600 συμβόλαια με συνολική χρηματοδότηση 900 εκατ. ευρώ. 11 από τα έργα αυτά έχουν επιλεχθεί να πραγματοποιηθούν στην Ελλάδα. Στόχος των εκδηλώσεων είναι η ενημέρωση των Ελλήνων ερευνητών για τις νέες προσκλήσεις του προγράμματος «Ιδέες», που αφορά στην πρωτοποριακή επιστημονική έρευνα και η παροχή πρακτικών συμβουλών για την επιτυχημένη συμμετοχή τους στο πρόγραμμα.

Οι συναντήσεις εργασίας διοργανώνονται σε συνεργασία με τη Γενική Γραμματεία Ερευνας και Τεχνολογίας και το Πανεπιστήμιο Πατρών (η εκδήλωση στην Πάτρα) και με την υποστήριξη της Ευρωπαϊκής Επιτροπής και του Ευρωπαϊκού Συμβουλίου Ερευνας.

ΕΚΤ: Συναντήσεις εργασίας για το ειδικό πρόγραμμα «Ιδέες»

Εκδηλώσεις στην Αθήνα και την Πάτρα για την επιστημονική έρευνα

ΕΞΠΡΕΣ
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Εθνικό Κέντρο Τεκμηρίωσης: Ενημερωτικές εκδηλώσεις για το ευρωπαϊκό Ειδικό Πρόγραμμα ΙΔΕΕΣ

Το Εθνικό Κέντρο Τεκμηρίωσης (ΕΚΤ), που αποτελεί Εθνικό Σημείο Επαφής για το 7ο Πρόγραμμα Πλαίσιο Έρευνας της ΕΕ, ανακοίνωσε ότι διοργανώνει συναντήσεις εργασίας σχετικά με το ευρωπαϊκό Ειδικό Πρόγραμμα ΙΔΕΕΣ.

Οι εκδηλώσεις θα πραγματοποιηθούν στις 14 και 15 Σεπτεμβρίου, στην Πάτρα (Συνεδριακό και Πολιτιστικό Κέντρο Πανεπιστημίου Πατρών) και στην Αθήνα (Εθνικό Ίδρυμα Ερευνών) αντίστοιχα. Στόχος είναι η ενημέρωση των Ελλήνων ερευνητών για τις νέες προσκλήσεις του προγράμματος ΙΔΕΕΣ, το οποίο αφορά την πρωτοποριακή επιστημονική έρευνα, καθώς και η παροχή πρακτικών συμβουλών για την επιτυχημένη συμμετοχή τους στο πρόγραμμα.

Οι συναντήσεις διοργανώνονται σε συνεργασία με τη Γενική Γραμματεία Έρευνας και Τεχνολογίας (ΓΓΕΤ) και με το Πανεπιστήμιο Πατρών, με την υποστήριξη της Ευρωπαϊκής Επιτροπής και του Ευρωπαϊκού Συμβουλίου Έρευνας.

Το Πρόγραμμα ΙΔΕΕΣ, με προϋπολογισμό 7.510 εκατ. ευρώ για την περίοδο 2007-2013, αφορά την ενίσχυση της δημιουργικότητας και της αριστείας της ευρωπαϊκής έρευνας στον τομέα της πρωτοποριακής γνώσης. Πρόκειται για έρευνα που πραγματοποιείται στα όρια μεταξύ διαφόρων επιστημών και η οποία, αν και δεν σχετίζεται άμεσα με την αγορά, βρίσκεται στην "πρώτη γραμμή" της δημιουργίας νέας γνώσης που είναι απαραίτητη για τις εφαρμογές του μέλλοντος.

More detailed information can be found in the online Report on activities and services provided by EKT as National Contact Point for the 7th Framework Programme, covering the period 2007 to 2013.

- **Table 15 Dedicated ERC Events co-organised by ERCEA, GSRT & EKT in Greece**

Date of event	Type of event	Event's dedicated webpage	Other organisers / co-organisers	Number of participants
18/01/2007, Athens	Infoday	http://www.ekt.gr/news/events/ekt/2007-01-18/index.html	Key note speaker: President of the ERC Prof. F. Kafatos	362
29/05/2007, Heraklion	Infoday	http://www.ekt.gr/news/events/ekt/2007-05-29/index.html	University of Crete	100
31/05/2007, Athens	Infoday	http://www.ekt.gr/news/events/ekt/2007-05-31/index.html		136
04/02/2008, Volos	Infoday	http://www.ekt.gr/news/events/ekt/docs/event4Feb08_agenda.doc	University of Thessaly	52
05/02/2008, Athens	Infoday	http://www.ekt.gr/news/events/ekt/docs/event5Feb08_agenda.doc	National & Kapodistrian University of Athens	75
06/02/2008, Heraklion	Infoday	http://www.ekt.gr/news/events/ekt/docs/event06Feb08_agenda.doc	Foundation for Research & Technology Hellas	63
20/01/2010, Athens	Workshop	http://www.ekt.gr/news/events/ekt/2010-01-20/index.html		89
14/09/2010, Patra	Workshop	http://www.ekt.gr/news/events/ekt/2010-09-14/index.html	University of Patras	47
15/09/2010, Athens	Workshop	http://www.ekt.gr/news/events/ekt/2010-09-15/index.html		81
10/10/2011, Athens	Workshop	http://www.ekt.gr/news/events/ekt/2011-10-10/		74
13/10/2011, Athens	Seminar			31
14/10/2011, Athens	Seminar			34
17/09/2012, Athens	Infoday	http://www.ekt.gr/news/events/ekt/2012-09-17/index.html		112
09/12/2013, Athens	Infoday	http://www.ekt.gr/news/events/ekt/2013-12-09/index.html	ERC in the Horizon 2020	600 (270 through webstreaming)

6. ERC & Horizon 2020

The European Union and many of its Member States, including Greece, are confronting one of the most severe economic and financial crises in their recent history. In this context the Europe 2020 Strategy for Jobs and Growth (28) was approved earlier in 2010. The Europe 2020 Agenda for delivering smart, sustainable and socially-inclusive growth wants to strengthen the "knowledge triangle" formed by the policies for research, education and innovation in such a way as to place knowledge at the service of economic, social and environmental progress. In this sense, the Innovation Union (3) – a flagship initiative within the Europe 2020 Strategy – was also established to strengthen every link in the Innovation Chain, from the frontier or blue sky research to the successful transfer of such research into commercial products and services.

Despite many achievements and a high level of performance in a large number of fields, Europe is not making the most of its research potential and resources. Europe's performance in excellent frontier research lags well behind the USA and faces increasing competition from fast-developing Asian countries. The innovation performance of the European economy has also declined in recent years. Indeed, there is an urgent need for improvement as shown by indicators relating to the numbers of technologically-based start-ups, the propensity of established firms to innovate, and the emergence of new sectors arising from the development of new technologies. Therefore, Europe urgently needs to strengthen its capacity to generate knowledge and translate such knowledge into greater economic competitiveness and well-being.

In order to redress such a situation, the European Commission has proposed a substantial change in EU research and innovation funding, bringing together current research and innovation programmes (i.e. FP7, the Competitiveness and Innovation Programme, and the European Institute of Innovation and Technology) into a single strategic framework to fund the whole innovation cycle. Horizon 2020 (29) – the current funding programme for research and innovation – was announced by the EC on 30th November 2011 (30), approved by the European Parliament on 21st November 2013 and adopted by the Council on 3rd December 2013. However, negotiations on the Horizon 2020 budget were long and cumbersome. In this sense, two initiatives tightly linked to the ERC – 50 Nobel Prize Laureates & Fields medallists in October 2012 and the European Round Table of Industrialists in January 2013 – each published a letter to European leaders against cuts in the European research budget (report 2013).

With a total budget of nearly 80 billion € (current prices) for the period 2014 to 2020, Horizon 2020 is the biggest EU research programme yet and one of the biggest publicly funded worldwide. It aims to make participation easier, to increase scientific and economic impact and to provide better value for money. It seeks the right balance between fundamental and applied research, and between a top-down approach, where goals are fixed in advance, and a bottom-up approach, where research themes are not pre-determined. Horizon 2020 is structured around three distinct but mutually reinforcing pillars, in line with Europe 2020 priorities and in support of the Innovation Union's commitments that include a greater focus on societal challenges, a strengthened approach to SMEs and stronger support for the market uptake of innovation through procurements, standards-setting as well as loan and equity financing.

- The first Pillar, "Excellent Science", supports the EU's position as a world leader in science and includes the European Research Council (ERC), together with Marie Skłodowska-Curie Actions, Future and Emerging Technologies (FET) and Research Infrastructures.
- The second pillar, "Industrial Leadership", is dedicated to supporting industrial participation in research through major investment in key technologies, and greater access to capital and support for SMEs.
- The third pillar, "Societal Challenges", has been established to face challenges identified in Europe 2020 by providing funds to address major concerns shared by all Europeans. The focus is on collaborative and multidisciplinary research projects of significant scope.

The ERC has a determinant role in Horizon 2020 and particularly under the 'Excellence in the science base' element of the programme where the funding approaches are science-driven and largely bottom-up and investigator-initiated. The budget for the ERC under Horizon 2020 from 2014 to 2020 is 13,095 billion € (current prices) which represents a significant increase in funding of about 75% and constitutes 17% of the Horizon 2020 budget.

Indeed, the ERC has been recognised as the success story of the 7th Framework Programme and occupies a leading position at the global research landscape. In a remarkably short time the ERC has gained widespread recognition as a world-class research funding agency, it has succeeded in attracting & funding world-class research, and it has strengthened the ERA by providing a more attractive status and image for frontier research and by empowering the best brains in Europe while also attracting talent from abroad. The ERC has also gained a central place in Europe 2020 and in the Innovation Union Strategy for promoting Europe's economic recovery, global competitiveness and social prosperity. Certainly, the ERC strategy promotes the competitive funding of excellent, curiosity-driven ideas as a key instrument to advance in all fields of science, engineering and particularly in new and rapidly emerging fields which are closely associated with world-leading innovation, and support these novel ideas in their first step towards the market.

In the timeframe of Horizon 2020, due to the rising demand for ERC funding, new eligibility criteria regarding reapplication rules have been introduced in the ERC calls. Some structural, governance and implementation changes have also been established, such as an improved Executive Agency displaying robust links with the Scientific Council and a stronger role for the agency director – a full-time Brussels-based ERC President – as a result of merging the positions of ERC President & ERC Secretary General, and three vice-chairs elected from amongst the Scientific Council members.

The ERC fully supports the EC in its objective to create "an ERA in which researchers, scientific knowledge and technology circulate freely" by 2014 and agrees that there is an urgent need to improve career prospects for researchers, to develop and maintain pan-European research infrastructures and the desirability of more open access, but stresses the need for an ERA that should reach a balance between funding based on coordination and merit-based competition in a curiosity-driven bottom-up mode (31). In the frame of Horizon 2020, the ERC continues to support and recommend policies to foster the empowerment of researchers, especially the younger ones that represent the next generation of research leaders in Europe, but also focus on increasing the involvement of industry in ERC funding schemes and attracting and repatriating more top talents from non-ERA countries. In this context, following the initiatives launched in 2012 & 2013 with the National Science Foundation (USA) and the National Research Foundation of Korea, respectively, new implementing arrangements for early-career scientists to join ERC research teams are being negotiated with Argentina & South Africa. Preliminary negotiations with China are also taking place whereas Japan, Brazil & Mexico have shown their interest.

Bibliometric studies and Intelligence reports assessing the Greek participation in different programmes of the 7th Framework Programme for Research & Technology shows that Greece has a rich heritage and a growing wealth of scientific and cultural output and displays excellence in numerous fields of science & technology such as Health, ICT, energy, transport, materials. In this sense, the 2013 Innovation Union Competitiveness Report (32) places Greece in 13th position when considering the EC financial contribution received during FP7 with 863 Mio euros and in 3rd position when considering the FP7 funding received as a percentage of GERD (Gross Domestic Expenditure on Research & Development). However, in a country where the R&D Intensity (R&D Expenditure as a percentage of GDP) is 0.78% (EKT, Eurostat, 2013) – among the lowest in the European Union – the challenges faced by the Greek Research & Innovation system are tremendous. Greece is in the midst of a prolonged and deep economic crisis that has dramatically affected the lives of its citizens and further decreased public investment in Research & Innovation (R&I), jeopardising the continuity of established and emerging units of excellence in Greece and leading to a wider innovation divide with leading Member States (33). Greek R&I authorities have recently established National Technology/Innovation platforms that bring together representatives from industry, academia, research centres, policymakers and national & regional authorities in those sectors where Greece possesses particularly strong institutions and human potential to delineate effective R&D&I funding strategies at national & regional level that should increase Greek research competitiveness and technological leadership in key innovation sectors, thus ultimately securing a competitive economy in the long run with limited resources.

Greece is suffering a tremendous brain drain of young research talent due to a lack of career opportunities. The ERC programme addresses this funding gap and has become an important mechanism in encouraging excellent young researchers to stay in Greece. In order to better face the crisis, Greece needs to improve its knowledge-based society by mainly using national & structural funds to repatriate and retain more leading researchers, providing scientists and scholars with appealing long-term career prospects, better skills (especially for the business sector), removing obstacles to their mobility across sectors and countries and improving the links between research, education and industry (34). Greek research institutions should make use of the available administrative and legal options in a flexible way or adapt them so as to guarantee the scientific independence of young top researchers and make provision for a competitive working environment that is equally attractive for nationals and non-nationals. An increase in the quality of research infrastructures and the quality of their management, combined with an increase in the resources channelled into the best researchers and innovative ideas would greatly increase the quality – in terms of competitiveness and attractiveness – of the research system in Greece. Indeed, excellent young talents are to become the next generation of Greek research leaders, and will represent the core of the new national research & technological units of excellence.

The ERC strategy of placing excellence and bottom-up frontier research at the heart of the European research systems has already acted as an inspirational goal for the Greek national research efforts. In 2011, Greece launched a national initiative which supports ERC applicants who applied with a Greek HI but were not funded due to budget limitations. It has also introduced two national funding schemes inspired in the ERC grant schemes. Boosting the budget dedicated to top-rate researchers – and especially younger talents that can be offered a long-term perspective – and their pioneering ideas are key instruments for stimulating competitiveness and growth and the Greek economic recovery. In this sense, Greece should further increase the level of public research funding for universities and research organisations dedicated to competitive, merit-based, investigator-driven, exploratory research so as to strengthen its capacity to generate knowledge and innovation and translate them into greater economic competitiveness and well-being.

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