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European Commission

2015

Annual Activity Report

European Research Council Executive Agency

Figures related to the financial statements are based on provisional accounts, as final accounts are to be adopted by July 31st, 2016.

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INTRODUCTION

The ERC and its Executive Agency in brief

The European Research Council[1], created under the previous Framework Programme (FP7)[2] and extended by the current Horizon 2020 (H2020) Framework Programme[3], has widely gained recognition as a key partner in the research & innovation area and as a world-class research funding agency. Its significant reputation within the scientific community across Europe and worldwide is echoed by its high media coverage[4] and its highly visible presence at numerous international scientific conferences, such as the the World Economic Forum (WEF), the "Summer Davos" (China), thus bringing science into the debate with political and business leaders from around the world.

The implementation of Horizon 2020 (H2020) provides the European Research Council (ERC) with the legal framework to fund frontier research pursuing the objectives of the "Ideas" programme (2007-2013). Indeed, the ERC marked with the "Ideas" programme[5] a new approach to investing in frontier research in Europe, aiming at reinforcing excellence, dynamism and creativity in European research by funding investigator-driven projects of the highest quality at the frontiers of knowledge. Such EU-funded research responds to the needs of improving the attractiveness of Europe for the best researchers worldwide and strengthening the EU capacity to generate new knowledge back into the economy and the society. In addition, the ERC frontier research funding benefits the scientific community in Europe by providing researchers in Europe with the means to conduct their research independently and by offering them attractive perspectives for a career in science.

With H2020, the ERC pursues this world-wide recognised path of funding cross disciplinary proposals and pioneering ideas in new and emerging fields which introduce unconventional and innovative approaches, spotlighted as "Generating excellent science", one of the three priorities of this new framework programme. Its mission remains to encourage the highest quality research in Europe through competitive funding and to support investigator-driven frontier research across all fields of research, on the basis of scientific excellence. A total budget of 13 billion euro is available under Horizon 2020 for the implementation of the ERC funding schemes.

Both the "Ideas" and H2020 objectives are fully in line with the aims of the Europe 2020 strategy designed to deliver smart, sustainable and inclusive growth through the strengthening of every link in the innovation chain, from 'blue sky' research to commercialization.

Also, the ERC is organised along a two-tier structure, composed of an independent Scientific Council and a dedicated implementation structure, the European Research Council Executive Agency (ERCEA), which handles autonomously the operational

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1 The ERC under H2020, established by Commission Decision C(2013)8915 replaces and succeeds the ERC established under FP7 by Commission Decision 2007/134/EC.

2 Respectively for the Ideas, Council Decision 2006/972/EC, of 19 December 2006, OJ L54, 22.2.2008, and for H2020 Council Decision 2013/743/EU of 3 December 2013, OJ L347, 20.12.2013.

3 The Research and Innovation 2014-2020 framework programme

4 Covering the ERC website (with more than 557,000 unique visitors in 2015), social media channels (Twitter, Facebook and LinkedIn), printed publications. As a result of the overall press activities, the ERC was mentioned in almost 8,000 articles, reaching a potential audience of 72 million people. Increasing each year, ERC Facebook page counts today over 10,000 followers, almost 45% more than in 2014. ERC Twitter account followers almost doubled this year, reaching almost 20,000.

5 The "Ideas" programme is a specific programme under the 7th Research and Innovation Programme (2007-2013) with an overall budget of € 7,5 billion.

management of both the "Ideas" and Horizon 2020 programmes[6].

Furthermore, the Scientific Council[7], representing collectively the European scientific community, benefits from a high degree of autonomy, setting the ERC scientific strategy and having full authority on the type of research to be funded. It is continuously committed to maintain the high quality of the evaluation system, in particular by selecting independent experts to be appointed for the evaluation of projects and applies a set of specific rules for the submission and evaluation of proposals. Finally, it monitors the scientific management and quality performance of the programmes implementation.

However, the H2020 legal framework revised the governance of the Scientific Council by setting the number of its members to 21– all being eminent scientists, engineers and scholars - plus the President, assisted by 3 Vice-Chairs. The President, Professor Jean-Pierre Bourguignon[8], ensures the leadership of the Scientific Council, represents the latter in the world of science and liaises with the ERCEA. In turn, the ERCEA executes the scientific strategy established by the ERC Scientific Council and supports the latter in fulfilling its tasks by providing advice and analysis, organising and running its plenary meetings as well as the regular meetings of the Scientific Council's members with ERC stakeholders, thus guiding the implementation of the "Ideas" and H2020 programmes. Furthermore, being accountable to the European Commission, the ERCEA is supervised by its Steering Committee[9], which overlooks the Agency's operations and adopts the Annual Work Programme (AWP), administrative budget and annual reports.

Through the management of ERC funding instruments[10], from the call for proposals to final payments and closure of projects, the ERCEA enables to finance investigator-driven research of the highest quality and favours innovative ideas and inter-disciplinary research, along with its mission statement: "*The European Research Council Executive Agency is dedicated to selecting and funding the excellent ideas that have not happened yet and the scientists that are dreaming them up*" and its core values **"***Commitment, Continuous Improvement and Integrity*".

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6 Commission Decision 2013/779/EU establishing the European Research Council and the European Research Council Executive Agency. The latter succeeds the Executive Agency established by Decision 2008/37/EU.

7 Composed of 21 members– all being eminent scientists, engineers and scholars - plus the President, assisted by 3 Vice Chairs. The President is appointed by the Commission further to a transparent procedure involving an independent dedicated Search Committee, upon the approval of the Scientific Council.

8 Appointed on December 17th, 2013

9 The Steering Committee is composed of five members, appointed by the European Commission: the Director-General of DG Research and Innovation, as Chairperson of the Committee, the Director for Policy Development and Coordination of DG Research and Innovation, as Vice-chairperson of the Committee, the Director of DG HR, responsible for Organisation and Executive Staff, and two members of the ERC Scientific Council. Commission Decision C(2014)430 amended by Decision C(2014) 9447.

10 ERC funding instruments are the Starting Grant, the Consolidator Grant, the Advanced Grant – the 3 core schemes –the Proof of Concept Grant and the Synergy Grant.

EXECUTIVE SUMMARY

The Annual Activity Report is a management report of the ERCEA Director to the College of Commissioners. It is the main instrument of management accountability within the Commission and constitutes the basis on which the Commission takes its responsibility for the management of resources by reference to the objectives set in the management plan and the efficiency and effectiveness of internal control systems, including an overall assessment of the costs and benefits of controls.

The ERC and its Executive Agency's highlights of the year

The fundamental activity of the ERC, both under FP7 and H2020, is to provide substantial five-year funding to researchers - and their research teams -working in Europe to pursue ground-breaking, high-gain/high-risk research, that would primarily contribute at the highest level to advancing the frontiers of knowledge.

ERC researchers are selected on the basis of their most ambitious ideas for future research and their previous outstanding achievements, covering all areas of knowledge from Physics and Engineering to Life Sciences and Social Sciences and Humanities. Awards are granted solely according to scientific quality with no predetermined priorities, targets or quotas. The level of competition guarantees excellence (success rate barely superior to 10% of submissions), thus getting an ERC grant is synonymous of Scientific Excellence for the worldwide scientific community.

The ERC allocates a significant share of the overall funding to young researchers, as two-third of the laureates is at the early stages of their scientific career. This represents around 4000 young researchers who have been given scientific autonomy. Some 40 000 PhD students and post-doctoral fellows work in ERC teams, 25% of them coming from outside Europe. After nearly a decade of operation, so far € 9 billion were awarded to some 6000 researchers.

Over the period 2009- 2015, 166 ERC grantees won prestigious research prizes, among which several Nobel Prizes and Fields Medals. Furthermore, more than 95,000 publications from ERC funded (FP7 projects) have been collected from both online bibliographic databases covering journals with international peer review and project reports. ERC's investments in frontier research enable scientific breakthrough discoveries but also transformative technologies that could lead to solutions to complex global problems.

ERC-funded teams were recognised in 2015 for the quality of their science-based companies and innovations, at the European Business Angel Network (EBAN) Winter University, a global summit on venture finance and innovation with 300 representatives of the early stage financing industry and entrepreneurs from all over the world.

At year-end 2015, the ERC committed 100% of its budget, as every year since its creation, recording about 4900 running projects worth € 3,5 billion, an average time to pay of 22 days and an error rate of 1.31%[11] related to the legality and regularity of payments. With an administrative overhead just 2,9%, the ERC and its Executive Agency achieved a cost effective and efficient use of public money.

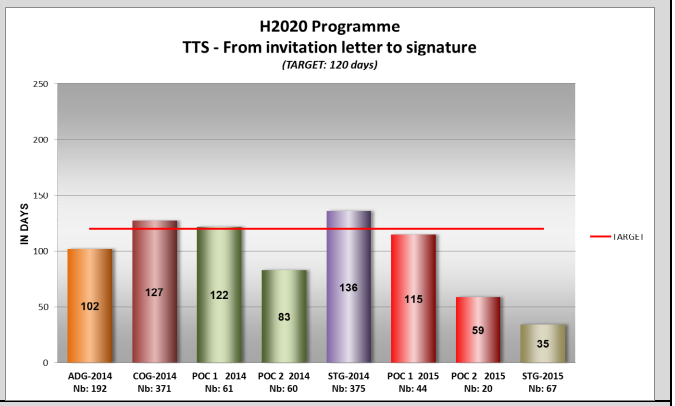
[11] Residual ERCEA MUS error rate.

ERCEA Key Performance Indicators

The below indicators reflect the AWP 2015 targets, except for the average time to inform which also covers the calls launched in 2014 and finalised in 2015, stemming from the AWP 2014.

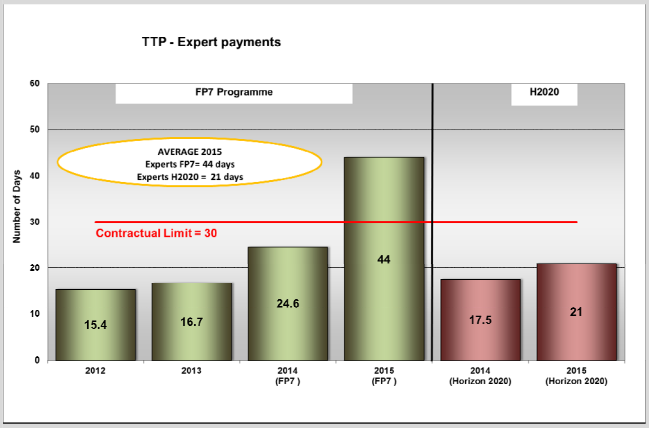
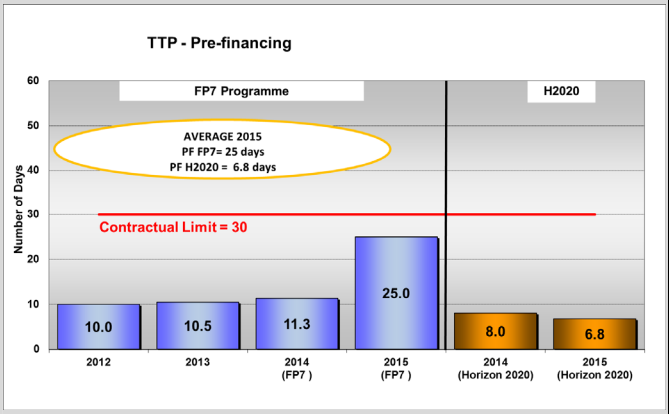
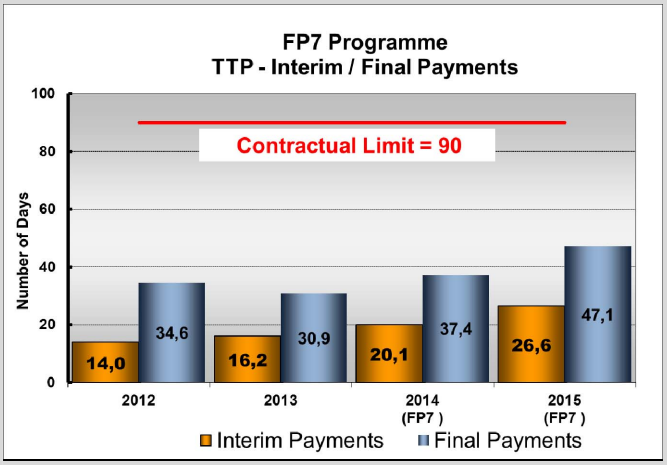
<table>
<tr><th>Key performance indicator</th><th>Target</th><th>31.12.2015</th></tr>
<tr><td>Average time to inform all applicants (days)</td><td>CoG and AdG 2014: 160 days

StG, CoG, AdG 2015: 160 days

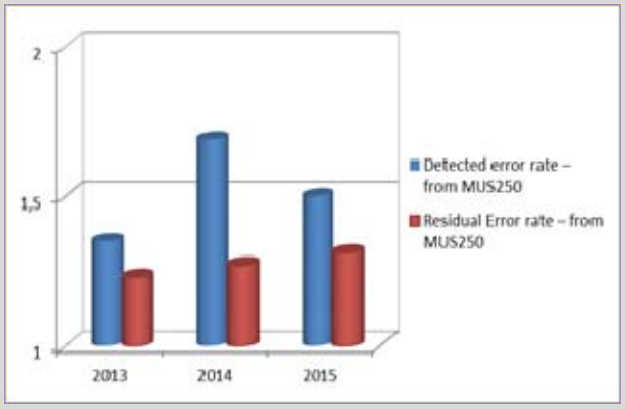
PoC 2015: 100 days</td><td>
<table>
<tr><th></th><th>2014 calls</th><th>2015 calls</th></tr>
<tr><td>StG</td><td>133</td><td>142</td></tr>
<tr><td>CoG</td><td>161</td><td>164</td></tr>
<tr><td>AdG</td><td>139</td><td>Not yet available</td></tr>
<tr><td>PoC</td><td>118</td><td>96</td></tr>
</table>
</td></tr>
<tr><td>Time to sign from invitation to signature of grants (days)</td><td>StG, CoG, AdG, PoC 2014: 120 days</td><td>
</td></tr>
<tr><td>Budget execution (Commitments and payment credits)[12]</td><td>100%</td><td>2014: 100% for commitment and payment credits
2015: 100% for commitment and payment credits

<table>
<tr><th>Programme</th><th>Budget Year</th><th>Position</th><th>Commitment credits execution</th><th>Payment credits execution</th></tr>
<tr><td>FP7</td><td>2015</td><td>C1</td><td>n.a.</td><td>100%</td></tr>
<tr><td>H2020</td><td>2015</td><td>C1</td><td>100%</td><td>100%</td></tr>
</table>
</td></tr>
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[12] It concerns L1 commitment and payment appropriations (C1 credits).

Average time to pay	<30/90 days[13]	Overall average (FP7 + H2020): 2014: 17,8 days for experts 2015: 21 days for experts   

[13] These targets result from the FR. ERCEA AWP 2015 related targets are 30 days for pre-financing and 90 days for interim and final payments.

Ex post control detected error rate	<2%	Error rates supporting the Declaration of assurance: **MUS detected error rate** (MUS250) 2013:1,35% 2014: 1,69% 2015: 1,5% **MUS residual error rate** (MUS250) 2013: 1,23% 2014: 1,27% 2015: 1,31 % 

The late adoption of the ERC Work Programme 2014[14], which followed the Scientific Council decision establishing the specific programme implementing Horizon 2020[15], had a significant impact on the calls calendar resulting in a delay of about 5 months on the completion of the evaluation in 2014. This resulted in an exceptionally busy 2015 calendar planned in order to absorb this delay and to come back to a more normal calendar in the next years where all calls will be aligned with annual budget expenditure. The split of the CoG2015 in 2 phases (PE, LS, then SH) impacted the average time to inform all applicants by 4 days above the target.

The 2014 Consolidator Grant and Advanced Grant calls have been finalised respectively in February and May 2015; the 2015 Starting Grant and Consolidators Grant calls, in October and December 2015 respectively. The 2015 Advanced Grant and Proof of Concept calls will be completed in 2016, as planned.

The 2015 Advanced Grant call evaluation process was supported for the first time as a pilot by the central SEP Evaluation IT system. Many IT issues needed to be addressed all along the process and even during the critical phase of panel meetings.

During 2015 ERCEA maintained its very good financial key performance indicators, despite a further importantly growing workload.

For H2020, a total of € 1,7 billion was available in 2015 to the Agency in terms of commitment credits, consisting of the sum of voted commitment credits (€ 1,65 billion)

[14] Usually adopted in July, the Commission adopted the ERC Work Programme 2014 on December 10th, 2013 (C(2013)8632).

[15] The Framework Programme for Research and Innovation (2014-2020) adopted by the Council Decision of December 3rd, 2013 – OJ L347 of December 20th, 2013.

and EFTA contributions (€ 48,5 million). The H2020 available payment credits amounted to € 463,1 million (voted credits of € 449,87 million and the EFTA contribution of € 13,2 million). Further to a re-balancing of needs between FP 7 and H2020, the final amount of fully executed payment appropriations was € 426,6 million.

For FP7, there were no further commitment credits as the programme ended in 2014. In view of further meeting the contractual obligations for the running FP 7 projects, a total amount of € 771,3 million was made available for payment credits, composed of voted credits of € 599,7, the EFTA contribution of € 77,7 million, as well as a budget transfer from DG RTD of € 93,9 million to cover the increased payment needs for FP 7 projects.

All payment and commitment credits, relating to both H2020 and FP7, were fully executed at the end of 2015.

The overall average time to pay (21, 9 days) for both programmes stood well below the targeted contractual threshold. 99, 6% of the pre-financing payments were executed within the 30 days contractual time limit and within an average time of 6,9 days. For the other payments (interim and final), the maximum target of 90 days was met for 99,9% of interim payments and 97,9% of final payments with an average time of respectively 26,6 and 47,1 days.

For FP7 expert payments the limit of 30 days was exceeded, mainly due to 2 late payments paid in January 2015, as these payments were transferred to 2015 due to the lack of payment credits at the end of 2014.

As regards H2020 experts, 6.647 payments were processed in average in 21 days, well below the contractual time limit of 30 days for an amount of € 14,8 million, representing 99,95% of total 2015 experts payments (3477 in 2014 for € 6,7 million).

The ERCEA target of 120 days in average for the Time to Sign Grant Agreements was largely met. The rather small deviations for the 2014 Starting Grant (+16 days) and Consolidator Grant (+6 days) calls were mainly due to the fact that the Agency started beginning of 2015 its first granting exercise under H2020 and consequently experienced some technical problems with regards to the IT roll out. Also, around 6% of the projects needed an in-depth ethical assessment, the latter completed with some delays, mainly affecting the Starting Grant call.

Finally, as regards the FP7 multi-annual ex-post error rates, it should be noted that, in line with annex 4, the ERCEA manages the ex-post controls in line with the FP7 Common Audit Strategy and is part of the FP7 Common Representative audit Samples (CRaS 1 & 2). To conclude on the legality and regularity of transactions, ERCEA does not rely however on the common approach of the CRaS, since the risk profile of the IDEAS beneficiaries is inherently lower compared to the rest of the FP7.

Thus, while contributing to the Research Family common strategy by performing audits, the ERCEA has adopted an alternative assessment pattern fully aligned with annex 4 as part of its audit strategy[16] and implemented its own multi-annual ex-post controls indicators to provide assurance to the Authorising Officer by Delegation on the ERC specific population. These control indicators reflect the multi-annual results of audits

[16] ERCEA disclosed since its 2013 AAR - in agreement with the parent DG - applying an alternative assessment pattern and reporting to support its declaration of assurance the specific error rate based on the ERCEA statistical sample MUS250 drawn before the introduction of the CRaS. Further to the implementation in 2015 of an IAS recommendation resulting from its 2014 audit on "ERCEA FP7 internal control systems and ex post controls", this practice has been enshrined in the 2015 revision of "ERCEA FP7 Ex post control approach and audit strategy for the remaining period 2015-2018" (Ares(2015)5997974 - 22/12/2015).

performed on a representative sample ("ERCEA MUS250") and on a risk based sample of ERCEA expenditure[17].

Although results of the representative sample are not yet statistically representative, these are becoming increasingly indicative (81% of the audit sample being closed). This can be taken together with the additional evidence of the lower risk profile of ERC grants and the higher concentration of beneficiaries compared to the rest of the FP7. The ERCEA is therefore confident that the multi-annual residual error rate will stay below the materiality threshold at the end of the "Ideas" programme, thus positively supporting the ERCEA Declaration of Assurance.

Key conclusions on management and internal control

In accordance with the governance statement of the European Commission, the ERCEA conducts its operations in compliance with the applicable laws and regulations, working in an open and transparent manner and meeting the expected high level of professional and ethical standards.

The Commission has adopted a set of internal control principles, based on international good practice, aimed to ensure the achievement of policy and operational objectives. The financial regulation requires that the organisational structure and the internal control systems used for the implementation of the budget are set up in accordance with these standards. ERCEA has assessed the internal control systems during the reporting year and has concluded that the internal control principles are implemented and function as intended[18].

In addition, ERCEA has systematically examined the available control results and indicators as well as the observations and recommendations issued by internal auditors and the European Court of Auditors. These elements have been assessed to determine their impact on the management's assurance as regards the achievement of control objectives[19].

In conclusion, management has reasonable assurance that, overall, suitable controls are in place and working as intended; risks are being appropriately monitored and mitigated; and necessary improvements and reinforcements are being implemented. The Director, in his capacity as Authorising Officer by Delegation for the operational budget and as Authorising Officer for the operating budget, has signed the Declaration of Assurance.

Information to the Commissioner

The main elements of this report and assurance declaration have been brought to the attention of the Agency's Steering Committee and to the parent DG Director General, who has taken these into consideration in his reporting to Commissioner Moedas, responsible for Research, Science and Innovation.

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17 For more details, please refer to pages 36 to 41.
18 Please refer to section 2.3 for further details.
19 Please refer to section 2.1 and 2.2 for further details.

1. IMPLEMENTATION OF THE AGENCY'S ANNUAL WORK PROGRAMME – HIGHLIGHTS OF THE YEAR

Reflecting the two tier-structure of the European Research Council, the ERC Scientific Council establishes annually its Work Programme, which is subsequently adopted by the Commission. It defines the specific objectives and result indicators disclosed below.

These derive from the general targets of respectively the FP7 "Ideas" Specific Programme and H2020 Specific programme as a whole and from Commission's policy objectives in the area of research which may be found in the related legal basis and in the Annual Management Plan of DG Research and Innovation.

In addition, these objectives and indicators are reflected in the ERCEA Annual Work Programme, as to bridge the ERC policy and corresponding ERCEA implementation objectives, the latter being reported in detail below.

Achievement of ERC specific objectives

The fundamental activity of the ERC, both under FP7 and H2020, is to provide substantial five-year funding to excellent researchers - and their research teams -working in Europe to pursue ground-breaking, high-gain/high-risk research, that would primarily contribute at the highest level to advancing the frontiers of knowledge.

FP 7 – Ideas Programme (AWP 2013) - To enhance the generation of excellent, innovative ideas in frontier research in Europe

The indicator retained for FP7 as to measure whether the ERC is funding excellent investigators is the number of the international scientific prizes and awards received by ERC grant holders. Another indicator of whether they are producing ground-breaking research is the number of scientific publications appearing in high impact journals. Based on the result indicators deriving from the general targets of FP7, as shown in the below table, the ERC is well on track to meet its targets.

Specific objective: FP 7 – Ideas Programme (AWP 2013)	Indicators	Target (result)	2009 - 31.12.2015
To enhance the generation of excellent, innovative ideas in frontier research in Europe	Number of international prizes and awards by grant holders.	200 by 2020	ERCEA has recorded 166 ERC grantees who won prestigious research prizes[20].
	Number of scientific publications by grant holders.	~40-60.000 by 2020	ERCEA has collected more than 95,000 publications from ERC funded projects from both online bibliographic databases and project reports.

H2020 Excellent science – European Research Council (ERC) – Strengthening frontier research

Relevant general objective(s): Horizon 2020			
Specific objective: Excellent science – European Research Council (ERC) – Strengthening frontier research			☒ Spending programme Non-spending
Result indicator: Share of publications from ERC-funded projects which are amongst the top 1% highly cited per field of science			
Baseline	Milestone	31.12.2015	Target 2020
	2018	2015	
-	1,5%	N/A[21]	1,8% (ERC publications 2014-2020) Index = 1.0

H2020 results are not available yet, since ERC-funded projects are just beginning and the first related publications are just started to be recorded. However, an independent study commissioned by the ERCEA and conducted by OST/RAND analysing the results of ERC projects funded until 2011, assessed what kind of contributions to science and knowledge was made by the most highly cited ERC-funded research. A post-publication peer review of top cited ERC acknowledged research papers indeed supports the

[20] For this indicator, only prizes awarded after the ERC Grant are taken into consideration. Also noteworthy is the fact that ERC counts to date among its grantees 11 Nobel Prize winners and 5 Field Medallists.

[21] Results are not available yet, since the H2020 ERC-funded projects are just beginning and the first related publications are just started to be recorded.

conclusion that the ERC-funded research is making an important contribution to the advancement of science and knowledge by resulting in some landmark contributions to their field, including the identification of new entities or phenomena, methodological advances in the study of a specific topic and the elaboration of theoretical principles.

ERC's investments in frontier research enable scientific breakthrough discoveries but also transformative technologies that could lead to solutions to complex global problems. In 2015, ERC-funded teams were also recognised for the quality of their science-based companies and innovations, at the European Business Angel Network (EBAN) Winter University, a global summit on venture finance and innovation with 300 representatives of the early stage financing industry and entrepreneurs from all over the world.

In addition to a prize for "Innovation in Science Venture Finance" awarded to the ERC in recognition of its efforts to explore the innovation potential of the research it funds, the two following prizes were awarded by this large gathering of business angel investors to ERC-funded ventures:

- Prize to the "most investable company" to StemCell2MAX, a biotechnology start-up in the field of regenerative medicine with proven market acceptance: internationally recognised innovating discovery (patented and published in Nature) and sales growing track-record. This venture is supported by the PoC grant **StemCell2MAX**, led by Prof Jose Henrique Veiga Fernandes at the University of Lisbon;

- Prize to the "technology to watch" to FabliTec, a Technical University (TU) Munich spin-off company focused on state-of-the-art technology for 3D scanning which has developed customized solutions for the consumer market and for the medical domain (orthopaedics and plastic surgery). This venture is supported by the PoC grant **COPYME3D**, led by Prof Daniel Cremers at the TU Munich.

1.1 H2020 "Excellence science" and the FP7 "Ideas" programmes implementation

2015 ERCEA operations were marked by a number of challenges, deriving from the condensed implementation of 2014 and 2015 calls for proposals and the central SEP Evaluation IT system supporting for the first time as a pilot the AdG2015 Call evaluation process.

Indeed, the late adoption of the ERC Work Programme 2014[22], which followed the Council decision establishing the specific programme implementing Horizon 2020[23] had a significant impact on the calls calendar resulting in a delay of about 5 months on the completion of the evaluation in 2014. This resulted in an exceptionally busy 2015 calendar planned to absorb this delay and to come back to a more normal calendar in the next years where all calls will be aligned with annual budget expenditure: the 2014 Consolidator Grant and Advanced Grant calls have been finalised respectively in February and May 2015. These were followed by the finalisation of the 2015 Starting Grant and Consolidators Grant calls in October and December 2015, while the 2015 Advanced Grant and Proof of Concept calls will be completed in 2016, as planned.

Furthermore, as regards the grant implementation activity, achieving the ambitious KPIs set by the Agency in previous years, as well as avoiding beneficiaries' dissatisfaction and

[22] Usually adopted in July, the Commission adopted the ERC Work Programme 2014 on December 10th, 2013 (C(2013)8632).

[23] The Framework Programme for Research and Innovation (2014-2020) adopted by the Council Decision of December 3rd, 2013 – OJ L347 of December 20th, 2013.

paying interest due to late payments, entailed a number of challenges for 2015: the management of two framework programmes running in parallel, the processing of granting operations carried forward from 2014 as well as an increased number of payment activity, coupled with an unexpected staff turnover. These challenges were addressed among others by means of constant review of the workload and careful reattribution of the payments, intensive management supervision, strict monitoring and training to new staff members, aiming at reducing any anticipated negative effect to the timely execution of payment credits and an effective internal communication with staff on changing priorities. Also, areas of improvement of validated procedures and simplification measures were implemented, such as further automation of the generation of the payment note and reminders, as well as the harmonisation with the parent's DG procedures was achieved as regards recovery of EU funds and the implementation of audit results and extrapolation. In addition, in anticipation of the ERCEA dependence on the Common Support Centre and the implications of the new IT functionalities for the ERCEA's specific H2020 payment workflow, the local IT solutions for reporting and monitoring have been maintained. Although progress has been made as regards the implementation of the H2020 Proof of Concept financial report in Compass, the development of the H2020 IT tools related to the ERC H2020 payment process and the ERCEA reporting modalities for other schemes - which represent the higher number of ERCEA transactions - remain to be implemented by the CSC.

Also, in 2015, ERCEA proved to be an efficient, effective and cost-effective structure for the management of the "Ideas" and H2020 Programmes, as its administrative payments was kept in 2015 to 2,9%[24] of the operational ones. At the end of 2015, the ERCEA employed a total of 417 agents, out of which 74% are allocated to ERCEA's operational activities[25], the Scientific Management Department and the Grant Management Department accounting for respectively 43% and 31% of total staff. Contract agents represented 71% of total ERCEA staff members.

1.1.1 Implementation of H2020 calls for proposals financed under the 2015 budget commitment appropriations

All 2015 calls for proposals were published according to the timetable of ERCEA's Work Programme 2015.

A total of 7263 proposals were submitted in response to the 2015 calls, a decrease of 15% in submissions compared to 2014,which can be partially explained by the restriction rules on re-submissions (the Scientific Council is currently analysing how these rules could be relaxed without compromising the targeted success rate of around 15%).

The information to applicants for the StG2015 and CoG2015 calls took place respectively in October 2015 and December 2015 as planned, resulting in respectively 351 and 307 proposals being retained for funding (main and reserve lists), in line with the AWP 2015.

The 2015 Advanced Grant (which Step 2 took place in January 2016) and Proof of Concept (deadline 3) calls will be completed in early 2016 as planned.

It should also be noted that the AdG2015 Call evaluation process was supported for the

[24] Refer to part 2.1 for payments related to the administrative budget (€ 36,86 Mio) and to the operational budget (€ 1.245,65 Bio).

[25] When applying the methodology of RTD (ARES(2015)2721378), which includes also some staff of the resources department, 85% of agents were allocated to ERCEA operational activities.

first time as a pilot by the central SEP Evaluation IT system. Many IT issues needed to be addressed all along the process and even during the critical phase of panel meetings, making it much more difficult to run the evaluation process as efficiently as with the legacy system. As a consequence, many Panel members complained about the new evaluation system to the Scientific Council. In addition, many recurrent IT issues also arose while using the new central IT system for information to applicants SyGMa which had a negative impact on the information to applicants for AdG Step 1 and PoC.

The 2015 commitment credits (C1) for a total amount of € 1,7 billion were booked on basis of the ERC Financing Decision, since the evaluations of most of the calls were not yet concluded. Only for PoC and StG 2015 calls the granting activity started in late 2015.

For the PoC 2015 call 64 grants out of 89 on the reserve list were signed until the end of 2015 (72% of the total) and for the Starting Grants 2015 call 67 grants out of 291 invited projects were signed (23% of the total). Thus, for the 2015 calls, 131 grants were signed for a total amount of € 106, 4 million.

Furthermore, the ERCEA finalised in 2015 the evaluation of two 2014 calls for proposals, resulting in the information to applicants for the 2014 CoG and AdG calls for proposals being carried out in 2015 (in February 2015 for CoG2014 and in May 2015 for AdG2014). Consequently, respectively 378 and 196 proposals were retained for funding (main and reserve lists) in line with the AWP 2014 output targets.

Consequently, most of the granting activity in 2015 related to the preparation of grant agreements from the 2014 calls and their budgetary commitments. Accordingly, 1025 new grant agreements were signed for a total amount of € 1,7 billion (remained voted 2014 credits and assigned revenue together).

These grant agreements were prepared for the various calls as follows:

- For the 2014 StG call a total of 375 grants were processed and after the withdrawal of 2 beneficiaries, 375 grant agreements were finally completed and signed.

- The granting process of the 2014 CoG call resulted in a total of 371 grants signed until the end of 2015 (two beneficiaries had withdrawn).

- Under the 2014 AdG call 192 grants were completed and signed.

- The granting process of the 2014 PoC calls resulted in a total of 87 grants signed.

Further to the launch of H2020, the granting activity has increased during 2015 by 104,2% compared to 2014. Nevertheless, full execution of the commitment credits was reached by year-end.

As to payment credits for H2020, these were used mainly for the pre-financing of the new grants of 2014 and 2015 calls. The amount available was € 426,6 million, which was fully consumed for 1016 pre-financing transactions.

The following table shows the results of the evaluation of the H2020 2014-2015 calls, including signed grants and pre-financings paid:

Implementation of calls in 2015

Calls implemented in 2015	Call deadlines		Indicative budget (€ Mio)	Number of proposals				Grants signed		Preparation failed	Of which pre-financing paid € Mio (main and reserve lists)[26]
	Opening dates	Closing dates		Submitted proposals	Ineligible (% of submitted proposals)	Main list – invited (not reserve)	Success rate	Number	€ Mio		
				(a)	(b)	(c)	(c)/(a)	(main and reserve list)			
ERC-2014-CoG – Consolidator Grant	1/12/2013	20/05/2014	**713**	2528	1,4%	372	14,7%	371	708	2[27]	167,774,722.83
ERC-2014-AdG- Advanced Grant	07/06/2014	21/10/2014	**450**	2.283	0,9%	190	8,6%	192	450	0	95,348,201.32
ERC-2014-StG – Starting Grant	1/12/2013	25/03/2014	**527,8**	3272	1,9%	328	10%	375	550	2[28]	134,767,983.96
ERC-2014-PoC - Proof of	01/12/2013	1) 01/04/2014 2) 01/10/2014	**18**	1) PoC1: 182 2) Poc2: 256	1) PoC1: 1,6% 2) Poc2: 0,8%	1) 50 2) 51	1) 27,5% 2) 19,9%	87	13	0	11,161,451
ERC-2015-StG – Starting Grant	07/10/2014	03/02/2015	**410**	2.920	1,1%	291	12,1%	67	97	1[29]	1,343,106
ERC-2015-CoG – Consolidator Grant	13/11/2014	12/03/2015	**605**	2.051	1,1%	302	14,8%	-	-	0	-
ERC-2015-AdG – Advanced Grant	10/02/2015	02/06/2015	**630**	1.953	0,8%	[30]	[30]	-	-	0	-
ERC-2015-PoC - Proof of Concept	07/11/2014	1) 05/02/2015 2) 28/05/2015 3) 01/10/2015	**20**	1) 96 2) 107 3) 136	1) 2,1% 2) 4,7% 3) 2,9%	1) 45 2) 44 3) 46	1) 52,1% 2) 57,8% 3) 61,4%	64	9	0	4,889,402

Reported in the AAR 2014 *Reported in the AAR 2015*

[26] All fund sources
[27] Both withdrawn by the Host Institution.
[28] 1 withdrawn by the Host Institution and 1 rejected by the ERCEA.
[29] Rejected by the ERCEA.
[30] By mid-February 2016, further to the completion of the step 2, 270 proposals were awarded, resulting in a success rate of 13,8%.

1.1.2 Implementation of H2020 and FP7 calls financed under previous year's budget

The following table provides an overview on the implementation of calls charged to previous year's budget, highlighting the volume of ERCEA in terms of grant preparation, pre-financing, interim and final payments.

Calls	Running projects 01/01/2015		Grant signed in 2015		Payments made in 2015		Projects closed in 2015		Running projects 31/12/2015	
	Number	Open balance Mio €	Number	Mio €	Number	Mio €	Number	Decommitments Mio €	Number	Open balance Mio €
FP7										
StG	2068	1.001,9			1344	356.7	165	2.9	1903	642.4
CoG	313	429,7			31	11.3	0	0	313	418.4
AdG	1536	1.288,3			1034	420.8	152	5.1	1384	862.5
PoC	93	2,8			56	1.6	43	0.2	50	1
SyG	24	188,2			12	25.0	0		24	163.2
Total FP7	**4034**	**2910.9**			**2477**	**815.4**	**360**	**8.10**	**3674**	**2087.4**
H2020										
StG			442	646.9	366	136.1			442	510.8
CoG			371	707.9	351	167.8			371	540.1
AdG			192	449.6	164	95.3			192	354.3
PoC	34	2.1	151	22.5	135	16.1			185	8.5
Total H2020	**34**	**2.1**	**1156**	**1826.9**	**1016**	**415.3**			**1190**	**1413.7**
Grand total	**4068**	**2913**	**1156**	**1826.9**	**3493**	**1230.7**	**360**	**8.10**	**4864**	**3501.1**

Each financial year, the Agency implements the remaining part of the successful projects from the calls of the previous year , in the form of grant agreements and budgetary commitments (C8 credits) and proceeds to the commitments (global under C1 credits) and the granting for the given year calls as far as evaluation results are available.

Thus, in 2015 the granting process for the H2020 2014 calls has been concluded while the H2020 2015 granting process has started and will be completed in 2016, resulting in the granting activity increasing by 590 grants (representing 104,2 %) compared to 2014 and reaching the full execution of the 2015 commitment credits.

Overall, 1156[31] Grant Agreements from the H2020 Calls were signed throughout the year, totalling to € 1, 8 billion. The related C8 credits linked to L1 (global) commitments for the 2014 calls reached 99, 92%, by means of L2 (individual) commitments.

A total of 3493 payments for ERC Grants were carried out in 2015 (versus 2.616 in 2014), representing an increase of 33,5% compared to 2014. Out of these transactions, 1016 related to H2020 and 3 to FP7 pre-financings (696 in 2014), for an amount of € 418,2 million[32], 2005 to FP7 interim payments (1567 in 2014) for an amount of € 752 million and 469 to FP7 final payments (378 in 2014), worth a total of € 60,5 million.

At year-end, the grant portfolio counted 4864 running grant agreements, corresponding to both the H2020 and FP7 programmes. The portfolio of running projects stood at year-end at 3674 for FP7 worth around € 2 billion and 1190 grants for H2020, worth € 1,4 billion.

Throughout 2015, 6650[33] expert payments were processed, representing a significant increase of 82% in comparison to 2014, linked to the condensed evaluation calendar of 2015 to catch up the delays which resulted from the late adoption and start in 2014 of the H2020 programme.

1.1.3 Amendments to grant agreements

During 2015, 878 new amendments requested by beneficiaries were received (compared to 1621 formal requests received in 2014) and 892 signed (compared to 1640 signed in 2014). The average time to amend was 23 days for H2020 and 17,2 (14,9 days in 2014 for FP7), which is significantly lower than the time limit of 45 days contractually foreseen.

This important reduction in volume (46%) is mainly explained by the massive drop reported in the number of amendments processed to activate the electronic submission of reports in 2015 (19) compared to the previous year (711). Another reason is the new extension policy which appeared as a challenge last year but which has been fairly well assimilated by the beneficiaries, as they became accustomed with the rules and procedures, notably thanks to consistent training offered to the Principal Investigators and host institutions. Following the adoption of this new, more restrictive, policy in 2014, the number of extension requested by the beneficiaries dropped by around 6% in 2015.

As in previous years, amendments remained more common for Starting Grants, due to the fact that beneficiaries for Starting Grants form young/new teams. However, in parallel with the steady increase in the number of Consolidator Grants being implemented since the first ERC Consolidator Call for proposals in late 2013, a similar increase (109%) has been noted in the number of amendments processed concerning this funding scheme.

Concerning H2020, the ERCEA continues to work on the finalisation of the common IT tool together with the CSC, with the appropriate user roles, functionalities and templates. Amendments in H2020 started to be processed in the common IT tool only as from the second part of the year. By the end of 2015, most amendment clauses have been implemented in the tool, however a number of amendment clauses are not yet available, notably those related to the partial takeover of a beneficiary as well as the grant suspension and termination. Nevertheless, in total 33 amendments under the H2020 programme have been signed in 2015, mainly related to changes of start date (13 cases) and changes of banking details (9 cases). It is to be noted that 4 changes of host

[31] Out of which 131 grants resulted from 2015 calls, as reflected in part 1.1.1 above.
[32] Including € 2.9mio related to FP7 pre-financing.
[33] Only 3 FP7 expert payments.

institution have been processed too.

1.1.4 Implementation of ERCEA administrative budget

The ERCEA administrative budget for 2015 was adopted on 10/12/2014 for a total amount of €39.625.000. The 2015 administrative budget was not amended and it remained of the same amount until 31/12/2015. Appropriations have been modified between chapters by two decisions, one by the Steering Committee on 22/09/2015 and one by the Director of the ERCEA on 8/12/2015. The Director of the ERCEA also took three transfer decisions. These various modifications have led to a transfer between titles representing 0.5% of the budget.

The administrative budget's structure remained consistent with previous years' with staff and infrastructure / operating expenditures (mainly building and ICT) accounting for respectively 74% and 17% of the 2015 budget. Out of the volume of 2053 payments made on the administrative budget in 2015 (to compare to 2053 in 2014), 56% related to salaries and 6% to infrastructure and operating expenditures, the remaining 38% concerned missions, ex-post control audit and information, publication and communication expenses (representing 9% of the budget's value).

1.2 Example of EU-added value of ERC funded projects

Alongside transnational collaboration and mobility, EU research funding also helps to promote more intense competition in research leading to higher quality and excellence, in particular through the European Research Council. The ERC provides a European-wide competitive funding structure based on the sole criterion of excellence.

In economic terms this transnational competition avoids the negative effects of cross border externalities and limited systems competition. This has far-reaching consequences:

- Resources are allocated more efficiently; the best researchers with the best ideas receive funding regardless of their nationality and the availability of national funding;

- ERC peer review and funded research acts as a gold standard allowing Member States and individual research institutions to benchmark the relative strengths of their systems and policies leading to important reform of national policies and institutional practices.

The ERC provides a powerful dynamic for driving up the quality of the overall European research system. In this way the ERC supports research excellence across the European Union and associated countries. It is a relatively new institutional mechanism to make Europe more attractive to outstanding research leaders (irrespective of their country of origin), providing them with the visibility, prestige and resources needed to develop their full research potential, and helping to retain them within Europe. The examples below are of excellent, world leading research funded by the ERC, representing a landmark contribution to science or knowledge. This type of research provides clear evidence of scientific leadership dynamism and increases the attractiveness of the European Research Area towards scientific talent from other parts of the globe.

ERC-funded research among the top 10 physics discoveries of the last 10 years

In October 2015, Nature Physics listed among "the top 10 physics discoveries of the last 10 years" the success of researchers in experimentally demonstrating the existence of the Majorana's fermion, which was predicted in 1937 but never proven. This particle on

the border between matter and antimatter- that could therefore be its own anti-particle - remained elusive for more than 70 years, receiving little attention for decades until the search began again in the 1970s. The recent discovery was published in Science in May 2012[34] in an article acknowledging support from the ERC for work conducted by PI Leo Kouwenhoven at the Delft University of Technology (TU Delft) within ERC 2008 Advanced Grant project **Quantum Opto-Electronics.** This result could add a completely new chapter to the book of physics, shading new light in the mysteries of quantum mechanics.

We are used to hear that in theoretical physics scientists predict on paper the existence of a particle that is soon or later then found in experiments, the Higgs boson being one of the most striking recent examples. This does not happen that often in condensed matter physics, the study of just about everything we deal with on a daily basis, but on which media reports are hardly ever seen.

Leo Kouwenhoven and his group fabricated a very small electronic device based on semiconductor nano-wires with which they managed, under certain specific conditions, to demonstrate the presence of Majorana's fermions.

Other groups working in this field are making announcements similar to those of the TU Delft, including teams led by other ERC grantees. Another article[35] presenting data and simulations that support the existence of a Majorana's state published in Nature Physics in November 2012 also acknowledged an ERC 2008 Advanced Grant project (**FQHE**), conducted by PI Moty Heiblum at the Weizmann Institute, who went on winning yet another Advanced Grant in 2014 (**NEUTRAL**) where he proposes, among other things, to further detect and study Majorana's particles.

As Moty Heiblum writes in his proposal for his second ERC grant, detecting Majorana's particles is not only exciting physics, their properties make them attractive to be used as a quantum bit (qubit) in the development of powerful quantum computers, a goal pursued by researchers and companies all over the world. But this still remains a major challenge.

Partly based on the Majorana's fermion, Leo Kouwenhoven, together with Lieven Vandersypen (TU Delft) and Carlo Beenakker (Leiden University) aims to move a step further towards the development of a quantum computer. Thanks to a 2012 ERC Synergy Grant (**QC-Lab**), they are working on an experimental computer link in which the quantum state is protected.

Another important step towards this goal has been taken by researchers from QuTech, a joint centre of know-how between TU Delft and TNO with industrial partners, with Leo Kouwenhoven among its scientists. In an article[36] published in Nature Physics in May 2015 they claim to have resolved a nearly thirty-year-old scientific problem, demonstrating the difference between the even and odd occupation of a superconductor in high magnetic fields. Until now this had been proven to be possible only in aluminium, which is incompatible with Majoranas. The QuTech researchers have determined the parity in a different superconductor, niobium titanium nitride (NbTiN). This is a major issue for Majorana research as superconductivity is required to survive in high magnetic

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[34] V. Mourik, K. Zuo, S. M. Frolov, S. R. Plissard, E. P. A. M. Bakkers, L. P. Kouwenhoven (2012): Signatures of Majorana Fermions in Hybrid Superconductor-Semiconductor Nanowire Devices, Science 336 (6084): 1003-1007. DOI: 10.1126/science.1222360

[35] Anindya Das, Yuval Ronen, Yonatan Most, Yuval Oreg, Moty Heiblum & Hadas Shtrikman (2012): Zero-bias peaks and splitting in an Al–InAs nanowire topological superconductor as a signature of Majorana fermions, Nature Physics 8, 887–895. DOI: 10.1038/nphys2479;

[36] David J. van Woerkom, Attila Geresdi & Leo P. Kouwenhoven (2015): One minute parity lifetime of a NbTiN Cooper-pair transistor, Nature Physics 11, 547–550. DOI:10.1038/nphys3342.

fields, at which aluminium ceases to be a superconductor. The discovery makes it possible to read-out and manipulate quantum states encoded in prospective Majorana qubits.

1.3 Specific efforts to improve 'economy' and 'efficiency' of spending and non-spending activities

According to the financial regulation (art 30), the principle of economy required that the resources used by the institution in the pursuit of its activities shall be made available in due time, in appropriate quantity and quality and the best price. The principle of efficiency concerns the best relationship between resources employed and results achieved.

The respect of these principles is continuously pursued through the implementation of internal procedures and predefined practices. These procedures ensure that activities are executed in an efficient manner (*e.g.* the different workflows contribute to the efficient cooperation between staff, units, etc) and according to the principle of economy (*e.g.* the procurement rules ensure procurement in optimal conditions).

ERCEA is continuously fine-tuning its internal arrangements in order to improve the efficiency and economy of its operations. The following two initiatives show how these principles are implemented in our Agency:

1.3.1 Service provider approach of the Grant management department

In 2015, the grant management department continued its tailor made services for ERC beneficiaries.

Indeed, four training conferences for PIs have been organised (in Brussels, Sweden, Spain and Austria). The aim of these conferences is primarily training of PIs on procedures and rules and the facilitation of a dialogue amongst ERC grantees. Almost 200 PIs attended these events. Like in previous years, these training events were very well received, as they give the opportunity to clarify the rights and obligations of all parties during the life cycle of an ERC grant, also to discuss specific cases in real time and benefitting to all participants.

1.3.2 Grant management re-organisation and revision of the financial circuits

The grant management department reorganisation and revision of the financial circuits that was launched in 2014, showed its positive effects on economy and efficiency of the operations of the Department, allowing to maintain the key performance indicators at comparable levels to previous years despite the significantly growing workload in 2015. In 2015, all units were responsible for the entire project life-cycle (grant preparation, payments and amendments), improving further the level of service provided to beneficiaries. Requests from beneficiaries were thus treated in a unified and consistent way while in parallel, unnecessary delays were avoided. The possibility to task Project Officers with more aspects of the project's cycle (granting, amendments, and/or payments) resulted in an overall more efficient management and follow-up of the grants. The time to respond to beneficiaries' requests had further improved (7-12 days) and positive feedback from the scientific community in relation to this entire project life-cycle management has been received.

2. MANAGEMENT AND INTERNAL CONTROL

Assurance is an objective examination of evidence for the purpose of providing an assessment of the effectiveness of risk management, control and governance processes. This examination is carried out by management, who monitors the functioning of the internal control systems on a continuous basis, and by internal and external auditors. Its results are explicitly documented and reported to the ERCEA Director. The reports produced in 2015 are:

- Management reports on control results;
- The contribution of the Internal Control Coordinator, including the results of internal control monitoring at the Agency level;
- The opinion and the observations of the Internal Auditor on the state of control and the observations and recommendations reported by the Internal Audit Service (IAS);
- The observations and the recommendations reported by the European Court of Auditors (ECA).

These reports result from a systematic analysis of the evidence available. This approach provides sufficient guarantees as to the completeness and reliability of the information reported and results in a complete coverage of the budget delegated to the Director of the ERCEA.

This section reports the control results and other relevant elements that support managements' assurance on the achievement of the internal control objectives[37]. It is structured into (1) control results, (2) audit observations and recommendations, including the implementation of audit recommendations, (3) effectiveneness of the internal control system, and resulting in (4) conclusions on assurance.

2.1 Control results of ERCEA activities

This section reports and assesses the elements identified by management that support the assurance on the achievement of the internal control objectives. The ERCEA assurance building and materiality criteria are outlined in the AAR annex 4 and annex 5 outlines the main inherent risks together with the control processes aimed to mitigate them and the indicators used to measure the performance of the control systems.

[37] Effectiveness, efficiency and economy of operations; reliability of reporting; safeguarding of assets and information; prevention, detection, correction and follow-up of fraud and irregularities; and adequate management of the risks relating to the legality and regularity of the underlying transactions, taking into account the multiannual character of programmes as well as the nature of the payments (FR Art 32).

		Operational and administrative payments 2015						
		Payments made[38]				Legality and regularity indicator: residual error rate	Total administrative expenditure[39]	Cost effectiveness indicator: % of total admin/operational
		Pre-financing	Payments against cost statements	Experts' payments	Total operational expenditure			
2015	FP7	2.932.139,25	812.563.073,74	95.082,94	815.590.295,93	1,3%	36.863.255,47	2,9%
	H2020	415.284.868,23	-	14.805.587,95	430.090.456,18			
	Total	**418.217.007,48**	**812.563.073,74**	**14.900.670,89**	**1.245.680.752,11**			
2009 - 2015		3.216.747.824,93	2.616.252.501,45	47.715.480,12	**5.880.715.806,50**		**251.201.044,87**	**4,3%**

The H2020 and FP7 programmes are implemented under the direct management mode.

The operational appropriations are dissociated appropriations, meaning that ERCEA manages separate budgets for commitments and payments. In 2015, the commitment budget of € 1,69 billion was fully committed. The finally available payment credits for Horizon 2020 of € 426,6 million and for FP7 of € 771,3 million were fully consumed[39]. Payment transactions for operational expenditures consist of pre-financing, interim and final payments. In an average grant agreement of 5 years, the pre-financing is paid at the start of the project, followed by 3 interim payments and 1 final payment. Administrative appropriations are non-dissociated ones, meaning that the same appropriations are used for commitment (over 12 months of year N) and payment (over 12 months of year N and 12 months of year N+1). In 2015, ERCEA administrative budget was of € 39, 6 million, committed at 99.3% and paid at 93.0%. The difference between the commitment and the payments (€ 2, 48 million) represents the carry-forward to be paid by 31/12/2016.

It should be noted that as regards the operational payments, 65% of the total amount executed in 2015 concerned FP7 payments against cost statements, while the remaining 35% payments executed concerned pre-financings and experts payments[40] related to H2020, both assessed as low risk transactions as regards the control objective related to the legality and regularity of underlying transactions. Therefore, the assurance provided for this control objective covers FP7 payments, whilst other control results are reported as appropriate for H2020 (call management & evaluations and granting) or for both programmes (grant implementation).

Control effectiveness as regards ERCEA objectives' achievement

In line with article 30 of the Financial Regulation, the ERCEA has set up internal control processes as to ensure the yearly achievement of its objectives as set out in its Annual Work Programme.

[38] The figures in this table include all types of credits (fund sources), like the voted credits and assigned revenue.
[39] Corresponding to C1 credits only.
[40] For respectively 33% and 1% of the 2015 overall operational payments.

Control effectiveness as regards legality and regularity

The ERCEA implements the Ideas and H2020 programmes delegated to it under the direct management mode, which implies direct financial contributions through grants to beneficiaries.

The major inherent risks in implementing the ERC programmes relate firstly to the quality and robustness of the evaluation process implemented for the selection of proposals and the monitoring of awarded projects, allowing funding projects that fit the purpose of the programmes, as defined by the ERC Scientific Council's funding strategy, as well as in line the sound financial management principles. The second major risk relate to the errors, irregularities or fraud not been detected in the cost claims submitted by the beneficiaries, thus jeopardizing the legality and regularity of underlying transactions. However, ERCEA management considers its activities to be exposed to a lower level of inherent risks as compared to other actors of the FP7 as its beneficiaries are mainly mono-beneficiaries, usually large, major public institutions (no SMEs) with well-established control systems on financial reporting and an accumulated experience in managing EU research grants. In addition, the programme design foresees certain features that contribute to the inherent programme simplifications, as flat rate overheads, 100% reimbursement rate of direct eligible costs and the absence of any negotiation on the maximum financial contribution in the grant preparation and signature process (as this is part of the grant award decision).

ERCEA has set up internal control processes aimed to ensure the adequate management of the risks relating to the legality and regularity of the underlying transactions, taking into account the multiannual character of programmes as well as the nature of the payments concerned. The control objective is to ensure that the ERCEA residual error rate does not exceed 2% on a cumulative basis by the end of the programmes' implementation, in line with the materiality criteria in annex 4. The starting point for the calculation of the residual error in the Research Family is the Common Representative Audit Sample (CRaS), which aims at estimating on a multi-annual basis the error rate at the level of the programmes, across all the services involved in their management. However, since the risk profile of the Ideas programme is inherently lower when compared to the rest of the FP7, the ERCEA has adopted an alternative assessment so as to provide additional assurance on the ERC specific population, in line with annex 4[41], in particular from the multi-annual (2009-2015) ERCEA residual error rate (MUS sample)[42]. At year-end 2015, with a multi-annual detected error rate amounted to 1.5% and the residual error rate to 1,31%, the ERCEA is confident that these results[43] will stay below the materiality threshold of 2% at the end of the "Ideas" programme, thus positively supporting the ERCEA 2015 Declaration of Assurance.

In the context of the protection of the EU budget, at the Commission's corporate level, the DGs' and Executive Agencies' estimated overall amounts at risk and their estimated future corrections are consolidated.
For ERCEA, the estimated overall amount at risk for the 2015 payments made is €18,9 million. This is the AOD's best, conservative estimation of the amount of expenditure authorised during the year (€1.284 million) not in conformity with the applicable contractual and regulatory provisions at the time the payment is made.

This expenditure will be subsequently subject to ex-post controls and a sizeable

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[41] In particular with the provision stating that "If the CRAS results are not used as the basis for calculating the residual error rate this must be clearly disclosed in the AAR, along with details of why and how the final judgement was made."

[42] For more details, please refer to page 36 to 41.

[43] Although these results of the representative sample are not yet statistically representative, they are becoming increasingly indicative with 81% of the audit sample being closed.

proportion of the underlying error will be detected and corrected in successive years. The conservatively estimated future corrections for those 2015 payments made are €2,6 million. This is the amount of errors that the ERCEA conservatively estimates to identify and correct from controls that it will implement in successive years.

ERCEA	Scope: payments made (FY; €)	Error Rate (%)	Amount at risk (FY; €)	Average recoveries and Corrections (ARC; %)	Estimated future corrections (FY; €)
ABB or other activity-level	*as per AAR annex 3, table 2*	*Detected error rate or equivalent*	*= (2) x (3)*	*Source: Dg BUDG (ABAC recovery context)*	*Avg % since 2009 [e.g. 2.0%], applied to FY payments made*
Ideas -FP7 H2020	815.590.296 430.090.456	- -	-		- -
Total operational	**1.245.680.752**	**1,50%**	**18.685.200**	**0,20%**	**2.491.000**
Administrative budget	**38.830.000**[44]	**0,60%**	**233.000**		
Overall ERCEA	**€1.284.511.000**[45]	**1,47%**	**€18.918.200**	**0,20%**	**€2.569.000**

Control efficiency and cost-effectiveness

Based on an assessment of the most relevant key indicators and control results, ERCEA has assessed the cost-effectiveness and the efficiency of the control system and reached a positive conclusion, as during the reporting year, the total financial management and control payments (ie operating budget) compared to the operational ones represented only 2,9%. In addition, positive results of key indicators related to efficiency, namely time-to inform applicants, time-to sign and time-to-pay, allow concluding to the control efficiency of ERCEA operations, thus positively supporting the Declaration of Assurance.

Fraud prevention and detection

ERCEA has developed and implemented its own anti-fraud strategy since 2010, which has been revised in 2013 to align to the methodology provided by OLAF. In 2015, the latter has been further updated, as well as the related action plan, as to ensure the effective alignment with the 2015 developments of the Common Anti-fraud Strategy in the Research Family (RAFS).

In addition, a new sector "Anti-Fraud and Supervision Strategies" was established early 2015 aiming at reinforcing inter alia the anti-fraud structure of the Agency by coordinating its anti-fraud activities, including the organisation of internal trainings on "Fraud Prevention and Detection" and maintaining the Fraud Register up to date.

Furthermore, in accordance with the updated procedure on "handling internally and reporting irregularities and potential fraud" , twice a year, a report is submitted to ERCEA

[44] Corresponding to C1 and C8 payments.
[45] Rounded amount for simplification (actual total sum: € 1.284.510.752).

Director presenting state of play of the cases of irregularity and potential fraud handled by the Agency. At year-end 2015, 2 cases are subject of in-depth monitoring controls, 4 are under OLAF investigation and a last one being assessed by OLAF on whether or not an investigation should be opened.

All above mentioned cases relate to ERC grants, while no cases were reported in relation to staff members, procurement and experts contracts, whether paid under the operational or administrative budget.

As from July 2015, the Anti-Fraud sector started to organise internal trainings on anti-fraud issues, as foreseen in the Anti-Fraud Action Plan and will be carried out on a bi-annual basis; 55 staff attended the two trainings organised in July 2015 and January 2016.

2.1.1 Implementation of the internal control system for the operational budget

The implementation of the FP7 and H2020 programmes is organised along 4 distinct stages with specific control mechanisms in place, which are described below following their respective control objective. Detailed description of the controls implemented is shown in the related Internal Control template (annex 5.1).

Stage 1: From call for proposals to evaluation results

This stage encompasses the implementation of the peer review process for the selection of ERC grants, the management of calls for proposals, the evaluation and selection of proposals, resulting in the execution of budgetary global commitments.

Control effectiveness as regards ERCEA objectives' achievement

Call management

ERCEA AWP 2015	**2015 Target**	**31/12/2015**
Number of submitted proposals per call	AdG 2014: 2600 CoG 2014: 4500 StG 2015: 4.000 CoG 2015: 3.200 AdG 2015:3.000 PoC 2015: 600	AdG 2014: 2283 CoG2014: 2528 StG 2015: 2.920 CoG 2015: 2.051 AdG 2015: 1.953 PoC 2015: 339

Research Family harmonised indicator	**2015 Target**	**31.12.2015**
% of calls for proposals successfully concluded / planned		
Calls 2014 concluded in 2015 (AdG, CoG, PoC -2)	100%	100%
Calls 2015 concluded in 2015 (StG and PoC-1 and 2nd deadline)	50%	50%

The new restrictions rules on submission decided by the ERC Scientific Council[46] seem to have had a greater impact than expected on the number of proposals submitted. The ERC Scientific Council has already decided to relax the restriction on applicants who were scored B in Step 2[47]. Due to the past increasing trend in submissions, these restrictions were introduced by the ERC Scientific Council not only to contain the experts' workload at a reasonable level to avoid compromising evaluation quality but also to keep the overall success rate at an appropriate level around 15%. In addition, an arbitrage is made by the Scientific Council on the use of the Associated Countries budget aiming at balancing the overall success rate among the Calls in order to reach a success rate of around 15% for each Call whenever possible, as shown in the table below:

Call	Funded proposals	Awarded proposals	Submitted proposals	Success rate
ERC-ADG-2014	192		2.287	8,40%
ERC-ADG-2015		270	1.953	13,80%
ERC-COG-2014	371		2.528	14,80%
ERC-COG-2015		294	2.051	14,30%
ERC-STG-2014	375		3.273	11,50%
ERC-STG-2015		350	2.920	12,00%

Evaluation

ERCEA AWP 2015	**2015 Target**	**31/12/2015**
Overall average number of remote referee reviews per proposal	AdG and CoG 2014: 2 StG, CoG, AdG 2015: 2	AdG and CoG 2014 : 3 StG and CoG 2015 : 3,2 AdG 2015 : not reported as evaluation not completed.
% of remote referees participated / invited	AdG and CoG2014: N/A[48] StG, CoG, AdG 2015: 35%	AdG2014 : 31,4% CoG2014 : 34,6% StG2015 : 33,9% CoG2015 : 32,8% AdG 2015 : not reported as evaluation not completed.

The change from a contract to a simpler appointment letter to recruit external experts didn't bring the expected improvement in the rate of participation of remote referees as the process of recruiting specialists in a research area remains very competitive, time consuming and very much dependent on the busy high-level scientists availability to evaluate. But it is to be noted that although the number of proposals passed to step 2 was lower in 2015 (2125 in comparison to 2190 proposals in 2014), the volume of remote referees who participated in 2015 has increased by 4% to reach 5652 experts and the overall average number of remote referees per proposal has increased by 8% from previous year.

[46] As reflected in the ERC Work programme 2015.
[47] As reflected in the ERC Work programme 2016.
[48] Not an indicator in the ERCEA AWP 2014.

ERCEA AWP 2015	2015 Target	31/12/2015
% execution of L1 commitment	100%	100%

Control effectiveness as regards legality and regularity

ERCEA AWP 2015		
Ineligible proposals (not withdrawn)	**2015 Target**	**31.12.2015**
AdG and CoG 2014 StG, CoG, AdG 2015 PoC 2015	1.5% 1,5% 4%	AdG2014 : 0,9% CoG2014 : 1,4% StG2015 : 1,1% CoG2015 : 1,1% AdG2015 : 0,8% PoC2015: 3,2%
Redress procedure		
% of re-evaluations out of the overall proposals submitted and following requests for redress	All calls (2014 + 2015):0,5%	0,02%
Ethics review		
% of proposals not granted compliance with ethical rules / proposals invited to the granting process	0%	0%

Control efficiency and cost-effectiveness

ERCEA AWP 2015	2015 Target	31.12.2015
Average time to inform all applicants[49]	AdG and CoG 2014 : 160 days StG, CoG, AdG 2015: 160 days PoC 2015: 100 days	AdG2014 : 139 CoG2014 : 161 StG2015 : 142 CoG2015 : 164 PoC2015: 106
Average time to inform successful applicants	AdG and CoG 2014: N/A StG, CoG, AdG 2015: 270 days PoC 2015[50]: 100 days	AdG2014 : 203 CoG2014 : 244 StG2015 : 248 CoG2015 : 275 PoC2015: 106[51]

[49] Calculated as the weighted average of step 1 and step2.
[50] The PoC call evaluation process entails only one step.
[51] Result covering the 3 deadlines.

ERCEA AWP 2015	2015 Target	31.12.2015
Time to appoint experts	30 days	5 days
Time to pay experts	100% within 30 days	84% (average 21 days)
Time to ethics clearance	45 days	27 days

Due to an unusual busy 2015 calendar in order to be able to catch up from late H2020 programme adoption in 2014 and to come back to a more normal calendar in the next years where all calls will be aligned with annual budget expenditure, the step 2 of CoG2015 was split up in 2 phases (PE,LS then SH) delaying SH step 2 and thus delaying the final communication of results to applicants (by 4 days above 160 target for all applicants and by 5 days above 270 target for successful applicants). Furthermore, the TTI deviation of 6 days regarding the PoC 2015 is explained by delays in approving the ERC template to inform applicants used in the common IT tool Sygma.

For both programmes, the average time to pay for experts is 21 days, which coincides with the average payment time for H2020. For the FP7 programme only 3 payments have been made during the year.

Research Family harmonised KPI	31/12/2015
Average evaluation cost per proposal (external experts paid/ total number of proposals evaluated)	€ 1140[52]

In addition, the external experts cost and the ERCEA staff costs related to the call coordination, evaluation and selection of proposals is estimated about 1 % of the total H2020 committed credits, which have been fully executed, resulting in an estimated total costs per proposal of about € 3000. (2014: € 3800) [53].

In terms of costs/benefits analysis of certain controls, it has to be kept in mind that while most costs of controls are quantifiable in monetary terms, most of their undeniable benefits are not. The controls related to the scientific evaluation ensure that the most meriting projects are funded, following the sole criterion of "excellence" and allowing ERCEA to fulfil its mission statement and operational objectives.

Stage 2: Grant preparation and signature

Stage two encompasses the preparation of grant agreements up to the time of signature of those agreements and the main control objective is to translate selected proposals into legally binding grant agreements. 2015 activities concerned exclusively the "Excellent science" Programme (Horizon 2020). In addition to the Internal Control and Management Control Systems in place for the entire Horizon 2020 Programme, further controls are implemented by the ERCEA taking into account the specificity of the "Excellent science"

[52] The 2015 cost per proposal is based only on experts expenses of 2015 Calls paid in 2015 (€8.5m), using the same method of calculation as in 2014. The remaining balance of 2015 experts costs relate to experts costs for 2014 Calls paid in 2015 (€4.4m) and to other experts costs not related to evaluation of proposals (€2m, e.g. CSAs, SAP,etc).

[53] The cost per proposal is decreasing in 2015 compared to 2014, further to the increased number of proposals evaluated in 2015.

Programme, namely the duality of the actors, the Host Institutions (HI) as the legal beneficiaries of the grants and the Principal Investigators (PI), conducting the scientific research. These ERCEA's specificities are addressed in detail in the related internal ERCEA procedures.

Control effectiveness as regards ERCEA objectives' achievement

ERCEA AWP 2015	2015 Target	31.12.2015	31.12.2014
% execution of L2/L1 commitment (C8)[54]	100%	99.92%	99,7%

Throughout the year, 1156 Grant Agreements (totalling € 1, 8 billion) were signed, representing a more than two-fold increase in the Agency's granting activity as compared to the previous year (566 grants signed in 2014 totalling around € 1 billon). Yet, the related carry forward credits linked to global commitments reached 99,92% by means of individual commitments.

Control effectiveness as regards legality and regularity

ERCEA specific control indicators	31.12.2015
% of exclusion from granting process following financial viability checks	-
% of weak financial viability checks / total financial viability checks	31%

In 2015, 13 Financial Viability Checks were performed. 9 were related to H2020 granting, of which 2 were weak. Only one case led to an exclusion but the PI subsequently proposed a change of Host Institution and the grant agreement could eventually be properly concluded. 4 checks were related to new beneficiaries introduced in FP7 grants in the framework of amendments to on-going grants, of which 2 reveal weak but none of the cases led to and exclusion.

Control efficiency and cost-effectiveness

The efficiency and cost-effectiveness of transactions related to the grant preparation and signature process is underpinned by the following 2015 results of related key controls[55]:

[54] The indicator for the percentage execution L2/L1 is dependent on the timing of the evaluation process.

[55] The cost and benefits of the controls related to grant preparation & signature phase is shown under the grant implementation phase (stage3).

ERCEA AWP 2015	2015 Target	31.12.2015
Time to grant measured (average values) from call deadline to signature of grants[56]	StG 2014, CoG 2014, AdG 2014: 390 days PoC 2014-2, 2015: 220 days	StG 2014: 395 CoG 2014: 400 AdG 2014: 313 StG 2015: 315 PoC 2014-1: 272 PoC 2014-2: 218 PoC 2015-1: 231 PoC 2015-2: 179
Time to sign measured (average values) from date of informing successful applicants to signature of grants	StG, CoG, AdG, PoC 2014: 120 days	StG 2014: 136 CoG 2014: 127 AdG 2014: 102 StG 2015: 35 PoC 2014-1: 122 PoC 2014-2: 83 PoC 2015-1: 115 PoC 2015-2: 59

Research Family harmonised KPIs	31.12.2015
Average "time to grant" (H2020 Rules of participation[57] <245 /ERCEA AWP 2015: 390 for main calls)	357.7[58]

ERC grant agreement entails features that may impact the Time To Sign (TTS), such as the need for a supplementary agreement, the possibility for the Principal Investigator to change Host Institution at any time during the granting process, and/or the grant agreement's start date, as well as the ethical clearance process. Also, it should be noted that grants related to H2020 calls benefit from the derogation for ERC actions of article 20.3 of the related Rules of Participation[49] which states that the 90 days target for the time to grant *"… may be exceeded for actions of the European Research Council (…)"*. Notwithstanding, the TTS target as reached for 3 out of the 6 calls for which granting was completed in 2015, it has notably been achieved for the Advanced Grant Call 2014 and the PoC 2-2014 and PoC-1-2015 calls.

For the remaining 3 calls the target was only slightly exceeded and this situation can be explained as follows:

The granting preparation of the 2014 Starting Grant Call started only in 2015 and was the first H2020 big call, with 378 grants invited, including 50 from the reserve list, to be processed by the Agency with the new corporate IT tools, exceeding the TTS target by 15

[56] The indicator for the TTG from call deadline to signature of grants is dependent on the timing of the evaluation process.

[57] Regulation N° 1290/2013 of the European Parliament and of the Council of 11 December 2013, OJ L 347/81 of 20.12.2014.

[58] This result reflect the 2015 time to grant from call deadline to signature of grant, covering grant signed from 2014 and 2015 calls.

days. As regards the CoG 2014 and PoC 2014-1, although the IT impact on TTS was less significant[59], the high dependence on the Common Support Centre at every step of the granting process (from invitation to signature) required time consuming iterations and was influenced by the response timeline from the IT helpdesk, the rise of their own volume of activities, and the knowledge gaps in relation to the H2020 IT processing. Also, as beneficiaries could not directly upload the signed Supplementary Agreement in the IT application, the TTS was adversely affected due to manual handling by the Agency. In addition, some beneficiaries required more time than others to review, adapt and/or accept the proposed model or proceed with additional legal consultation.

In addition, the procedure for the ethical clearance of the ERC grant agreements, which is implemented in parallel with the granting process, also adversely affected the TTS, as results thereof required to be manually recorded into the H2020 IT tools, resulting in a number of clerical errors and strongly affected the granting indicators, in particular in cases of ethical in-depth review. As an example, 4 months after the launching of the invitation letters, around 12% of the StG 2014 still required ethics clearance).

Furthermore, the high number of changes of Host Institution during the granting phase (around 10-12% of the projects) represented an additional administrative burden and additional delays, as the internal ERCEA decision on the acceptance of the change of HI is not supported by the IT system.

Despite all these challenges, the granting process was completed for all calls with a TTS very close to the target.

The ERCEA costs of the grant preparation and signature is estimated to 0.2% of total individual commitments. The resulting 2015 average cost per grant signed is around €3316 (2014: €3000[60]).

Benefits of controls embedded in the specific ERCEA grant preparation and signature process are not quantifiable, however, it is undeniable that these controls are necessary to ensure that the process complies with rules and regulations and that researchers are provided on time with a sound legal framework to conduct their research projects.

Stage 3: Grant implementation

Control effectiveness as regards ERCEA objectives' achievement

Grant & experts payments

ERCEA AWP 2015	2015 Target	31.12.2015	31.12.2014
% execution of payment credits - grants	100%	100%	100%
% execution of payment credits - experts	100%	100%	100%

Achieving the ambitious KPIs set by the Agency in previous years for the grant

[59] For the 2014 CoG and PoC-1 calls, respectively 7 and 2 days.

[60] The cost per grant increase observed in 2015 compared to 2014 is explained by a rise in FTE allocated to granting as to address the significant increase over the period of grants to be signed (+104,2%).

implementation activity, as well as avoiding beneficiaries' dissatisfaction and paying interest due to late payments, entailed a number of challenges for 2015: the management of two framework programmes running in parallel, the processing of granting operations carried forward from 2014 as well as an increased number of payment activities, coupled with an unexpected staff turnover. These challenges were addressed among others by means of constant review of the workload and careful reattribution of the payments, intensive management supervision, strict monitoring and training to new staff members, aiming at reducing any anticipated negative effect to the timely execution of payment credits and an effective internal communication with staff on changing priorities.

At the same time, areas of improvement of the validated procedures and simplification measures were identified, such as further automation of the generation of the payment note and reminders, and in coherence with the evolutions in the parent DG harmonisation was achieved in the areas of recovery of EU funds and the implementation of audit results and extrapolation via the corresponding procedures.

Finally, a coherent and consistent interpretation of the rules and regulations across the department that was ensured by the Payments' Business Process working group which helped achieving impressive results and meeting all targets. Three non-compliance events were registered in 2015 and concerned final payments. They related to a Head of Sector signing in ABAC as AOSD instead of a Head of Unit. A fourth non-compliance event related to verification and authorisation visa given by the same agent by mistake. Finally the fifth non-compliance event concerned a pre-financing of a H2020 project by an officer who did not have yet the sub delegation signed by the Director of the Agency.

All 5 events were duly reported and registered, following the related internal procedure and the related transactions were double-checked *a posteriori* by the respective Head of Unit. It is important to note that none of the above-mentioned events has any impact on the assurance.

Control effectiveness as regards legality and regularity

ERCEA control indicators - 2015			
Rejection of interim and final payment costs	**Number of Invoices**	**Amount**	**% of ineligible costs on total declared costs[61]**
Total declared cost	2656	1.171.278.142,61	
Of which Ineligible costs declared[62]	351	3,631,983.05	0,31%

From the above table it can be noticed that in 2015 there was an amount of € 1,2 billion of declared costs over 2656 completed invoices out of which € 3,6 million were identified as ineligible costs, including € 3,2 million detected by ex-ante controls.

The number of Certificates on Financial Statements (CFS) submitted in 2015 amounted

[61] Covering ex-ante rejections by Financial Officers and independent certified auditors (CFS).
[62] Ineligible costs as identified in the recovery context of the respective cost claim (e.g. independent controls, community controls/desk checks and on the spot).

to 752 out of 2,477 payments[63] (interim and final payments) validated, representing €416, 9 million of costs claimed. Only 23 Certificates identified ineligible costs of € 0,4 million, representing 0,09% of costs claimed for projects for which a CFS was submitted.

During 2015 the methodology of liquidated damages was changed in order to align with RTD practice, so that liquidated damages are applied when the project audited is closed. This practice has a dissuasive effect on the beneficiaries and contributes to more care being put into the preparation of Financial Statements. In 2015, for 7 projects liquidated damages amounting to € 54.110,13 have been imposed, out of which 5 have been cashed for an amount of € 28.176,95.

In addition, 2 Pre-financing payments, showing a low EWS warning level, were executed. By the end of 2015, the early warning notice on the legal entities was cleared.

Research Family harmonised KPIs	**31.12.2015**	**31.12.2014**
% and value of errors detected through the ex-ante desk checks[64] / total value of cost claims	0,27% € *3.188.505,61*	0,12% € 969.190,07

Finally, a total of about 1150 scientific monitoring reports (mid-term and final) were processed in 2015 for StG, AdG and PoC Calls. Due to an unusual busy 2015 calendar in order to be able to catch up from late H2020 programme adoption in 2014 and to come back to a more normal calendar in the next years, the percentage of final reports which exceeded 60 days was kept at 3% for StG and AdG and went up to 13% for PoC. The overall average number of days used to assess a scientific report went up to 42 in comparison to 25 in 2014. The number of project visited due to problematic cases was two, for scientific communication purposes eight projects were visited (5 StG, 2 AdG and 1 PoC), and 15 projects were visited in the framework of the assessment of the Synergy Calls. The percentage of projects assessed as unsatisfactory or acceptable but requiring a 9 month follow-up was 8% for StG and 4% for AdG.

Control efficiency and cost-effectiveness

Time to pay related to grants & experts

FP7 Type of Payments	**Average Net Time to Pay[65]** (in days)		**Paid on Time - Contractually**	
	2015 -YTD	**2014**	**2015-YTD**	**2014**
Pre-financing (PF)	**25**	11,3	66,7%	92,3%
Interim (IP)	**26,6**	20,1	99,9%	99,8%
Final payments (FP)	**47,1**	37,4	97,9%	99,2%

[63] Please note the number of CFS is out of payments and not invoices while the table above provides ineligible costs based on validated invoices in 2015.
[64] Resulting from ex-ante checks performed by Financial Officers (in-house) only.
[65] Time needed by ERC EA to execute a payment (excluding suspension days).

FP7 Type of Payments	Average Net Time to Pay[65] (in days)		Paid on Time - Contractually	
	2015 -YTD	2014	2015- YTD	2014
Experts	**44**	24,6	33,3%	81,0%
TOTAL	**30,5**	**20,6**	**99,35%**	**96,8%**

The FP7 experts time to pay increased in 2015 compared to 2014 due to 2 late payments being executed in January 2015, as these payments were transferred to 2015 following the exceptional lack of payments credits in 2014.

H2020 Type of Payments	Average Net Time to Pay[66] (in days)		Paid on Time - Contractually	
	2015 -YTD	2014	2015- YTD	2014
Pre-financing (PF)	**6,8**	8	99,7%	100%
Interim (IP)	**-**	-	-	-
Final payments (FP)	**-**	-	-	-
Experts	**21**	17,5	83,8%	87,1%
TOTAL	**19,1**	**17,4**	**85,92%**	**87,2%**

The 2015 increase of the H2020 time to pay experts is linked to the significant rise in payment volume compared to 2014 (respectively 6647 and 3477 transactions), the latter resulting from the exceptionally busy 2015 call calendar, combined to the colliding evaluation calendar at year-end 2014, with the panels being held until mid-December 2014, thus postponing related experts payments to the first quarter 2015. Noteworthy is the positive trend of the time, to pay throughout 2015, from an average of 38,7 days (1563 transactions) at the end of the first quarter 2015 to 17,9 days on average (2461 transactions) at the end of the fourth quarter 2015.

Research Family harmonised KPIs	**31.12.2015**	**31.12.2014**
Average time to pay (% on time) (FR 92.1)[67]	21,9 days (89,20% on time [<30/90])	18,8 days (91,4% on time [<30/90])

[66] Time needed by ERC EA to execute a payment (excluding suspension days).
[67] Average time to pay for pre-financings, interim and final payments.

Cost of controls

Commission indicator	31.12.2015
Cost of control from contracting and monitoring the execution up to payment included/ amount paid (%)	1,57%

Research Family harmonised KPIs	31/12/2015	31/12/2014
Average project mngt cost per running* project (staff FTE * standard staff cost)[68] *(*ALL projects - *Range of € 5.000 – 10.000)*	€ 1865	€ 1858
Average number *(Range of 15 – 35)* **& value of running projects managed 'per' staff FTE** *(Range of € 1 Mio – 50 Mio)*	48 € 83 Mio	45 € 784 Mio

The costs associated with the control system are quantifiable through the "Average project management cost per running project". In addition the cost of monitoring the implementation of the grants up to the payments compared to the total amount paid results in 1.2%, or in an estimated total cost per project of about €2.900 in 2015 (2014: € 3.100[69]).

The different indicators presented above provide a robust indication on the cost-effectiveness of the control system put in place at the grant implementation stage to ensure a sound financial management of the grant implementation throughout the life-time of the projects, as well as the monitoring of their scientific progress.

Also, benefits can be measured by the low error rate resulting from ex-ante controls (0,27%), even if these are affected by the deliberate limitation of the depth of the ex-ante controls as part of the overall control framework, as established by FP7.
Finally, the established control framework strikes the right balance between the efforts to simplify and minimise the administrative burden on beneficiaries and the necessity to provide assurance as regards the sound financial management of the operational budget and the timely provision of financial means to beneficiaries allowing them to conduct their research in line with the grant agreements' provisions.

Stage 4: Ex-post controls

The fourth stage includes the ex-post audits and their implementation via recovery or offsetting of amounts found to have been paid in excess of the amount due. Related activities cover only the "Ideas" programme (FP7).

Particular focus is put on the fourth stage to obtain main part of the assurance from ex-post controls, with careful monitoring of their efficiency and cost effectiveness.

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[68] FTE's accounted for are the staff intervening in the grant execution and monitoring process taking into account their contribution to the process and their work pattern. Running projects are those related to commitments with completion flag set to "no" in ABAC.

[69] The decrease in the total cost per running project compared to 2014 can be explained by the increase of closed and running projects in 2015.

Control effectiveness as regards ERCEA objectives' achievement

Audit strategy

The main legality and regularity indicator resulting from the ex-post audits is the error rate. Because of its multi-annual nature, the effectiveness of the control strategy of the Research Family can be measured and assessed in the final stages of the Framework Programme, once it has been fully implemented and systematic errors have been detected and corrected. As a major development of the Common FP7 Audit Strategy, the Research family has introduced in 2012 the Common Representative Audit Sample (CRaS) and the related CRaS error rate, aiming at estimating the overall level of error on a multi-annual basis in FP7 across all the services.

The ERCEA manages the ex-post controls in line with the FP7 Common Audit Strategy and is part of the FP7 Common Representative audit Samples (CRaS 1 & 2). To conclude on the legality and regularity of transactions, ERCEA does not rely however on the common approach of the CRaS, since the risk profile of the IDEAS beneficiaries is inherently lower compared to the rest of the FP7.

The different risk profile is due to the specificities in the IDEAS programme, such as ERC grants being mono-beneficiary, beneficiaries being mostly large research institutes with well-established internal controls on financial reporting (*e.g.* no SMEs, few newcomers to the programme, mostly public bodies), simplifications inherent in the programme design (*e.g*. flat-rate overheads).

Thus, while contributing to the Research Family common audit strategy, the ERCEA has adopted an alternative assessment pattern fully aligned to annex 4 and implemented its own multi-annual ex-post controls indicators, since it has considerable additional evidence to allow for an assessment of the error rate of its own expenditure, to provide assurance to the Authorizing Officer by Delegation on the ERC specific population. Different error rates are calculated according to the methodology described in annex 4, namely the MUS Statistical Error rate (detected error rate), the MUS Residual Error rate, the Risk based error Rate and the Global Activity Error Rate[70], and the results are corroborated to provide a comprehensive view of the legality and regularity of underlying transactions.

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[70] **-MUS Statistical Error Rate**: the multi-annual error rate derived from the results of audits performed on a representative sample of IDEAS beneficiaries, to be defined as "representative" error rate upon finalization of the sample and to be extrapolated to the overall population. Until completion, this indicator is defined as "detected" statistical error rate. The MUS rate has a multi-annual nature and is calculated for the IDEAS programme since before the introduction of the CRaS. Although the degree of completion does not ensure yet statistical precision, the rate gives a strong indication of the most likely error in the population and, as such, represents an important element in the assurance building.
- Residual MUS Error Rate: on a multi-annual basis, the extrapolated level of error remaining after corrections/recoveries undertaken by ERCEA following the audits that have been made on the MUS sample (calculation of the residual error rate shown in Annex 4).
Upon completion, this is the reference indicator for the purposes of assessing the legality and regularity of transactions, as well as the progress made through the ERCEA ex-post strategy in dealing with errors over a multiannual basis.
The detected rates derived from the statistical sample are complemented by the risk based error rate, resulting from audits conducted for corrective and budget cleaning effects.
- Risk based error rate – the level of error derived from audits performed for corrective purposes. It mainly results from the audits conducted at the beneficiaries identified as a result of the risk analysis, from audits on request, audits on Top 100 beneficiaries, technical audits.
- Global Activity Error Rate: the error rate derived from the results of all audits (excluding the ones performed on the CRaS), whether audits on the statistical sample of beneficiaries or audits implemented for other reasons (risk based etc.).

Finally, it should be underlined that the Agency has disclosed in its 2013 AAR - in agreement with the parent DG - the above described alternative assessment pattern, which supports its Declaration of Assurance based on its the specific error rate deriving from the ERCEA statistical sample (MUS250) drawn before the introduction of the CRaS. Furthermore, this practice has been enshrined in the 2015 revision of "ERCEA FP7 Ex-post control approach and audit strategy for the remaining period 2015-2018" [71], following the implementation in 2015 of an IAS recommendation resulting from the audit on ERCEA FP7 internal control systems and ex-post controls.

Implementation of the Ex-post control audit strategies and plans / audit coverage

Audit Plan

In the AWP 2015 the ERCEA audit has planned – also according to the Annex 1 of the Common audit Strategy of the Research Family – to launch 60 audits, to close 60 audits and to ensure an audit coverage of 7,5% - 8,5%.

During the year the internal annual audit plan targets have been increased and monitored regularly, in order to ensure the gradual recovery of the gap recorded between the multiannual/cumulative FP7 audit targets and the cumulative results to date. Thus, ERCEA audit plan has been increased to 84 audits in 2015 and fully implemented[72].

A number of 54 audits (275 cost statements) remained open at year end 2015, out of which 12 are on-going for which most findings have been identified (8 launched in 2015 and 4 launched before 2015[73]) and 42 audits have been launched at the end 2015 on the account of the 2016 audit exercise. The audit coverage of 8,14% has met the planned expectations (7,5% - 8,5%).

During 2015, ERCEA continued to narrow the distance between the number of audits completed to date and the multiannual audit targets initially set in the common audit strategy. The gap resulted from the initial period, when the audit activity was limited by the number of requested EC contribution and related payments. At the end of 2015, the deviation from the cumulative/multiannual targets was reduced to 6% (from 15% in 2014), and is expected to meet the multiannual targets by the end of 2016[74].

Audit Activity and Sampling

The ERCEA performs audits for the following samples[75]:

1. The statistical MUS sample, comprising:

- The MUS1 (ex MUS250) sample, consisting of 160 items selected on the basis of a statistical method from the first € 250 million submitted and accepted cost statements. A number of 129 financial statements have been audited so far, representing 81% of the first statistical sample. It is planned to be audited until full completion by end 2016.

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[71] Ares(2015)5997974 - 22/12/2015.
[72] Detailed data on the ERCEA completion of the annual and cumulative plans is shown in annex 7 (indicating both numbers of audits and of financial statements audited).
[73] Out of which only one, to date in the closure phase, pertains to 2013.
[74] Detailed data is provided in annex 10.
[75] A table is provided in annex 10 giving an overview of the audit activity performed by the ERCEA throughout 2015, detailed by type of audits.

- The MUS2 sample, in continuation of the MUS1, consisting of 150 items selected on the same method on a rolling base from the Euro 250 mil.–4 billion submitted and accepted cost statements. A number of 36[76] financial statements have been audited by the end of 2015, representing 24 % of the second statistical sample.

The final MUS2 results, respectively the combined MUS1&MUS2 results are expected by end 2018. Currently the detected error rate is based on the MUS1 results, given the high degree of completion allowing for more reliable conclusions.

2. The risk sample, resulting from a risk analysis considering beneficiaries with a higher risk profile.

In addition to the risk sample, the overall risk based audit category includes the Top 100 beneficiaries, technical audits and other audits on requests. A number of 695 financial statements[77] have been audited to date under the risk based strand, representing 78% of the total audits performed.

Other audits like CRaS related engagements or audits jointly performed with the Court of Auditors have had a limited share in the 2015 audit activity.

Control effectiveness as regards legality and regularity

ERCEA ex-post control error rates and implementation of audit results

To conclude on the legality and regularity of transactions, ERCEA does not rely on the results of the CRaS common approach, since its risk and program profiles are different. It takes into account all the evidence available, especially the results of its own MUS sample and, more widely, the cumulative results of all audits carried out specifically on ERCEA expenditure.

Thus, ERCEA has implemented its own multi-annual ex-post controls indicators to provide assurance to the Authorizing Officer by Delegation on the ERC specific population, using an ERCEA specific MUS sample. The completion of this specific ERCEA MUS1 sample, although not yet statistically representative, is becoming more and more indicative and useful to draw preliminary conclusions, given that 129 out of 160 items (81%) of ERCEA population are closed as of 31/12/2015. The so far detected error rate is of 1,50% (or around 1,55% if including the findings or estimations of the engagements still to be closed) and the related residual error rate of 1,31% (1,35% including estimated findings), below the materiality threshold.

Since the start of its ex-post control activity in 2010, the ERCEA specific error rate is constantly lower than the FP7 Common Representative Error Rate, confirming the lower inherent risk profile of ERC grants and the higher concentration of the beneficiaries, as compared to the rest of the FP7.

The ERCEA therefore considers that, taking into consideration all the information available, it has sufficient evidence to expect the multiannual residual error rate based on the MUS sample to stay below the materiality threshold by the end of the FP7 programme.

The risk based non-residual error rate and the overall non-residual error rate (including MUS plus risk based audits) maintain levels between 2%-3% (slightly or moderately

[76] 20 cost statements audited in 2015 and 16 items already audited in the past, before being identified as part of the sample.

[77] In total 730 FS were audited under this sample, including 35 FS jointly audited with the Court of Auditors.

above 3% when including estimated findings) and confirm the robustness of the risk analysis applied for this strand of audits. In addition, a couple of technical audits and audits on request have been performed with impact on the overall results.

The most common errors in ERCEA are usually found in personnel costs, namely incorrect methodology used to calculate the hourly rate, incorrect productive hours or incorrect reported hours devoted to ERC projects. Other common errors include lack of supporting documents (as invoices, timesheets), costs claimed outside of the eligibility period, VAT included, incorrect depreciation, costs not relevant to the project and non-compliance with EU public procurement principles.

Indicators related to ERCEA specific ex-post control strategy (excluding the CrAS)				
Financial Statements audited	**2015**		**2009-2015**	
	Amount in €	**Num-ber**	**Amount in €**	**Num-ber**
Total cost accepted by Financial officers (€) on audited FS – Audited amount (excluding CraS)	**€ 117.661.386,88**	**299**	**€ 313.269.992,06**	**880**
Thereof audited as part of the MUS 1 (ex-MUS250)	**€ 9.145.079,51**	**24**	**€ 49.123.601,87**	**129**
Thereof audited as part of the MUS 2	**€ 7.219.705,81**	**20**	**€ 12.110.960,90**	**36**[78]
Thereof audited as part of the risk based sample (35 FS jointly audited with CoA included)	**€ 101.296.601,56**	**255**	**€ 257.019.980,20**	**730**
Total adjustments in favour of the ERCEA (€, only negative)	**€ 2.123.600,88**	**75**	**€ 4.582.027,08**	**249**
On the MUS sample	**€ 151.246,96**	**10**	**€ 861.747,09**	**45**
On the risk based sample	**€ 1.972.353,92**	**65**	**€ 3.720.279,99**	**204**
Detected error rate – from MUS1 - %	**0,19%**	**24**	**1,50%**	**129**
Residual Error rate – from MUS1 - %	**N/A**	**N/A**	**1,31%**	**N/A**
Other MUS related rates:				
Detected error rate – from MUS2 - %	**0,16%**	**20**	**0,52%**	**36**[78]
Detected error rate – stratified (MUS1 & MUS2) - %	**N/A**	**44**	**0,69%**	**165**
Residual Error rate – from MUS stratified- %	**N/A**	**N/A**	**0,62%**	**N/A**
Other ERCEA error rates:				
Risk based error rate (risk analysis, audits on request, Top100, other)- %	**4,38%**	**255**	**2,59%**[79]	**730**
Global activity error rate (all activity excluding CRaS) - %	**3,84%**	**299**	**2,35%**	**880**

[78] Including 15 financial statements already audited under the MUS1 (also called MUS250).

[79] Including 3 audits with high error rates; excluding the impact of these results from the calculation of the overall risk based error rate, the latter would decrease well below 2%.

Implementation of audit results in 2015

The table below shows the cumulatively activities on the implementation of external audits from the moment the final audit report has been sent to the beneficiary and the amount to be recovered/paid has been established (by project).

EX-POST AUDIT IMPLEMENTATION												
Type of Call	Results from external audits							Adjustments pending neg implementation		Adjustments implemented (neg implemented)		% cases neg implemented / total
	Total number of findings $R=A^1+A^3$	Findings with negative adjustments		Findings with positive adjustments		Number of findings with zero adjustments - Implemented	Number of findings with zero adjustments - not implemented	Number (S)	Value (B)	Number (T)	Value (C)	T/A^1
		No (A^1=S+T)	Amount (A^2=B+C)	No A^3	Amount							
AdG	148	99	-2,400,050.85	49	981,269.36	134	1	21	-863,769.28	78	-1,536,281.57	78.8%
StG	151	85	-1,897,764.86	66	1,206,686.81	156	2	12	-827,031.79	73	-1,070,733.07	85.9%
CSA	1	1	-3,248.00	0	0.00	2	0	0	0.00	1	-3,248.00	100.0%
TOTAL	**300**	**185**	**-4,301,063.71**	**115**	**2,187,956.17**	**292**	**3**	**33**	**-1,690,801.07**	**152**	**-2,610,262.64**	**82.2%**

As per the approved implementation procedure, the period to implement the negative adjustments in favor of the ERCEA cannot be longer than 3 months from the issuance date of the letter of conclusion. For 28 pending cases with a negative adjustment out of the total reported (33) the issue date of the letter of conclusion is on average not older than 3 months. Thus, in accordance with the standard business practice, the pending cases will be implemented in the first months of 2016.

Implementation of extrapolations in 2015

In case of encountering systematic errors during an external audit, the results may be extrapolated to other projects run by the same beneficiary. One extrapolation case may include several projects. The table below shows the extrapolation recommendations by project (cumulatively).

IMPLEMENTATION OF EXTRAPOLATION									
Type of Call	Results from extrapolations		Implemented cases				Number of cases to be implemented (neg adjustments) (E)	Number of cases to be implemented (pos adjustments) (F)	% cases neg implemented / total
	Total number of contracts with systematic errors A=C+D+E+F	Number of contracts without systematic errors (B)	In favour of the ERCEA		In favour of the BEnEFICIARY				
			No (C)	Amount	No (D)	Amount			C/C+E
AdG	16	24	16	-208,195.32	0	0.00	0	0	100%
StG	14	46	10	-117,648.30	3	9,424.98	0	1	100%
PoC	0	1	0	0.00	0	0.00	0	0	0.0%
CSA	0	1	0	0.00	0	0.00	0	0	0.0%
TOTAL	**30**	**72**	**26**	**-325,843.62**	**3**	**9,424.98**	**0**	**1**	**100%**

Control efficiency and cost-effectiveness

- **Average time to audit closure**

In 2015 the ERCEA has computed and monitored the time to audit per different categories – internal and external resources - and has focused on closing the highest possible number of audits launched in 2015 and before. After closing the backlog audits, the time to audit for the engagements launched and closed in 2015 proved to maintain within the benchmarked limits (7-9 months). The time to audit of the engagements performed by external resources has recorded some delays, yet by the end of the year the related audit targets commonly agreed have been met.

	Number of audits 2015	Time to audit (number of days)
Audits performed by Internal resources (launched & closed in 2015)	7	197
Audits performed by Internal resources (backlog = launched before 2015)	25	761
Audits performed by external resources	52	347
Total:	**84**	**N/A**

- **Cost of ex-post control auditing**

The figures in the table below indicate a trend of improved use of both categories of resources – internal and external - and a decrease of the total average as a consequence, while the annual FTE was maintained at the same level or slightly lower. The audit coverage both in terms of number of beneficiaries and value coverage have improved.

ERCEA indicators	**31.12.2015**	**31.12.2014**
Internal resources (FTE)	8,0 FTE	8,5 FTE
Cost of internal resources (€)	€ 947.191,97 for 32 audits	€ 930.833,33 for 26 audits
Average cost per closed audit/own resources	€ 29.599,75[80]	€ 35.801,28
Cost of externalised auditing (€)	€ 505.427,50 for 52 audits	€ 413.651,12 for 34 audits
Average cost per closed audit/externalised	€ 9.719,76[77]	€ 12.166,20
Research Family harmonised indicators	**31.12.2015**	**31.12.2014**
Number of audits performed[81] (+ % of beneficiaries & value coverage[82] – cumulative figures)	84 So far 35,33 % of our beneficiaries have been audited at least once for a value coverage of 8,14 %	60 So far 32.28 % of our beneficiaries have been audited at least once for a value coverage of 7,82 %[83].
Total & Average ex-post audit cost in-house (FTE * standard staff cost) and/or outsourced (audit fees paid)	€ 1.452.619,47 – total € 17.293,09 – average	€ 1.344.484,45 – total € 22.408,07 – average

[80] The difference in costs between in house and outsourced audits is mainly due to the complexity of those performed by ERCEA staff.

[81] This number refers to the total number of audits closed in 2014 by the ERCEA Ex-Post Controls Unit, steaming from the corrective strand (ERCEA "CRaS1" audits were closed at the end of 2012).

[82] Only on the basis of the financial statements submitted by the Host Institutions and accepted by ERCEA.

[83] Closed audited claimed amount out of the total submitted amount (€ 203.140.159,02/€ 2.596.698.925,78).

Non-quantifiable benefits

In addition, the non-quantifiable benefits of auditing should be also considered. Ex-post controls bear an inherent deterrent effect, as beneficiaries will take extra care over the preparation of their cost claims knowing that on the spot audits may follow.

Furthermore, results of ex-post control provide a valuable feedback regarding the effectiveness of ex-ante controls. Ex-post control audits also result in reducing the exposure to future errors, thanks to guidance provided to audited beneficiaries.

In view of training ERC beneficiaries in procedures, a total of 27 Grant Management workshops have taken place between 2009 and 2015 (2 events in 2015). The objectives of these Host Institution events have been to provide grant management guidance, improve beneficiary awareness of the ERC programmes, provide best practices in the area of grant management, highlight the H2020 novelties and provide an interactive forum for questions and answers. The events have covered so far 54% of total ERC Host Institutions (representing 88% of the ERC budget), of which 93% of the Top100 Beneficiaries (representing more than 68% of the ERC budget). In total, more than 410 Host Institutions have participated to date.

The feedback received from the participants was very positive and showed high interest. The events are perceived as complete and exhaustive overviews of all the different phases of the administration of projects, excellent workshops in clearing misunderstandings, highlighting financial areas exposed to common errors and providing relevant case studies and best practice examples.

2.1.2 Implementation of the internal control system for the administrative budget

Control effectiveness as regards ERCEA objectives' achievement

ERCEA AWP 2015 indicator	2015 target	31.12.2015	31.12.2014
% budget execution commitments	100%	99,3%	99,3%
% budget execution payments (C1)	92%[84]	93%	93,5%

The commitment rate of 99.3% (€39,341,568) has remained unchanged compared to 2014. The 2015 payment rate of 93.0% (€36.863.255) shows a slight decrease compared to 2014 (93.5%). For non-dissociated appropriations, the payment rate can only be evaluated at end of year N+1, together with C8 appropriation execution. Thus, the final 2014 payment rate reached 99,0% at end of 2015 compared to a commitment rate of 99,3%, almost reaching the yearly target.

[84] This target does not include payments on C8 appropriation in year N+1. The fact that payments on C1 appropriations do not reach 100% at the end of year N does not mean that the objective is not reached.

Control effectiveness as regards legality and regularity

ERCEA AWP 2015 indicator	2015 target	31.12.2015	31.12.2014
Number of accounting adjustments (exceptions)	<5 adjustments	2[85]	1

All transactions on the administrative budget are subject to an ex-ante financial verification. All errors detected by this ex-ante check have been corrected. In 2015, 0,18% of the amounts paid, below the 2% materiality threshold have been subject to a correction related to the legality and the regularity of the underlying transactions, namely errors on the legal entity, bank account, calculation or incorrect budget line.

The ERCEA issued recovery orders in 2015 on the administrative budget for a total amount of €39,670,055.13[86]. However, only €57,452 concerned errors for unduly paid amounts[87], resulting in an ex-post error rate of 0,1%.

In addition, the ex-post error rate related to salaries, which represented 72,5% of the payments, amounted to 0,59%.

Control efficiency and cost-effectiveness

ERCEA AWP 2015 indicator	2015 target	31.12.2015	31.12.2014
Number (and % of total) of late payments for the administrative budget	<20 (<1%)	15 (0,8%)%	36 1,8%
Average time to pay (days)	15 days[88]	10,6%	12,4

2.011 payments were made on the administrative budget in 2015 (compared to 2.039 in 2014), out of which 15 were paid late (36 in 2014), representing 0.8% of 2015 payments processed (1,8% in 2014 and 0,9% in 2013).

Overall conclusion on the cost-effectiveness of controls

Research Family harmonised indicators (all stages combined)	31.12.2015	31.12.2014
Total cost of fin. management & control[89] / total value of operational payments made (target:<3%)	2,9%	3,4%

[85] Ares(2014)4221892 and Ares(2015)5921935.
[86] Out of which 99.8% concerns the subsidy from RTD.
[87] Concerning mainly the regularisation for the ERCEA "Crèche petite enfance" contribution paid to OIB.
[88] Internal benchmark, not an AWP target.
[89] For a nearly 'pure' grant management DG/EA, this is approximated by comparing the administrative/operating budget to the total operational budget.

2.2 Audit opinion, observations and recommendations

This section reports and assesses the observations and conclusions reported by auditors in their reports as well as the opinion of the Internal Auditor on the state of control, which could have a material impact on the achievement of the internal control objectives, and therefore on assurance, together with any management measures taken in response to the audit recommendations.

Overall, 2015 audit results positively support the Declaration of Assurance, as none of the recommendations issued in 2015 was rated very important or critical and all action plans stemming from previous year's audit were fully implemented.

The Internal Audit Service issued 2 final reports, related to audits performed in 2015, the first on the "Participants Guarantee Fund for FP7"[90] and the second on "H2020 Grant Management in ERCEA: from the evaluation of proposals to the signature of the Grant Agreements"[91].

While no issue addressed to the ERCEA was reported in the final report regarding the Participants Guarantee Fund, 6 recommendations were identified on the audit on H2020 Grant Management, all rated as important. These relate to improvements regarding the implementation of changes to the proposal during the grant agreement preparation, the grant agreement preparation phase, the ethics review process, the Principal Investigator's Time commitment in Member State or Associated Countries, the IT support for ERC calls and the provision of briefing and guidance to independent experts. The resulting proposed action plan has been agreed by the IAS[92].

As to recommendations resulting from audits performed in previous year performed by the former ERCEA Internal Audit Office, significant progress has been achieved with 100% implementation at year end 2015, as confirmed by the related IAS follow-up audit[93]. These recommendations concerned 3 audits, namely on Indicators[94], Support to the Scientific Council[95] and the audit on FP7 payments[96].

In addition, 2 very important and one important recommendations related to the 2014 IAS final report on the "Implementation of FP7 control systems the ERCEA" were fully implemented. Indeed, in line with the agreed action FP7 plan, the ERCEA adopted its "FP7 Ex-post control approach and audit strategy for the remaining period 2015-2018"[97], enshrining the definition and the use of an alternative assessment pattern for the purpose of supporting the yearly declaration of assurance. It also strengthened its ex-post audit methodology in particular as regards fraud related risks[98] and significant results in reducing the number of ex post control audits launched in previous years[99]. The related IAS follow up audit will be performed in the course of 2016.

The above assessment has been reflected in the IAS annual opinion related to the

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[90] Ares(2015)5957238 – 18/12/2015. The audit was performed across two other services (RTD & ECFIN).
[91] Ares(2016)434629 - 27/01/2016.
[92] Ares(2016)844506 – 01/03/2016.
[93] Ares(2015)5955847 – 18/12/2015.
[94] Ares(2014)3607832-30/10/2014) ; eight recommendations, rated "important" except one rated "very important".
[95] Ares (2015)801424-25/02/2015 ; four "important" recommendations.
[96] Ares(2013)3761825-18/12/2013; one "important" recommendation.
[97] Ares(2015)5997974 – 22/12/2015, including also a multiannual rolling plan, relevant KPIs regularly monitored and an-analysis of the audit capacity.
[98] Ares(2015)5973014 – 21/12/2015.
[99] As reported above under section 2.1, stage 4 (page 38).

internal control systems [100] audited in the period 2013 – 2015.

Further to its audit on the ERCEA annual accounts for the financial year 2014, the Court of Auditors recommended the procedure regarding the tangible and intangible assets to be further strengthened in order to ensure their proper safeguarding and reporting of accurate and complete information in this area. The related procedure has been adopted early February 2016 by the Agency.

Based on the above, management believes that the recommendations issued in 2015 do not raise any assurance implications. Furthermore, these are being implemented as part of the Agency's continuous commitment in further improving its internal control systems.

2.3 Assessment of the effectiveness of the internal control systems

The Commission has adopted a set of internal control standards, based on international good practice, aimed to ensure the achievement of policy and operational objectives. In addition, as regards financial management, compliance with these standards is a compulsory requirement.

ERCEA has put in place the organisational structure and the internal control systems suited to the achievement of the operational and control objectives, in accordance with the standards and having due regard to the risks associated with the environment in which it operates.

The 2015 ERCEA annual review of the effective implementation of the Internal Control Standards' (ICS15) was based on a management self-assessment using DG BUDG internal control assessment tool (iCAT), tailored to the specific needs and control arrangements in place in ERCEA.

The iCAT outcome[101] confirms the high effectiveness of ERCEA's internal control systems – overall 90,32%, showing no substantial fluctuations across the results of different ICSs as even the lowest score of 84,44% (ICS 3. Staff Allocation and Mobility) is in the high effectiveness area. Also, the effectiveness of this standard increased in 2015 compared to 2014 (80,7%), thanks to the measures taken during the year to encourage internal mobility[102]. Efforts will continue in 2016 to promote the inter-agency and internal mobility in line with the Staff survey follow-up plan which was adopted during the last 2015 quarter. In addition, the effectiveness level of ICS 5 (Objectives and performance Indicators), 88,89%, and ICS 10 (Business Continuity), 85,67%, has been influenced by the managers' assessment of some H2020 IT tools managed by the Common Support Centre which do not support certain particular requirements of ERCEA operations, thus affecting the results of some indicators.

The functioning of the internal control systems has also been closely monitored throughout the year by the monthly internal scorecard, the bi-annual risk management update, the monitoring of the timely implementation of audit recommendations and by the systematic registration of exceptions and non-compliance events and internal control weaknesses. The underlying causes behind these non-compliance events and requests for exceptions have been analysed, corrective mitigating measures have been defined when necessary and their implementation has been regularly followed up.

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[100] Ares(2016)738565 – 11/02/2016
[101] Based on a participation rate of 100% (ERCEA management team).
[102] All posts of the staff 2016 were published internally in the first semester 2015. In addition, all posts becoming vacant during the year were systematically published internally.

Additionally, in Q4 2015, a supervision exercise[103] was performed with the objective to assess the effectiveness of internal controls related to eligibility of the declared costs in the area of legality and regularity of 2015 FP7 payments. The outcome of the checks supports the conclusion on the effective functioning of the ex-ante controls carried out by the Agency over FP7 cost claims submitted by ERC beneficiaries. Indeed, the testing revealed that the eligibility criteria are properly checked, through the high number of clarifications and justifications requested by project officers to the Host Institutions and/or Principal Investigators. In conclusion, the internal control standards are effectively implemented and functioning.

2.4 Conclusions as regards assurance

This section reviews the assessment of the elements reported above and draw conclusions supporting of the declaration of assurance and namely, whether it should be qualified with reservations.

The information reported in the AAR covers both the operational budgets related to the IDEAS and to the H2020 programme as well as the operating budget managed by the ERCEA in 2015 and supports the statements of the Declaration of Assurance. It derives from management's and auditors' monitoring, based on the systematic analysis of the evidence available as reflected in the reports listed above part 2.

Indeed, management's assessment provides the results of key indicators related to the budget execution addressing the statement on the "use of resources for the intended purpose". It further assesses the "sound financial management" and the "legality and regularity of underlying transactions" per process stages[104] and reports on measures implemented to prevent, detect and correct fraud[105].

As demonstrated throughout the report, the results of performance and control indicators positively support the 5 statements of the declaration of assurance. Although few indicators, relating to the efficiency component of the sound financial management, show slight deviations from targets, these do not impair the declaration of assurance. Also, the assessment of the internal control system, as well as the overall assessment of the cost benefit of controls, resulted both in a positive conclusion. Last but not least, fraud prevention and detection mechanisms in place did not reveal anything that would adversely impair the Declaration of Assurance.

In addition, this report has been prepared with the objective of providing the reader with reliable, complete and correct information on ERCEA state of affairs for the reporting period ("true and fair view"). Finally, it does not knowingly contain any material inaccuracy or omit any significant information ("non-omission of significant information")[106]. Management confirms the non-occurrence in 2015 of any significant weakness or reputational event that would have adversely impacted the assurance provided below.

In conclusion, management has reasonable assurance that, overall, suitable controls are in place and working as intended; risks are being appropriately monitored and mitigated; and necessary improvements and reinforcements are being implemented. The Director, in his capacity as Authorising Officer by Delegation for the operational budget and as Authorising Officer as regards the operating budget, has signed the Declaration of Assurance.

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[103] Ares(2015)5902384: Results of 2015 Supervision exercise.
[104] Part 2.1.1 for the operational budget and 2.1.2 for the operating budget.
[105] Part. 2.1 (page 25)
[106] To be confirmed by management before the signature of the final AAR, at the latest on 31.03.2016.

3. DECLARATION OF ASSURANCE

I, the undersigned,

Executive Director of the ERCEA,

In my capacity as authorising officer for the operating (administrative) budget and authorising officer by delegation for the operational budget

Declare that the information contained in this report gives a true and fair view.

State that I have reasonable assurance that the resources assigned to the activities described in this report have been used for their intended purpose and in accordance with the principles of sound financial management, and that the control procedures put in place give the necessary guarantees concerning the legality and regularity of the underlying transactions.

This reasonable assurance is based on my own judgement and on the information at my disposal, such as the results of the self-assessment, ex-post controls, the Opinion of the Internal Auditor on the state of internal control and the observations of the Internal Audit Service for years prior to the year of this declaration.

Confirm that I am not aware of anything not reported here which could harm the interests of the ERCEA or those of the Commission.

Brussels, 17th March 2016

Signed

Pablo Amor

Electronically signed on 17/03/2016 19:05 (UTC+01) in accordance with article 4.2 (Validity of electronic documents) of Commission Decision 2004/563