



2018

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, 2019.**

Table of Contents

THE ERC AND ITS AGENCY IN BRIEF	3
EXECUTIVE SUMMARY	5
A) HIGHLIGHTS OF THE YEAR	5
B) KEY PERFORMANCE INDICATORS (KPIs)	6
C) KEY CONCLUSIONS ON FINANCIAL MANAGEMENT AND INTERNAL CONTROL	10
D) PROVISION OF INFORMATION TO THE COMMISSIONER	10
1. IMPLEMENTATION OF ERCEA'S 2018 ANNUAL WORK PROGRAMME - HIGHLIGHTS OF THE YEAR	11
1.1 H2020 "STRENGTHENING FRONTIER RESEARCH" AND THE FP7 "IDEAS" PROGRAMMES IMPLEMENTATION	14
1.1.1 IMPLEMENTATION OF H2020 CALLS FOR PROPOSALS FINANCED UNDER THE 2018 BUDGET COMMITMENT APPROPRIATIONS	14
1.1.2 IMPLEMENTATION OF H2020 AND FP7 CALLS FINANCED UNDER PREVIOUS YEAR'S BUDGET (2007-2013)	18
1.1.3 AMENDMENTS TO GRANT AGREEMENTS	19
1.1.4 IMPLEMENTATION OF ERCEA OPERATING BUDGET	20
1.2 EXAMPLE OF EU-ADDED VALUE OF ERC FUNDED PROJECTS	20
1.3 EVALUATION OF THE ERCEA OPERATIONS	22
2. ORGANISATIONAL MANAGEMENT AND INTERNAL CONTROL	23
2.1 FINANCIAL MANAGEMENT AND INTERNAL CONTROL	23
2.1.1 CONTROL RESULTS	24
2.1.1.1 IMPLEMENTATION OF THE INTERNAL CONTROL SYSTEM FOR THE OPERATIONAL BUDGET	35
2.1.1.2 IMPLEMENTATION OF THE INTERNAL CONTROL SYSTEM FOR THE OPERATING BUDGET	41
2.1.2 AUDIT OBSERVATIONS AND RECOMMANDATIONS	42
2.1.3 ASSESSMENT OF THE EFFECTIVENESS OF THE INTERNAL CONTROL SYSTEMS	43
2.1.4 CONCLUSIONS ON THE IMPACT AS REGARDS ASSURANCE	44
2.1.5 DECLARATION OF ASSURANCE	45
DECLARATION OF ASSURANCE	46
2.2 OTHER ORGANISATIONAL MANAGEMENT DIMENSIONS	47
2.2.1 HUMAN RESSOURCES MANAGEMENT	48
2.2.2 INFORMATION MANAGEMENT ASPECTS	50
2.2.3 EXTERNAL COMMUNICATION ACTIVITIES	50

THE ERC AND ITS AGENCY IN BRIEF

The European Research Council¹, created under the previous Framework Programme (FP7)² and extended by the current Horizon 2020 (H2020) Framework Programme³, has widely gained recognition as a key actor in research and innovation. It is acknowledged worldwide as a label of excellence, a European success story. Researchers and the public at large increasingly value its brand recognising the tangible impact of the projects it funds.

The ERC frontier research funding benefits the scientific community in Europe by providing top researchers in Europe with the means to conduct their research independently and by offering them attractive perspectives for a career in science. Such EU-funded research responds to the needs of improving the attractiveness of Europe for the best researchers worldwide and strengthening the EU's capacity to generate new knowledge that feeds back into the economy and the society. By supporting the best research and making Europe a magnet for world-class talent, the ERC backs the EU's job creation, as well as long-term growth and investment, thereby also encouraging the establishment of new research teams in Europe and supporting young talent.

While implementing a bottom-up funding approach and focusing on excellence, the ERC contributes to the European Commission's political priorities in other fields, pushing knowledge forward in a variety of areas: transport, energy and climate, financial markets, international cooperation, migration, fundamental rights, digital agenda, etc. Both the FP7 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 commercialisation.

The ERC's reputation within the scientific community across Europe and worldwide is echoed by its high media coverage⁴ and its highly visible presence at numerous international scientific conferences, such as the annual World Economic Forum in Davos (Switzerland), the "East Coast Roadshow" in the United States or the Annual Congress of Mathematicians in Rio (Brazil).

With H2020 the ERC continues to pursue the by now world-wide recognised path of funding ambitious research proposals and pioneering ideas that lead to new and emerging fields of science and introduce unconventional and innovative approaches. Thereby it contributes to "Generating excellent science", one of the three priorities of this 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 € 13.1 billion is available under Horizon 2020 for the implementation of the ERC funding schemes.

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

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 611 500 unique visitors in 2018), social media channels (Twitter, Facebook and LinkedIn) and printed publications. As a result of the overall press activities, the ERC was mentioned in more than 14 700 articles reaching a potential audience of 149 million people. Growing each year ERC Facebook page likes today add to more than 24 900 followers, 33% more than in 2017. ERC Twitter account followers increased even more in 2018 and their number is just below 56 000 (40% growth compared to 2017). Please refer to annex 2.

The H2020 legal framework revised the governance of the Scientific Council by setting the number of its members to 21, including three Vice Presidents plus the President, all being eminent scientists, engineers and scholars. The current ERC President, Professor Jean-Pierre Bourguignon⁵, 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 ensures the selection and implementation of ERC grants.

Thus, 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 management of both the "Ideas" and Horizon 2020 programmes⁶.

The European Research Council Executive Agency (ERCEA) contributes to help the Commission to achieve its general objective "*A new boost for Jobs, Growth and Investment*" as well as helps its parent DG, DG Research and Innovation (DG RTD), to achieve its specific objective related to the implementation of H2020⁷. By giving opportunities to non-EU researchers supported by foreign agencies to visit ERC research teams⁸, or by fostering broadening participation outside-ERA, the ERCEA also contributes to the *open to the world* priority of DG RTD.

The ERCEA operates on the basis of the powers delegated to it by the European Commission, which has the ultimate political responsibility for the specific programme implementing the framework programme Horizon 2020. The Steering Committee of the ERCEA is the body that supervises the operations of the Agency. It adopts the Annual Work Programme of the Agency, its Annual Activity Report as well as decisions related to the Staff Regulations, organisational structure, administrative budget and annual accounts. The Steering Committee meets four times a year and is composed of five members appointed by the European Commission for a (renewable) period of two years.

The organisational structure of the Agency follows its operational and horizontal objectives. It consists of two operational departments, the Scientific Management and the Grant Management Department, and one Resources and Support Department. The Accounting Officer, the Communication Unit and the Support to the Scientific Council Unit report directly to the Director.

Through the management of ERC funding instruments, the ERCEA finances investigator-driven research of the highest quality and favours innovative ideas and inter-disciplinary research. This fits 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".

⁵ Appointed on December 17th, 2013. The term of office of the ERC President has been extended for a period of 2 years, starting on January 1st, 2018 (C(2017)5876, 31/08/2017).

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 Namely specific objective 1.3 of DG RTD Strategic Plan 2016-2020: *To ensure an effective and efficient implementation of Horizon 2020 and other RTD programmes and maximise synergies.*

⁸ Cf. implementing arrangements with key funded bodies and science ministries of the United States, Korea, Argentina, Japan, China, South Africa, Australia, Canada, China, Brazil, Mexico. More information on that under the "ERC teams open to the world section": <https://erc.europa.eu/funding-and-grants/funding-schemes/other-erc-opportunities>.

EXECUTIVE SUMMARY

The Annual Activity Report is a management report of ERCEA Director to the College of Commissioners. Annual Activity Reports are the main instrument of management accountability within the Commission and constitutes the basis on which the College takes political responsibility for the decisions it takes as well as for the coordinating, executive and management functions it exercises, as laid down in the Treaties.

a) Highlights of the Year

2018 saw the carefully prepared and smooth reintroduction of the ERC Synergy calls which were piloted in 2012 and 2013. External experts and ERC Scientific Council members vigilantly assessed the resulting grants from the pilot calls and came to the conclusion that Synergy Grants have the potential of putting their respective research areas on the global map. 27 projects of an average of € 9.5 million were selected in the 2018 call. Compared to the previous pilot calls, the evaluation process was shortened and included new elements such as dynamic panel formation which may point ahead to how the ERC evaluation system overall could evolve in the future.

Always on the lookout for opportunities for further simplification and increased efficiency, the Agency's Grant Management department prepared the groundwork for piloting lump sum grants on the ERC Proof of Concept scheme in 2019 and 2020. The Commission Decision of an ERC Proof of Concept lump sum pilot model grant agreement in Horizon 2020 was adopted in September 2018. The Agency will carefully monitor the potential efficiency gains as well as the impact of this pilot scheme on its operational departments.

Upon request from the ERCEA Steering Committee and ERC Scientific Council, the Agency conducted a major beneficiaries satisfaction survey to see how it could improve its services. Close to 2000 individuals in three categories responded with fully filled-in questionnaires. The results were predominantly positive. However, the Agency identified two focus areas with improvement potential – ethics review and IT systems – and developed an action plan vetted and validated by the Steering Group overseeing the survey that included members from the Scientific Council and the Agency.

By December 2018, ERC-funded projects related to IDEAS have produced cumulatively more than 116.882 scientific publications and projects funded under Strengthening Frontier Research generated 7,9% out of the top highly cited per field of science published in 2018⁹ exceeding by far their respective target.

The ERC is expanding its international dimension, with two new signed Implementing Arrangements respectively with the Japan Science and Technology Agency – JST (on 7 October) and the Australian National Health and Medical Research Council – NHMRC (on 22 October). The arrangements will allow Japanese and Australian scientists to temporarily join a research team run by an ERC grantee.

The ERC Board and Scientific Council decided to move forward the calendar for discussion on ERC Work Programme (ERC WP 2020) by one Scientific Council plenary meeting compared to previous years in order to mitigate the risk of delays in the adoption by the European Commission similar to those experienced for ERC WPs 2018 and 2019¹⁰.

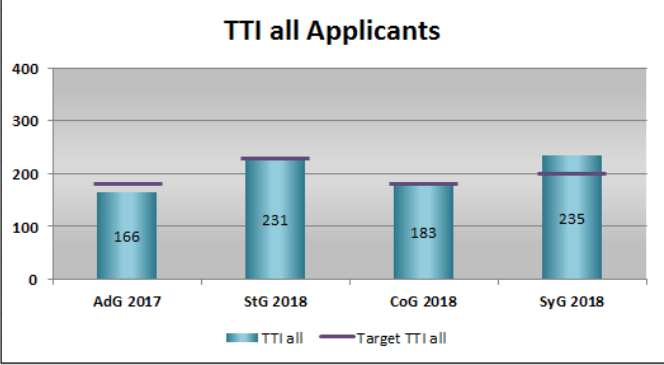
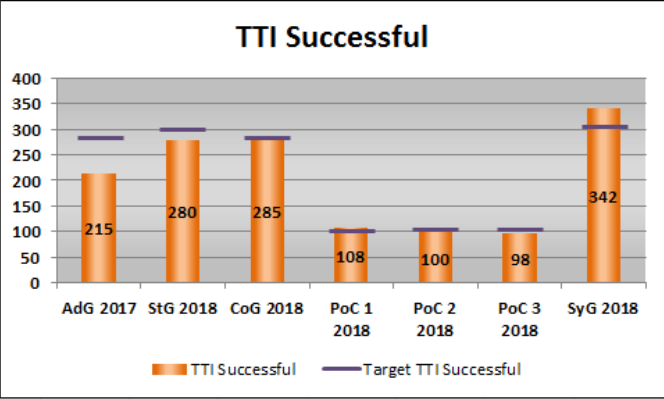
Finally, the Agency fully successfully implemented the Internal Control Framework. It is applicable since 1st of January 2018 and moves away from a purely compliance-based to a principle-based system.

⁹ Source: www.altmetric.com Altmetric is a data science company whose mission is to track and analyze the online activity around scholarly literature.

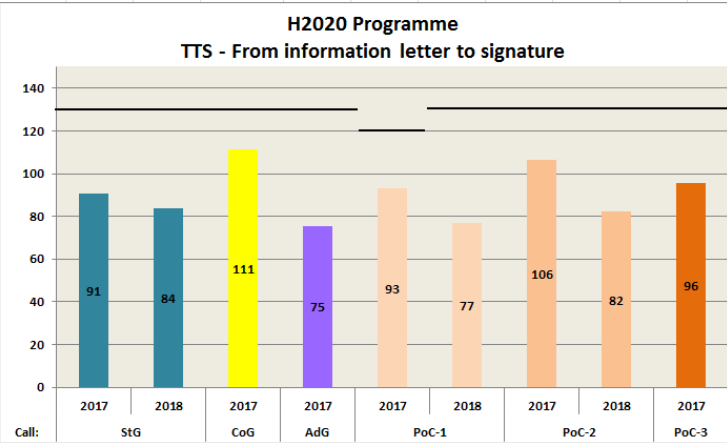
¹⁰ Thus, the first orientation debate took place in October 2018 instead of December 2018, and the final debate on an advanced draft took place in December 2018. The establishment of the ERC WP 2020 is set to take place via remote Scientific Council approval by mid-February, so that the European Commission can proceed with its adoption in parallel with the adoption of the update of the Horizon 2020 WP.

b) Key Performance Indicators (KPIs)

The below indicators reflect the 2018 Annual Work Programme (AWP) targets¹¹.

Result/Impact indicator (description)	Target	Result 31/12/2018																																							
Time to Inform all / successful applicants (average number of days)	2018-StG: 230/300 2018-CoG/AdG: 180/280 2018-PoC: 100 2018-SyG: 200/300	<div style="text-align: center;">  <p>TTI all Applicants</p> <table border="1"> <thead> <tr> <th>Category</th> <th>TTI all</th> <th>Target TTI all</th> </tr> </thead> <tbody> <tr> <td>AdG 2017</td> <td>166</td> <td>~180</td> </tr> <tr> <td>StG 2018</td> <td>231</td> <td>~230</td> </tr> <tr> <td>CoG 2018</td> <td>183</td> <td>~180</td> </tr> <tr> <td>SyG 2018</td> <td>235</td> <td>~200</td> </tr> </tbody> </table> </div> <div style="text-align: center; margin-top: 20px;">  <p>TTI Successful</p> <table border="1"> <thead> <tr> <th>Category</th> <th>TTI Successful</th> <th>Target TTI Successful</th> </tr> </thead> <tbody> <tr> <td>AdG 2017</td> <td>215</td> <td>~280</td> </tr> <tr> <td>StG 2018</td> <td>280</td> <td>~280</td> </tr> <tr> <td>CoG 2018</td> <td>285</td> <td>~280</td> </tr> <tr> <td>PoC 1 2018</td> <td>108</td> <td>100</td> </tr> <tr> <td>PoC 2 2018</td> <td>100</td> <td>100</td> </tr> <tr> <td>PoC 3 2018</td> <td>98</td> <td>100</td> </tr> <tr> <td>SyG 2018</td> <td>342</td> <td>~300</td> </tr> </tbody> </table> </div> <p>Source of data: Compass</p>	Category	TTI all	Target TTI all	AdG 2017	166	~180	StG 2018	231	~230	CoG 2018	183	~180	SyG 2018	235	~200	Category	TTI Successful	Target TTI Successful	AdG 2017	215	~280	StG 2018	280	~280	CoG 2018	285	~280	PoC 1 2018	108	100	PoC 2 2018	100	100	PoC 3 2018	98	100	SyG 2018	342	~300
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¹¹ Advanced Grant 2017 is included as the call was launched in 2017 and finalised in 2018.

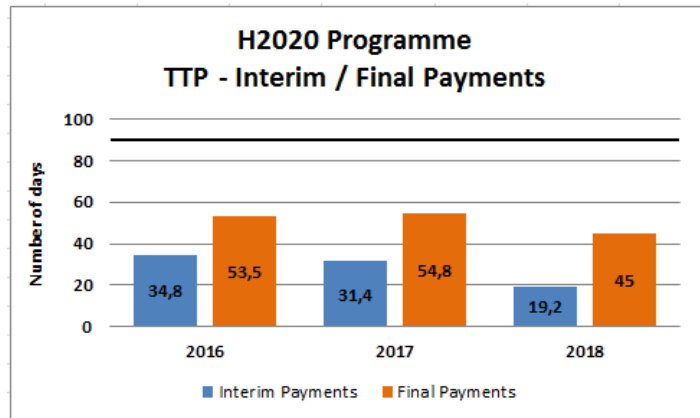
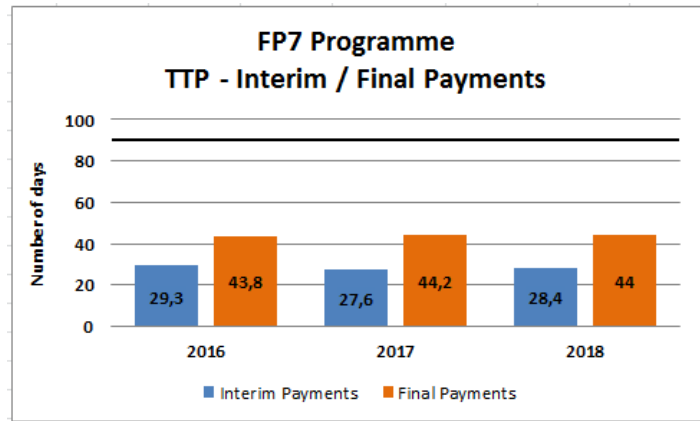
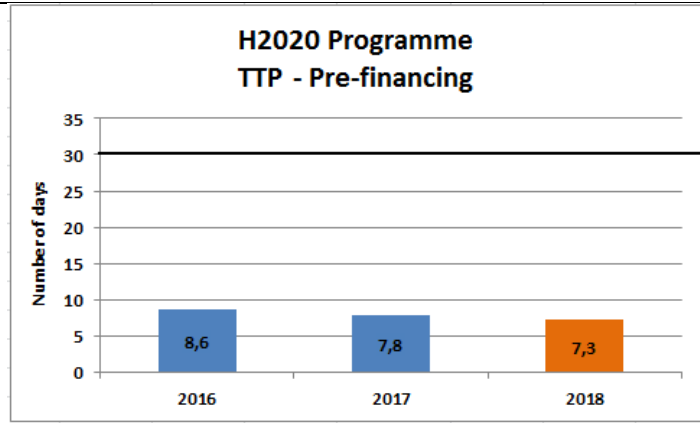
Result/Impact indicator (description)	Target	Result 31/12/2018																									
Time to Sign from the date of informing successful applicants (average number of days)	2017-StG: 130 days 2017- CoG: 130 days 2017- AdG: 130 days 2017-PoC-1/2:120 days 2017-PoC-3:130 days 2018-PoC-1/2:130 days 2018-StG: 130 days 2018- CoG: 130 days 2018- SYG: 130 days	 <p>Source of data: Compass</p>																									
Budget execution (Commitments and payment credits)	100% for commitments and payments credits	<table border="1" data-bbox="687 1039 1378 1205"> <thead> <tr> <th>Programme</th> <th>Budget Year</th> <th>Position</th> <th>Commitment credits execution</th> <th>Payment credits execution</th> </tr> </thead> <tbody> <tr> <td>FP7</td> <td>2018</td> <td>C1/E0</td> <td>n.a.</td> <td>100%</td> </tr> <tr> <td>FP7</td> <td>2018</td> <td>C8</td> <td>95.50%</td> <td>n.a.</td> </tr> <tr> <td>H2020</td> <td>2018</td> <td>C1/E0</td> <td>100%</td> <td>100%</td> </tr> <tr> <td>H2020</td> <td>2018</td> <td>C8</td> <td>99.70%</td> <td>n.a.</td> </tr> </tbody> </table> <p>Source of data: ABAC Data Warehouse</p>	Programme	Budget Year	Position	Commitment credits execution	Payment credits execution	FP7	2018	C1/E0	n.a.	100%	FP7	2018	C8	95.50%	n.a.	H2020	2018	C1/E0	100%	100%	H2020	2018	C8	99.70%	n.a.
Programme	Budget Year	Position	Commitment credits execution	Payment credits execution																							
FP7	2018	C1/E0	n.a.	100%																							
FP7	2018	C8	95.50%	n.a.																							
H2020	2018	C1/E0	100%	100%																							
H2020	2018	C8	99.70%	n.a.																							

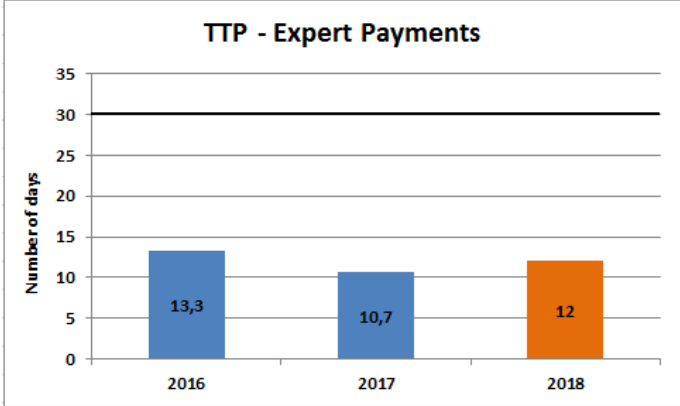
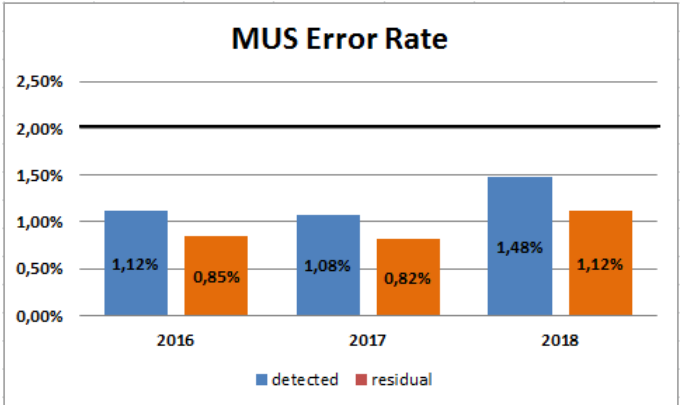
Time to Pay

Pre-financing: 30 days (H2020)

FP7: 90 days for Interim and Final payments

H2020: 90 days for Interim and Final payments



FP7 specific rate ERCEA error rate	Experts payments: days 30	 <p>Source of data: ABAC Data Warehouse</p>
	< 2%	 <p>Source of data: Internal follow up tool, " closed audit - error rates & implementation follow-up.xls "+ AUDEX + CORDA BO report</p>

The H2020 audit campaign was launched by the CAS (Common Audit Service) in 2017 and until the end of 2018, 165 CRS audits have been closed with a residual error rate for the Research Family of 2.22% (2.45% including draft audit findings).

Furthermore, the first results from the CAS provide an ERCEA detected error rate of 0.61%. Results are not statistically representative, as only 57 participations were audited out of 160 selected participations from the Specific ERCEA random selection to be audited by end of 2019, i.e. 80 participations to audit per year. Considering that the latter may evolve over the next year, the ERCEA decided to adopt a prudent approach for calculating the estimated amount at risk by applying the ERCEA error rate for FP7 of 1.48% to H2020 payments.

ERCEA key performance indicators relate to the control objectives regarding the effectiveness of operations, the efficiency of operations and the legality and regularity of underlying transactions. The Agency 2018 results are excellent, even considering the deviations on the Time to Inform all¹² / successful¹³ applicants. Indeed, the latter concerns only the Synergy Grant with deviations above the target of + 35 for all and + 42 days for successful applicants. These are explained by the complexity of this call with multi-disciplines, the participation of 1 up to 4 Principal Investigators and a 3 steps evaluation process instead of 2 applied to the ERC other main calls.

¹² Starting Grant (+1 day), CoG 2018 (+3 days).

¹³ Consolidator Grant (+5 days), Proof of Concept (+8 days).

c) Key conclusions on Financial management and Internal control

In accordance with the governance arrangements of the European Commission, 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.

On 1st of January 2018, the ERCEA has adopted the Internal Control Framework, 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 this framework. ERCEA has assessed the internal control systems during the reporting year and has concluded that internal control principles are present and functioning. Some areas for improvement have been identified, resulting from the transition to the Internal Control Framework, with no impact on the declaration of assurance. Please refer to AAR section 2.1.3 for further details.

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 in regards to the achievement of control objectives. Please refer to Section 2.1 for further details.

In conclusion, management has reasonable assurance that, overall, suitable controls are present and functioning; risks are being appropriately monitored and mitigated; and necessary improvements are being addressed. 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.

d) Provision of information to the Commissioner

In the context of the regular meetings during the year between the Director and DG RTD on management matters, the main elements of this report and assurance declaration have been brought to the attention of ERCEA's Steering Committee and to DG RTD Director General, who has taken these into consideration in his reporting to Commissioner Moedas, responsible for Research, Science and Innovation.

1. IMPLEMENTATION OF ERCEA'S 2018 ANNUAL WORK PROGRAMME - HIGHLIGHTS OF THE YEAR

ERC's Specific Objectives and Result Indicators – FP7 and H2020

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 2016-2020 Strategic Plan of DG Research and Innovation. In addition, these objectives and indicators are reflected in the ERCEA Annual Work Programme in order to bridge the ERC Scientific Council's strategy and the corresponding ERCEA implementation objectives, the latter being reported in more detail below.

The fundamental activity of the ERC, both under FP7 and H2020, is to provide substantial five-year long¹⁴ funding to researchers - and their research teams – working in Europe to pursue ground-breaking frontier research, that will primarily contribute at the highest level to advancing the frontiers of knowledge. ERC-supported 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 the Physical Sciences and Engineering to Life Sciences, Social Sciences and Humanities. Awards are granted solely according to scientific quality with no predetermined priorities, targets or quotas. The level of competition guarantees distinction (success rates ranging from 9% to 13,5%, depending on the grant schemes), thus being awarded an ERC grant is synonymous with scientific excellence for the worldwide scientific community.

This explains the high number of international prizes awarded to FP7 ERC grant holders – almost 1 350¹⁵ in the period 2009-2018 which already exceeds significantly the target of 200 by year 2020. Likewise, by December 2018, FP7 ERC-funded projects have produced more than 116.882 scientific publications. In addition, the share of publications from ERC-funded H2020 projects which are among "the top 1% most highly cited"¹⁶ worldwide, namely 7.9% at 2018 year-end, is a clear indication of the research performance supported by the ERC. Indeed, this result exceeds by far the H2020 target of 1.8%.

In 2018, a number of ERC studies produced scientific breakthroughs and earned important recognitions; to mention a few:

Scientists, involved in the ERC 2014 Advanced Grant *Artificial-Intelligence Driven Discovery and Synthesis of Polyoxometalate Clusters*, created a robot chemist that could revolutionise the way new molecules are discovered, using machine learning techniques. The Principal Investigator was awarded the 2018 Royal Society of Chemistry interdisciplinary prize.

The ERC grantee Irma Johanna MOSQUERA VALDERRAMA was one of the nine experts that provided evidence-based policy recommendations to the G20 2018 Summit in Buenos Aires (ERC 2017 Starting Grant *A New Model of Global Governance in International Tax Law Making*).

¹⁴ The Synergy call boosts six-year long funding and the Proof of Concept – 1.5-years.

¹⁵ This number refers to the prizes/awards and other forms of recognition which are recorded in ERC internal data systems, taken from reporting by ERC grantees and public records.

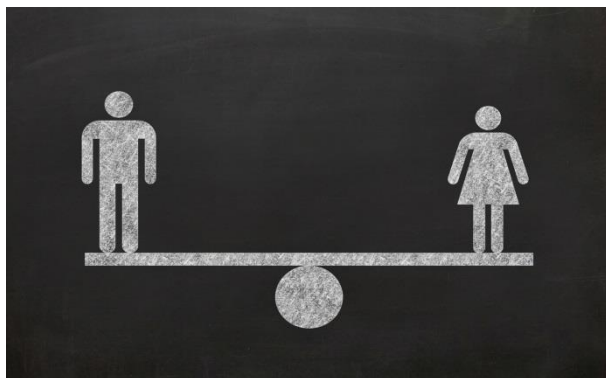
¹⁶ Related tables are shown in annex 12.

In addition, amongst the top 100 most popular scholarly articles published in 2018¹⁷ below few examples of ERC articles which captured the public imagination¹⁸:

The genome of the offspring of a Neanderthal mother and a Denisovan father (Science, August 2018).¹ The ERC team (H2020 Grant) has found a bone from a Neanderthal-Denisovan 'love child'. The DNA analysis of the bone suggests there was more interbreeding among early humans than previously thought.



Relationship of gender differences in preferences to economic development and gender equality (Science, October 2018). ERC-funded scientists (FP7 Grant) found that the more equal women and men are, the less they want the same things. In countries where there is more gender equality, gender-specific work preferences differ more widely.



ERC funding instruments and H2020 2017 and 2018 Calls for Proposals

The European Research Council Executive Agency contributed in 2018 to help achieving the Commission's general objective "A new boost for Jobs, Growth and Investment" as well as DG Research and Innovation's (DG RTD) specific objective related to the implementation of H2020¹⁹. By providing opportunities to non-EU researchers supported by foreign agencies to visit ERC research teams²⁰, or by fostering broadening participation outside-ERA²¹, the ERCEA also contributed to the "open to the world" priority of DG RTD.

In 2018, the ERCEA managed the Horizon 2020 specific objective "Strengthening Frontier Research through the activities of European Research Council" of part I "Excellent Science" of the Horizon 2020 Specific Programme²², as shown below:

¹⁷ Source: www.altmetric.com. Altmetric is a data science company whose mission is to track and analyze the online activity around scholarly literature.

¹⁸ Photos credits: © www.istockphotos.com

¹⁹ Namely specific objective 1.3 of DG RTD Strategic Plan 2016-2020: *To ensure an effective and efficient implementation of Horizon 2020 and other RTD programmes and maximise synergies.*

²⁰ Cf. implementing arrangements with key funded bodies and science ministries of the United States, Korea, Argentina, Japan, China, South Africa, Brazil, Canada and Mexico. More information on that under the "ERC teams open to the world section": <https://erc.europa.eu/funding-and-grants/funding-schemes/other-erc-opportunities>.

²¹ By the means of communication actions organized by the ERCEA or by joining parent DG's campaigns.

²² Cf. Council Decision 2013/743/EU of 3/12/2013 establishing the specific programme implementing Horizon 2020 – The Framework Programme for Research and Innovation (2014-2020) (OJ L347, 20/12/2013).

Call identifier	Opening date	Closing date	Indicative n° of outputs	Output 31/12/18 ²³
ERC-2018-StG – Starting Grant	03/08/2017	17/10/2017	391	403
ERC-2018-CoG – Consolidator Grant	24/10/2017	15/02/2018	287	291
ERC-2018-AdG – Advanced Grant	17/05/2018	30/08/2018	194	On-going
ERC-2018-SyG – Synergy Grant	03/08/2017	14/11/2017	30	30
ERC-2018-PoC – Proof of Concept	06/09/2017	1) 16/01/2018 2) 18/04/2018 3) 11/09/2018	130	1) 50 2) 50 3) 60

Relevant general objective: <i>A new boost for Jobs, Growth and Investment</i> Parent DG: <i>DG RTD</i>			
RTD Specific objective: <i>To ensure an effective and efficient implementation of Horizon 2020 and other RTD programmes and maximise synergies</i>		Related to spending programme: <i>H2020</i>	
ERC Specific objective: <i>Excellent Science – European Research Council (ERC) – Strengthening frontier research²⁴</i>		Related to spending programme: <i>H2020</i>	
Main outputs in 2018:			
Outputs	Indicators	2018 Targets	2018 Results
Launch of calls for proposals ²⁵	% of calls for proposals successfully launched according to agreed deadlines	100 %	100%
Evaluation of calls	% of 2018 calls evaluated in 2018 % of 2017 calls evaluated in 2018	100% of 4 2018 calls ²⁶ 100% of 1 2017 call ²⁷	100% for 2017 (AdG2017 completed) 100% for 2018 (AdG2018 Step 2 will be completed in early 2019)
Grants signed in 2018	Proposals selected under 2017 calls granted in 2018	100% ²⁸	100%

The original planning of launching the calls for proposals and the evaluation of the submitted proposals was strictly respected. All proposals selected for granting under the 2017 calls were signed in the course of 2018 (if not already signed in 2017).

The number of retained proposals for funding (main list and reserve list proposals) of the

²³ Including reserve list proposals selected for funding; please refer to Annex 12.

²⁴ The ERC Specific objective (provided by Article 3 of Council Decision 2013/743/EU of 3/12/2013) has been included by DG RTD, the parent DG, into the following global specific objective: *To ensure an effective and efficient implementation of Horizon 2020 and other RTD programmes and maximise synergies* whilst the relevant general objective is: *A new Boost for Jobs, Growth and Investment*.

²⁵ Some ERC 2019 calls will also be launched in 2018 further to the adoption of the ERC WP 2019 foreseen to be adopted by the Commission in July 2018.

²⁶ Namely ERC – 2018 StG- Starting Grant, ERC – 2018 CoG – Consolidator Grant, ERC – 2018 SyG – Synergy Grant and ERC – 2018 – PoC – Proof of Concept.

²⁷ Namely ERC-2017-AdG – Advanced Grant.

²⁸ Covering all successfully concluded grants e.g. excluding terminations, withdrawals etc.

2018 calls met the ERC and ERCEA Work Programmes' targets. The evaluation of the AdG 2018 call was still ongoing at the time of writing, and results will be available later in 2019.

Thus, as evidenced above, the Ideas part of the FP7 spending programme and the Strengthening Frontier Research part of H2020 spending programme managed by the ERCEA are on course to meet their respective multiannual objectives and have achieved the annual performance indicators or outputs and milestones.

1.1 H2020 “Strengthening Frontier Research” and the FP7 “Ideas” programmes implementation

ERCEA's main challenges were to manage efficiently the 2018 grant competitions, which were supported by an operational commitment budget of around € 1.9 billion, enabling the Agency to award some 890 new grants, most of them to start in 2019.

Also, further to the assessment of the 2012 and 2013 Synergy pilot calls, the ERC Scientific Council decided to launch a first ERC Synergy call under Horizon 2020, with an allocated budget of € 250 million. Further to the submission of 299 proposals, 27 were retained for funding. The new three steps evaluation process was implemented featuring an algorithm supporting a dynamic panel constitution to ensure that the best expertise is brought together for a group of proposals. Also, synchronous proposal discussions allowed the cross-panel reviewers systematically attending the debates on proposals in the proposals' respective panels. This showed to be a challenging and important improvement of the evaluation process of these very complex and interdisciplinary research propositions.

Furthermore, about 1200 grants were signed during the year, showing a significant improvement of the Time to Sign compared to last year, thanks to an effective planning and resources attribution as well as granting process simplification. Also, the overall increase of 4.3% of payments related to FP7 legacy and H2020 was managed efficiently. Finally, the Agency ensured the scientific and financial management of more than 6000 funded projects, 25% being funded under FP7 and 75% under H2020, assessing 1 449 scientific reports from Principal Investigators.

1.1.1 Implementation of H2020 calls for proposals financed under the 2018 budget commitment appropriations

Overall, in response to the 2018 calls a total of 8352 proposals were submitted (StG+CoG+AdG+SyG+PoC), an increase of 0.4% in submissions compared to 2017.

The StG 2018 evaluation of 3170 submitted proposals (an increase of 2.9% from the previous year) was carried out as planned with 970 passed to step 2 for interviews and resulted in 388 proposals being selected for funding and 35 reserve list proposals. Out of twenty-two redress cases received 2 were considered for re-evaluation, the outcome of which is pending.

The CoG 2018 evaluation of 2389 submitted proposals (a decrease of 5.9% from the previous year) was carried out as planned with 747 passed to step 2 for interviews and resulted in 280 proposals being selected for funding and 16 reserve list proposals. Thirty-two redress cases were received and none was considered for re-evaluation.

The AdG 2018 Step 1 evaluation of 2052 submitted proposals (a decrease of 5.3% from the previous year) was carried out as planned and resulted in 519 proposals being passed to Step 2. The ERC WP 2018 indicative date to inform applicants of Step 1 results is end of January 2019. One redress case on eligibility was received (still pending).

For the first year of the re-launch of the Synergy Call, the SyG 2018 evaluation of 300 submitted proposals was carried out as planned with 154 passing to step 2 and 73 to Step 3 for interviews. It resulted in 27 proposals being selected for funding and 3 reserve list proposals. Two redress cases were received and none considered for re-evaluation.

The PoC 2018 evaluation was carried out as planned with three deadlines (Jan. 19th, April 18th and Sept. 11th). The PoC 2018 call received in total 441 proposals (a decrease of 4% compared to the previous year) and resulted in 144 proposals being selected for funding and 16 reserve list proposals. No redress case was submitted.

As regards the AdG 2017 evaluation which was completed in early 2018, the step 2 evaluations of 632 proposals (which passed Step 1 in late 2017) resulted in 233 proposals being selected for funding and 44 reserve list proposals. Thirty-five redress cases were received and none considered for re-evaluation.

Regarding the submissions, the accumulated experience shows that, after the resubmission rules were stabilized, the number of proposals for StG, CoG and AdG fluctuates within the interval $\pm 5\%$ every year. In order to be prepared for the scenario with the highest workload, the Agency usually estimates the number of expected proposals with an increase of 5%. The Agency follows a similar logic for PoC. However in 2018 the Agency experienced an unexpected decrease of the number of proposals. Most likely the reason for this is that the reference for the estimation, the number of proposals in 2017, was abnormally high. One reason for this could be that in 2017 PIs were surveyed regarding their participation in the PoC funding scheme and this raised a high degree of awareness that led many of them to apply.

The 2018 commitment credits²⁹ for a total amount of € 1 885.04 million were booked on basis of the ERC Financing Decision, since the evaluation process of one of the 2017 call was not yet concluded.

Altogether, 497 grants of the 2018 ERC calls were signed for a total amount of € 661.42 million. The granting activity for the 2018 calls having started in late 2018, reached the following completion rates: for StG 86.6%; for CoG 17.2%; for PoC 59.4% and for SYG 11.1%.

Furthermore, 729 grants and their budgetary commitments originating in the 2017 ERC calls for proposals were signed during 2018, in particular: 70 for StG, 323 for CoG, 268 for AdG as well as 68 for PoC.

The following table shows the results of the evaluation of the H2020 2017-2018 calls, including signed grants and pre-financings paid.

²⁹ Covering commitments voted for the year and EFTA ones (C1/EO).

Implementation of calls in 2018 ³⁰

Calls implemented in 2018	Call deadlines		Indicative budget (€ Mio)	Number of proposals				Grants signed		Preparation failed	Of which pre-financing paid € Mio
	Opening dates	Closing dates		Submitted proposals	Ineligible (% of submitted proposals)	Main list – invited (not reserve)	Success rate	Number	€ Mio		
ERC-2017-StG – Starting Grant	26/07/2016	18/10/2016	€ 650	3 082	1.0%	406	13.2%	70	103.51	-	66-38.98 Mio (signed in 2018) 313 – 186.76 Mio (signed in 2017-2018)
ERC-2017-CoG – Consolidator Grant	20/10/2016	09/02/2017	€ 575	2 539	1.4%	298	11.7%	323	619.36	1	301 – 232.42 Mio (signed in 2018) 305 – 235.34 Mio (signed in 2017-2018)
ERC-2017-PoC – Proof of Concept	02/08/2016	1) 19/01/2017 2) 25/04/2017 3) 05/09/2017	€ 20	1) 124 2) 139 3) 269	1) 5.6% 2) 3.6% 3) 2.6%	1) 51 2) 51 3) 52	1) 41.1% 2) 36.7% 3) 19.3%	1) 3 2) 7 3) 58	1) 0.45 2) 1.05 3) 8.67	-	1) 3 – 0.36 Mio 2) 7 – 0.84 Mio 3) 57 – 6.82 Mio (signed 2018) 1) 7 – 0.84 Mio 2) 29 – 3.46 Mio 3) 57 – 6.82 Mio (signed in 2017-2018)
ERC-2017-AdG – Advanced – Grant	16/05/2017	31/08/2017	€ 567	2 166	1.1%	233	12.9%	268	650.38	1	249 – 242.74 Mio (signed in 2018) 249 – 242.74 Mio (signed in 2017-2018)

³⁰ Results in light grey were already reported in the 2017 AAR, while those in light orange refer to 2018.

Calls implemented in 2018	Call deadlines		Indicative budget (€ Mio)	Number of proposals				Grants signed		Preparation failed	Of which pre-financing paid € Mio
	Opening dates	Closing dates		Submitted proposals	Ineligible (% of submitted proposals)	Main list – invited (not reserve)	Success rate	Number	€ Mio		
ERC-2018-StG – Starting Grant	03/08/2017	17/10/2017	€ 581	3 170	1.1%	388	13,50%	349	521.57	1	66 – 39.20 Mio
ERC-2018-CoG – Consolidator Grant	24/10/2017	15/02/2018	€ 550	2 389	1.2%	280	11.7%	50	98.68	-	-
ERC-2018-AdG – Advanced Grant	17/05/2018	30/08/2018	€ 450	2 052	1.1%			-	-	-	-
ERC-2018-SyG – Synergy Grant	03/08/2017	14/11/2017	€ 250	300	1%	27	9.2%	3	27.27	-	-
ERC-2018-PoC – Proof of Concept	06/09/2017	1) 16/01/2018 2) 18/04/2018 3) 11/09/2018	€ 20	1) 119 2) 132 3) 190	1) 0.8% 2) 0.8% 3) 6.3%	1) 50 2) 50 3) 60	1) 42.0% 2) 37.9% 3) 31.6%	1) 49 2) 46 3) -	1) 7.27 2) 6.89 3) -	-	1) 42 -5.03 Mio 2) 44 -2.64 Mio 3) -

1.1.2 Implementation of H2020 and FP7 calls financed under previous year's budget (2007-2013)

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 01/01/2018		Grants signed in 2018		Payments made in 2018		Projects closed in 2018		Running projects 31/12/2018	
	Number	Open balance Mio €	Number	Mio €	Number	Mio €	Number	De-commitments Mio €	Number	Open balance Mio €
FP7										
StG	1118	178.78	-	-	794	87.49	537	12.54	581	78.83
CoG	310	189.91	-	-	146	63.54	5	0.71	305	125.66
AdG	889	244.96	-	-	546	101.57	291	13.84	598	129.59
PoC	-	-	-	-	-	-	-	-	-	-
SyG	24	102.55	-	-	19	40.82	1	0.09	23	61.64
Total FP7	2341	716.20	-	-	1505	293.42	834	27.18	1507	395.72
H2020										
StG	1452	1453.01	419	625.08	1176	504.89	4	4.51	1867	1569.09
CoG	992	1200.09	373	717.74	864	489.33	7	10.79	1358	1418.63
AdG	699	969.54	268	650.38	604	425.31	1	5.06	966	1191.60
PoC	359	14.48	163	24.37	302	23.35	146	0.65	376	14.85
SyG	-	-	3	27.27	-	-	-	-	3	27.27
Total H2020	3502	3637.12	1226	2044.84	2946	1442.88	158	21.01	4570	4221.45
Grand total	5843	4353.32	1226	2044.84	4451	1736.30	992	48.19	6077	4617.17

Source of data: ABAC Data Warehouse

Each financial year, the Agency processes the remaining part of the successful projects from the calls of the previous year, in the form of grant agreements and budgetary commitments (so-called C8 credits) and proceeds with the global commitments (per call - under C1 credits) and the granting for the given year calls as soon as evaluation results are available.

In 2018 the granting process for the H2020 2017 calls was finalised, while the H2020 2018 granting process started and will be completed in 2019. Overall, 1 226 Grant Agreements were signed throughout the year totalling to € 2044.84³¹ million, out of which €1383 million on 2017 calls. Thus, these related C8 credits linked to L1 (global) commitments for the 2017 calls reached 100% by means of L2 (individual) commitments. In addition, grants related to 2018 call were signed for an amount of €661 million.

A total number of 4 451 payments were carried out in 2018 (vs. 4 268 in 2017), representing an increase of 4.3% compared to 2017. Out of these transactions, 2 946 related to H2020 and 1 505 to FP7.

In line with the programme's maturity, H2020 payments related mainly to interim payments (1 676 vs. 964 in 2017) for an amount of € 695.10 million, 1 127 pre-financing payments (vs. 1 184 in 2017) summing up to € 743.80 million, 142 final payments (vs. 139 in 2017) summing up to € 3.97 million, and 1 late interest payment for an amount of € 287.88.

Payments related to FP7, worth a total of € 293.42 million, concerned mainly final payments (787 vs 692 in 2017) and interim payments (718 vs. 1 281 in 2017), respectively worth € 109.06 million and € 184.36 million.

At year-end, the total ERCEA grant portfolio of both FP7 and H2020 programmes counted a total of 6077 running grant agreements, including 1 507 for FP7 worth € 395.72 million and 4 570 grants for H2020 worth € 4 221.45 million.

Throughout 2018, 6 396 expert payments were processed representing a moderate increase of 8.5 % in comparison with 2017.

1.1.3 Amendments to grant agreements

During 2018, 1 220 new amendments were requested (671 for H2020 and 549 for FP7) by beneficiaries and 1 087 amendments were signed which represents an overall increase of about 6.9 % for the two programmes compared to year end 2017.

The highest number of amendments in 2018 was registered for the Starting Grants followed by the Advanced Grants. Most of the H2020 amendments dealt with changes of bank credentials and modifications of Annex 1 (action description), while FP7 amendments were mostly related to modifications of the grant duration and changes of the authorised representative.

In 2018, the number of amendments linked to extension of the grants' duration has increased by 6.2%. The total number of cases registered in 2018 for FP7 (275) remained stable compared to the previous year, differently from H2020, for which the number of cases registered has more than doubled in 2018 (30 vs. 12 in 2017). The Agency further applied the extension rules decided by the ERCEA Board and communicated to the beneficiaries in 2014.

The number of requests to change of Host Institution further to PIs moving outside Europe or to the private sector (portability) has decreased by 36% for FP7 grants and increased by 3.5% for H2020 grants compared to 2017, reflecting the maturity of the programmes as portability is mostly observed in the early stage of the programme implementation. Also, 14 termination cases have been registered³² triggered mainly by departures of the Principal Investigators to third countries.

In addition, 2018 saw an increase in number of complex amendments cases (around 60 cases), non-respect of the PI time commitment, as well as dual affiliations, IPR licencing and scientific and professional misconduct. Finally, the Agency received the first final H2020 project report on which it needs to react with a grant reduction³³.

³¹ Corresponding number of grants, please refer to page 19.

³² 5 cases for FP7 and 9 for H2020.

³³ The Agency decided to apply a grant reduction to a PoC project, for which the CLSS is being consulted. An

1.1.4 Implementation of ERCEA operating budget

The administrative budget for 2018 was initially adopted on 19 December 2017 for a total amount of € 48 600 000 and it was subsequently amended once and modified three times by the Steering Committee and Director's decisions to reflect budget line re-allocations.

A first modification of the budget was adopted by the Steering Committee on 24 May 2018 to accommodate the budget requirements for the furniture needed for the evaluation facilities in Cove1 7th floor and for the recruitment of interims. This was accomplished via re-allocating funds between titles, from one budget line (Hardware, Software & linked expenses) to the appropriate ones.

On 23 August 2018, the Director authorised a transfer of € 109 170 between lines of the chapter 12 'Professional development and social expenditure' in order to reallocate savings made from 'Mobility and Public transportation' to cover increased needs for social and medical services and training.

The first budget amendment was adopted by the Steering Committee on 5 October 2018, in the framework of the Bourlanges exercise. A re-allocation of funds was achieved together with an increase of the total 2018 budget by € 208 107, in order to support the works of the 7th evaluation floor (2018's part was estimated at € 328 400) and the anticipated 2.1% annual salary indexation (instead of 1.5% in 2017).

Furthermore, the Director adopted two budget modifications (re-allocation of funds between titles), respectively on 20 November 2018 and 10 December 2018 in order to address the actual annual salary indexation of 1.7% and the budgetary needs in the framework of the year end fine-tuning. The Steering Committee was informed accordingly.

On 17 December 2018, a second and last budget transfer (within same chapter) was authorised by the Director in order to optimize the budget consumption.

In total, with 3 modifications, 2 transfers and one amendment, we stayed within the internal indicator's target which foresaw a maximum of 6 budget modifications/transfers per year.

The administrative budget structure remained largely consistent with the ones from previous years with the staff expenditure representing 78% of the budget, whereas costs for the building, ICT and other operating expenditure represent 16.5% and the Programme Management Expenditure represent 5.5%.

1.2 Example of EU-added value of ERC funded projects

Since its foundation, ERC has demonstrated a new interpretation of EU-added value, based on the introduction of a pan-European competition and the capacity to attract leading researchers from a very large pool. The striking scientific value of ERC projects is confirmed by a new independent study showing that 79% of ERC projects were of major impact: 19% led to a breakthrough and 60% to a major scientific advance. Almost half of the projects have already left their mark on the economy, society and policy-making, whilst around three quarters are foreseen to do so in the medium- and long-term. Published in May, the analysis confirms the results announced in 2016 and 2017, with even a certain increase in overall impact in the latest study³⁴.

The following are just a few examples of ERC projects which produced breakthrough scientific results, published during 2018:

ERCEA procedure is being drafted following the instructions and guidance on the implementation of grant reductions received from the Directorate General for Research and Innovation.

³⁴ https://erc.europa.eu/news/impact_study_breakthroughs_major_advances

Cancer – know your enemy

ERC grantee Cédric Blanpain defined for the first time tumor growth phases during cancer progression and identified the types of tumor cells causing metastases in skin and breast cancer. Skin cancer is the most frequent cancer worldwide and breast cancer is the most frequent cancer in women. This breakthrough discovery in cancer research will have major implications for the diagnosis, prognosis and therapy of cancer patients.

Engineered crop plants to fight drought³⁵

Ana Caño-Delgado has been studying the plant steroid hormones, known as brassinosteroids, in *Arabidopsis thaliana* for more than 15 years. In 2018 she discovered that modifying brassinosteroid signalling in the plant vascular system, plants increase their resistance to water scarcity and grow normally. In the past, her team succeeded to enhance plant drought tolerance, but, due to the complex action of brassinosteroids, these plants were much smaller than those not modified. Her strategy is the first to improve hydric stress resistance in plants without interfering with their development and growth. Researchers have started trials on cereals and tomatoes in order to find solutions to increase the tolerance of crops to drought, one of the most important threats to agriculture today.



Energy Vulnerability and Urban Transitions in Europe

The ERC grantee Prof. Bouzarovski from University of Manchester studied energy poverty estimated to affect around 10% of the EU population, or 50 million Europeans. A major spin-off of the project has been the establishment in 2018 by the European Commission of the EU Energy Poverty Observatory (EPOV) to help EU Member States in their efforts to combat energy poverty. EPOV will improve the measuring, monitoring and sharing of knowledge and best practice on energy poverty. Prof. Bouzarovski is now Chair of the Observatory.

Microplastic pollution: a global threat for seas and soils³⁵

The scientific community has become aware in the last years of the damaging effects of pollution from small plastic pieces – less than a millimetre long. Two studies by ERC grantees warn about the long-term negative impact of microplastics on marine and terrestrial ecosystems throughout the world. The first study to which Erik van Sebille has contributed, the level of pollution in the Mediterranean Sea pairs the highest ever measured in the South China Sea. Microplastic pollution, however, is not only a threat for seas and oceans. Matthias Rillig found evidence that land-based pollution may strongly impact the terrestrial geochemical and biophysical environment.



³⁵ © www.istockphotos.com

1.3 Evaluation of the ERCEA operations

An independent evaluation of the Agency's 2015-2018 operations was launched in July 2018. The aim of the exercise was to evaluate the effectiveness, efficiency and coherence of the implementation of parts of the Union programmes by the Agency in the period from 2015 to 2018. The draft final report was presented to the Steering committee on 22nd February 2019 and will be disclosed in the AAR 2019.

2. ORGANISATIONAL MANAGEMENT AND INTERNAL CONTROL

This section explains how ERCEA delivered the achievements described in the previous section. It is divided into two subsections.

The first subsection reports the control results and all other relevant information that support management's assurance on the achievement of the financial management and internal control objectives³⁶. It includes any additional information necessary to establish that the available evidence is reliable, complete and comprehensive, appropriately covering all activities, programmes and management modes relevant to the DG.

The second subsection deals with the other components of organisational management: human resources, better regulation principles, information management and external communication.

2.1 Financial 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 Director-General. The reports produced are:

- Management reports on control results;
- The contribution of the Risk Management and Internal Control Director (RMIC), including the results of internal control monitoring at the Agency, in particular the reports on recorded exceptions, non-compliance events and any cases of 'confirmation of instructions' (Art 92.3 FR)
- The ERCEA reports of the ex-post audits results for FP7;
- The CAS reports of the ex-post audits results for H2020;
- The limited conclusion of the Internal Auditor on the state of control;
- 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 ERCEA.

This section reports the control results and other relevant elements that support management's assurance. It is structured into (a) Control results, (b) Audit observations and recommendations, (c) Effectiveness of the internal control system, and resulting in (d) Conclusions on the impact as regards assurance.

³⁶ Art 36.2 FR: a) effectiveness, efficiency and economy of operations; b) reliability of reporting; c) safeguarding of assets and information; d) prevention, detection, correction and follow-up of fraud and irregularities; and e) adequate management of risks relating to the legality and regularity of underlying transactions

2.1.1 Control results

This section reports and assesses the elements identified by management that support the assurance on the achievement of the internal control objectives³⁷. The ERCEA's assurance building and materiality criteria are outlined in the AAR Annex 4. Annex 5 outlines the main risks together with the control processes aimed to mitigate them and the indicators used to measure the performance of the relevant control systems.

Operational and administrative payments 2018							
		Payments made³⁸				Total administrative Expenditure	% of total (adm-in/op-erational)
		Pre-financing	Payments against cost statements	Experts' payments	Total operational expenditure		
2018	FP7		293,422,398.91		293,422,398.91	47 980 583	2.7%
	H2020	743,799,665.29	699,074,526.76 ³⁹	15,213,990.39	1,458,088,182.44		
	Total	743,799,665.29	992,496,925.67	15,213,990.39	1,751,510,581.35		
2009 - 2018		5,295,413,984.29	5,308,262,510.67	92,804,781.39	10,696,481,276.35	364 029 432	3.4%

Source of data: ABAC Data Warehouse

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

The final available payment budget for H2020 of € 1 430.30 million and for FP7 of € 280.73 million in voted credits⁴⁰ was fully consumed. Payment transactions for operational expenditures consist of pre-financing, interim, final payments and regularisation payments. Usually, a grant agreement of five years is financed by a pre-financing, paid at the start of the project, followed by three interim payments and one final payment.

It should be noted that in 2018, 56.67%⁴¹ of the total amount executed concerned payments against cost statements, while the remaining 43.33%⁴² payments executed concerned pre-financings and expert payments, both assessed as low risk transactions as regards to the control objective related to the legality and regularity of underlying transactions. Also, out of all 2018 payments against cost statements, 29.56% related to FP7 and 70.44% to H2020, compared to 60% for FP7 and 40% For H2020 at year end 2017.

While the legality and regularity of underlying transactions is underpinned for FP7 by ERCEA Monetary Unit Sample (MUS) error rate, no sufficient error rates results for H2020 from the Common Audit Service (CAS) are available at the time of finalising the AAR to draw any conclusion on the legality and regularity of H2020 payments.

As a consequence and in agreement with its parent DG, the ERCEA applies in the context of this AAR⁴³ the detected error rate of 1.48% deriving from the ERCEA FP7 programme

³⁷ 1) Effectiveness, efficiency and economy of operation; 2) reliability of reporting; 3) safeguarding of assets and information; 4) prevention, detection, correction and follow-up of fraud and irregularities; and 5) 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 36.2).

³⁸ The figures in this table include all types of credits (fund sources), like the voted credits and assigned revenue.

³⁹ The amount includes 1 late interest payment of € 287.88.

⁴⁰ Commitments voted for the year and EFTA ones (C1/EO).

⁴¹ In 2017, 57.44% of the total amount executed concerned payments against cost statements, while the remaining 42.56% payments executed concerned pre-financings and expert payments.

⁴² 42.56% of payments executed concerned pre-financings and expert payments in 2017.

⁴³ As for the AAR 2017.

to its H2020 expenditure for the purpose of the declaration of assurance and of calculating the Agency's estimated overall amounts at risk and their estimated future corrections. Indeed, since the ERCEA's beneficiary base remains the same as under FP7 and the specificities of the program have not been changed in H2020, it is unlikely that the latter programme will be adversely impacted by the error rate.

Furthermore, the first results from the CAS provide an ERCEA detected error rate of 0.61%⁴⁴; considering that the latter may evolve over the next year, the ERCEA decided to adopt a prudent approach for the estimated amount at risk by applying the ERCEA error rate for FP7 of 1.48%.

The assurance provided for this control objective covers FP7 as well as H2020 payments, whilst depending on the process, other control results⁴⁵ are reported either for H2020 only (call management and evaluations as well as granting), or for both programmes (grant implementation).

The new 2018 Financial Regulation introduces few additional reporting requirements:

- **Case of 'confirmation of instructions' (new FR art 92.3)**

No case was reported.

- **Cases of financing not linked to costs (new FR art 125.3)**

No case was reported.

- **Cases of flat rates >7% for indirect costs (new FR art 181.6)**

According to Horizon 2020 Rules for Participation indirect eligible costs of H2020 grants shall be determined by applying a flat rate of 25% of the total direct eligible costs. It is not a Commission decision, but the basic act that derogates from the Financial Regulation in this case. This applies to all Horizon 2020 grants, although in some cases the 25 % could be directly embedded within a unit cost (e.g. unit cost for clinical studies).

- **Derogations from the principle of non-retroactivity pursuant to Article 193 of the Financial Regulation**

Four grant agreements signed in 2018 derogate from the principle of non-retroactivity pursuant to Article 193 of the Financial Regulation. No cost was claimed to date on any of these grants.

1. Effectiveness

In order to be considered effective, controls are expected to meet the internal control objectives detailed hereafter and result in benefits.

- **Legality and regularity of the transactions**

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.

⁴⁴ Results are not statistically representative, as only 57 audited participations from the Specific ERCEA random selection of 160 planned participations to be audited by end of 2019, ie 80 participation to audit per year.

⁴⁵ Effectiveness in achieving ERCEA objectives, the efficiency and the cost-effectiveness,
ERCEA_aar_2018_final Page 25 of 51

ERCEA FP7 and H2020 operational expenditures

The control objective is to ensure that the ERCEA residual error rate does not exceed 2% for FP7, while for H2020 the ultimate aim is to achieve a level as close as possible to 2 %, on a cumulative basis by the end of the programme implementation. It is in line with the materiality criteria in annex 4.

ERCEA results of the ex post audits for FP7

The starting point for the calculation of the residual error rate 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 FP7⁴⁶, the ERCEA has adopted for FP7, since 2015, an alternative assessment to provide additional assurance on the ERC specific population, in line with annex 4 , in particular from the multi-annual (2009-2018) ERCEA residual error rate (MUS sample).

At year-end 2018, with a multi-annual detected error rate amounted to 1.48 % and the residual error rate to 1.12%, the ERCEA is confident that these results will stay below the materiality threshold of 2% at the end of the "Ideas" programme, thus positively supporting the ERCEA 2018 Declaration of Assurance.

Research family results⁴⁷ of the ex-post audits and expectations for Horizon 2020

At this stage of the programme lifecycle, cost claims totalling € 9 billion of requested funding had been received by the services by the end of 2018. The first Horizon 2020 audits were launched in the middle of 2016 and further audits were launched in 2017 and 2018. Two Common Representative Samples (CRS), Common Risk Samples and Additional Samples⁴⁸ have been selected. In total, by December 2018, 2383 participations had been selected for audit, covering all the services signing grants in Horizon 2020.

In total, the audit of 1155 participations has been finalised by 31/12/2018 (763 in 2018). This includes 164 out of 303 participations selected in the first 2 CRS.

The Research family error rates at 31/12/2018 are the following:

Overall Detected Error Rate⁴⁹ based on 1155 participations: 1.62 %

Detected Error Rate⁵⁰ based on 164 out of 303 participations selected in the first and second Common Representative Sample (CRS) is 2.43%. However, if we take into account the draft audit reports, then the expected representative error rate for the full sample will be around 3.32%.

Residual Error Rate for the Research and Innovation Family: 2.22 % (2.14% for ERCEA alone), expected to rise to around 2.45% when taking into account the draft audit reports.

ERCEA specific error rates:

Out of the 110 **ERCEA** participations included in the CAS audit plan, the related **overall Detected Error Rate** based on 96 audited participations so far is 0.90%.

⁴⁶ Please refer to annex 10 for details.

⁴⁷ Source of information: DG RTD - Common Audit Service

⁴⁸ This sampling accommodates special needs of certain stakeholders with regard to audit coverage and selection method. In addition, top ups, which are participations of selected beneficiaries which are added to the selected participations, are included in the total participations selected.

⁴⁹ Covering all types of samples (representative, corrective, risk based etc.) and providing global results.

⁵⁰ At this stage, this error rate is not named "common representative" error rate as the audits of the first CRS are not yet all finalised.

In addition, the **ERCEA detected specific error rate** of 0.61% is based on the results of 57 audited participations so far. This specific error rate derives from a random selection performed by the CAS only on ERCEA population. This selection encompasses a total 160 participations to be audited by 2019, i.e. 80 per year, in line with the CAS audit plan⁵¹.

In agreement with its parent DG, for the purpose of the declaration of assurance and the calculation of the Agency's estimated overall amount at risk and their estimated future corrections, considering the ERCEA limited H2020 ex post control results, the Agency applies the error rate of the ERCEA FP7 programme (1.48%) to its H2020 expenditure. Indeed, since the ERCEA's beneficiary base remains the same as under FP7 and the specificities of the program have not been changed in H2020, it is unlikely that the latter programme will be adversely impacted by the error rate.

Comments on the control results for the Research Family

As in 2017, the error rates set out above must still be treated with care. The two first CRS are not yet complete, and so the error rate is not yet fully representative of the expenditure that it covered. In addition, the first CRS was taken at an early stage of the programme in order to provide an early indication of the error rate and, also, to help assess whether the simplifications introduced in Horizon 2020 had been effective. The nature of expenditure in the first years of the programme may not be totally representative of the expenditure across the whole period of expenditure. And the programme is in any case multi-annual, so the error rates, and especially the residual error rate, must be considered over time. In particular, the cleaning effect of audits over time will tend to increase the difference between the representative/detected error rate and the residual error rate, with the latter finishing at a lower rate.

There is nevertheless evidence that the simplifications introduced in Horizon 2020, as well as the increased experience of major beneficiaries, are reducing the number and level of errors made by beneficiaries. However, number of errors still persists, and therefore actions to improve clarity of the rules, as well as compliance with them, have already been taken amongst research family:

- The Model Grant Agreement, and its accompanying annotations, have already been adjusted to introduce simplifications or clarifications on different points. The results of the first audits were considered in a working group bringing together auditors from the Commission and the Court of Auditors to see where additional simplifications and clarifications may be needed⁵².
- Considerable efforts have been made to ensure clear communication of the rules and guidance to participants and their auditors. In 2018, the Common Support Center has been attending and coordinating 15 events organised by the National Contact Points of members States and associated members with a total of 1819 participants.
- Lump sum funding has already been used for the SME stage 1 call grants. Trials of lump sum funding for collaborative projects began in 2018 to evaluate if this form of entitlement funding, which would avoid errors of legality and regularity, is appropriate to achieving all the objectives of research policy. These trials will continue in 2019, and include the extension of lump sum funding to the ERCEA Proof of Concept grants.

The Financial Statement accompanying the Commission's proposal to the legislative authority for the Horizon 2020 regulation states: "*The Commission considers therefore that, for research spending under Horizon 2020, a risk of error, on an annual basis, within **a range between 2-5 % is a realistic objective**, taking into account the costs of controls, the simplification measures proposed to reduce the complexity of rules and the related inherent risk associated to the reimbursement of costs of the research project. The ultimate aim for the **residual level of error** at the closure of the*

⁵¹ This selection method allows considering the results as representative only once all items have been audited.

⁵² This meeting took place on 14 March 2018.

programmes after the financial impact of all audits, correction and recovery measures will have been taken into account, is to **achieve a level as close as possible to 2%.**"

The first audit results suggest that the detected (and in future representative) error rate will remain within the established range. Together with the experience in FP7, they also suggest that the objective for the residual error rate will be respected.

Thus, ERCEA considers that the error rate will remain within the range of the materiality criteria established, so it does not consider that a reserve is needed for Horizon 2020 expenditure.

As regards **ERCEA administrative expenditure's** error rate, the result in 2018 (0.6%) is comparable to the one of 2017 (0.5%) and below its target value of 1.5%.

In the context of the protection of the EU budget, at the Commission's corporate level, the DG's and Executive Agencies estimated overall amounts at risk and their estimated future corrections are consolidated.

For ERCEA, the estimated overall amount at risk at payment⁵³ for the 2018 expenditure is 23.24 M€. This is the AOD's best, conservative estimation of the amount of *relevant expenditure*⁵⁴ during the year (1 599.1 M€) not in conformity with the applicable contractual and regulatory provisions at the time the payment is made⁵⁵.

This expenditure will be subsequently subject to ex-post controls and a sizeable proportion of the underlying error will be detected and corrected in successive years. The conservatively estimated future corrections⁵⁶ for the 2018 expenditure are 5.58 M€. This is the amount of errors that DG RTD conservatively estimates to identify and correct from controls that it will implement in successive years.

The difference between those two amounts leads to the estimated overall amount at risk at closure for the 2018 expenditure of 17.66 M€.

⁵³ In order to calculate the weighted average error rate (AER), the detected or equivalent error rates have been used; see note 6 to the table.

⁵⁴ "Relevant expenditure" during the year; see note 5 to the table.

⁵⁵ "Payments made" or equivalent; see note 2 to the table.

⁵⁶ The historic average of recoveries and financial corrections (ARC) received from the central services is 0.34%. However, further to 2017 ECA/IAS recommendations to RTD, ERCEA adjusted this value to 0.36% for grant management expenditure and used as best estimation: the difference between overall detected error rate (1.48%) and the ERCEA residual error rate (1.12%). For other expenditures, ERCEA assumed that the ex-post future corrections would be 0%.

Estimated overall amount at risk at closure

ERCEA	"payments made" (FY; m€)	<i>minus</i> new prefinancing [<i>plus</i> retentions made*] (in FY; m€)	<i>plus</i> cleared prefinancing [<i>minus</i> retentions released* and deductions of expenditure made by MS] (in FY; m€)	= "relevant expenditure" (for the FY; m€)	Average Error Rate (<i>weighted AER</i> ; %)	estimated overall amount at risk <i>at payment</i> (FY; m€)	Average Recoveries and Corrections (<i>adjusted ARC</i> ; %)	estimated future corrections [and deductions] (for FY; m€)	estimated overall amount at risk at closure (m€)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Programme, Budget Line(s), or other relevant level	as per AAR annex 3, table 2	as per ABAC DWH BO report on prefinancing	as per ABAC DWH BO report on prefinancing	= (2) -/+ (3) +/- (4)	Detected error rates, or equivalent estimates	= (5) x (6)	<i>H-ARC</i> (as per ABAC DWH BO report on corrective capacity), <i>but adjusted</i>	= (5) x (8)	= (7) - (9)
FP7	293.42		518.27	811.69	1.48%	12.01	0.36%	2.92	9.09
H2020	1 458.09	744.17	25.51	739.43	1.48%	10.94	0.36%	2.66	8.28
Total operational budget	1 751.51	744.17	543.78	1 551.12	1.48%	22.95	0.36%	5.58	17.37
Total operating budget	47.98			47.98	0.60%	0.29			0.29
Overall ERCEA	1 799.49mEUR	744.17 mEUR	543.78mEUR	1 599.1mEUR	1.45%	= 23.24 mEUR; and 1.45% of (5)	0.35%	= 5.58 mEUR; and 0.35% of (5)	= 17.66 mEUR; and 1.10% of (5)

Notes to the table

- (1) Differentiated at the level of type of budget (administrative or operational) and at the level of the programme for the operational budget.
- (2) Payments made or equivalent, such as after the expenditure is registered in the Commission's accounting system, after the expenditure is accepted or after the pre-financing is cleared. In any case, this means after the preventive (ex-ante) control measures have already been implemented earlier in the cycle.
- (3) New pre-financing actually paid by out the Agency itself during the financial year. The "Pre-financing" is covered as in the context of note 2.5.1 to the Commission (provisional) annual accounts.
- (4) Pre-financing actually having been cleared during the financial year (i.e. their 'delta' in FY 'actuals', not their 'cut-off' based estimated 'consumption').
- (5) For the purpose of equivalence with the ECA's scope of the EC funds with potential exposure to L&R errors (*see the ECA's 2017 AR methodological Annex 1.1 point 15*), also our concept of "relevant expenditure" includes the payments made, subtracts the new pre-financing paid out, and adds the previous pre-financing actually cleared during the FY. This is a separate and 'hybrid' concept, intentionally combining elements from the budgetary accounting and from the general ledger accounting.
- (6) In order to calculate the weighted Average Error Rate (AER) for the total relevant expenditure in the reporting year, the detected error rates have been used for operational budget.
For administrative expenditure, type of low-risk expenditure, the error rate resulting from ex-ante checks on salaries was used.
- (8) The historic average of recoveries and financial corrections (ARC) received from the central services is 0.34%. However, further to 2017 ECA/IAS recommendations to RTD, ERCEA adjusted this value to 0.36% for grant management expenditure and used as best estimation:
The difference between overall detected error rate (1.48%) and the ERCEA residual error rate (1.12%). For other expenditures, ERCEA assumed that the ex-post future corrections would be 0%.

- **Other legality and regularity indicators**

a) Evaluation

ERCEA 2018 AWP		
Ineligible proposals (not withdrawn)	2018 Target	31/12/2018
StG, CoG, AdG 2017	1.5%	1.1%
SyG 2018	3%	1%
PoC 2018	5%	3.2%
Evaluation complaints		
% of re-evaluations out of the overall proposals submitted and following requests for redress	All calls: 0.1%	0.03%

The above table presents the percentage of ineligible proposals and evaluation complaints. The average percentage of ineligible proposals for the three PoC deadlines has not exceeded the target of 5%. However, the third call deadline registered a higher number of ineligible proposals (6%) due to applicants reapplying to the same call year.

During the reporting period, the Commission received six requests for legal review in accordance with Article 22 of Regulation 58/2003 ('Article 22 requests') concerning ERCEA's decisions. The Agency provided timely contributions to the parent DG in all cases, although the Commission considered one as inadmissible and did not treat it as an Article 22 request. All the handled five requests stemmed from unsuccessful applicants. Three requests concerned the outcome of the evaluation (i.e. subject-matter outside the scope of the Commission's legal review). The other two requests concerned respectively an alleged conflict of interest and the development of the Principal Investigator's interview. Already in 2018, the Commission closed three of these five cases as unfounded. Two cases are thus still pending.

b) Grant preparation and signature

ERCEA 2018 AWP	2018 Target	31/12/2018	31/12/2017
% execution of L2/L1 commitment (C8)⁵⁷	100%	100%	99.9%

Source of data: ABAC

Throughout the year, 1 226 grant agreements for a total of € 2 044.84 million were signed, a comparable volume to the one achieved in 2017, allowing to effectively meet ERCEA's objectives.

⁵⁷ The indicator for the percentage execution L2/L1 is dependent on the timing of the evaluation process.

ERCEA specific control indicators	31/12/2018
% of exclusion from granting process following financial viability checks	-
% of weak financial viability checks / total financial viability checks	11%

Source of data: CORDA

In 2018, 9 Financial Viability Checks (FVC) were performed either related to H2020 granting concluded this year or to amendments signed in 2018 for change of Host Institution in FP7 projects.

Only one of these FVC check, resulted in a "weak" overall outcome, which will be follow up at the next payment.

c) Grant implementation

ERCEA control indicators – 2018						
Rejection of interim and final payment costs	Number of Invoices		Amount		% of ineligible costs on total declared costs⁵⁸	
	H2020	FP7	H2020	FP7	H2020	FP7
Total declared cost	1 836	1 791	726 650 969.92	825 691 609.99	0.14%	0.37%
Of which Ineligible costs declared⁵⁹	61	291	1 052 192.02	3 082 329.27		

Source of data: DWH BO reports

The above table presents the ex-ante control results, reflecting the percentage of declared costs considered as ineligible.

In addition, during the reporting period, the Scientific Management Department assessed a total of 1 449⁶⁰ scientific reports, split half/half in mid-term and final scientific reports, out of which 44% relate to FP7 Ideas and 56% to Strengthening Frontier Research (H2020). Further to this assessment, 1 FP7 and 99 H2020 mid-term reports have been subject to a 9 months follow up.

- **Fraud prevention, detection and correction**

The ERCEA has developed and implemented its own anti-fraud strategy since 2011, elaborated on the basis of the methodology provided by OLAF. It has been updated twice, in 2013 and 2015. Further to the Commission's Anti-fraud Strategy's (CAFS) update, expected to be approved in mid-March 2019, and the Research Family Anti-fraud

⁵⁸ Covering ex-ante rejections by Financial Officers and independent certified auditors (CFS).

⁵⁹ 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).

⁶⁰ Namely, 587 StG, 254 CoG, 437 AdG, 156 PoC and 15 SyG scientific reports (final and mid-term).

(RAFS) on-going update, ERCEA will renew its Strategy in 2019. Throughout 2018, the Agency contributed to the on-going revision of the RAFS.

The previous ERCEA action plan covering the period 2015-2017 was fully implemented by the end of 2017, providing the Agency a strong capacity to prevent, detect and report potential fraud. Recurrent measures, as the fraud risk assessment, trainings and case handling, were also implemented in 2018 providing reinforced fraud arrangements. A new Agency Anti-fraud Action Plan for the period 2018-2020 has been drafted in 2018.

At year-end, 11 open cases⁶¹ were registered in the ERCEA Register of irregularities and potential fraud ("ERCEA Register"). These entries concerned only cases related to the management of ERC grants.

Indeed, four cases involving an ERC beneficiary were under OLAF investigation at the end of 2018. On 7 cases, ERCEA applied reinforced monitoring to the beneficiaries, including 3 new allegations received by the Agency from external whistle-blowers reporting potential irregularities or fraud in the management of ERC grants. One further potential irregularity was detected during selection procedure.

In addition, one allegation under OLAF selection was dismissed and an OLAF investigation was closed without recommendations for the Agency. Finally, the ERCEA register shows seven cases closed in 2018.

- **Other control objectives: reliability of reporting**

DG BUDG, on behalf of the Accounting Officer of the Commission, launched at the end of February 2016 a second evaluation of the accounting internal control environment in the ERCEA. This horizontal evaluation concerned the control environment of the six executive agencies. Three recommendations which were rated "important" were issued to ERCEA in the final report received on 4 April 2018. Two out of three were implemented⁶²; they concerned the clear indication of all actors and roles involved in the interim payment check-list and improvements to bring to the Chief Accounting Officer's synthesis note. In regards to the remaining recommendation, related to the complete registration in ABAC workflow of legal commitments resulting from expert contracts, an exemption for the registration of expert contracts in ABAC LCK (Legal Commitment management) has been requested by DG RTD⁶³. Discussions between DG RTD and DG BUDG on this subject are still ongoing.

In parallel, in accordance with a new strategy for the validation of local systems DG BUDG assess on a continuous basis the accounting quality for each DG, service or executive agencies on the basis of a desk review of available documentation, resulting in a risk score. In 2018, the accounting risk for ERCEA assessed by DG BUDG⁶⁴ is medium and the risk score is 25%. According to DG BUDG's risk scoring methodology this assessment is due to the observation reported by the Court of Auditors with impact on accounting on the operational budget (see § 2.1.2) and to the fact that there is still one outstanding recommendation regarding the last validation of local system as described above.

2. Efficiency

Time to Inform Successful Applicants of three calls exceeded their related targets due to constraints stemming from the Agency's call calendar.

In 2018, the TTS and TTG results of the 2017 calls met their AWP targets, confirming the already excellent results of 2017 and reaffirming the effectiveness of all measures implemented in the past years by the ERCEA for improving the KPIs' results (please see the detailed results in section 2.1.1.1 and Annex 12).

⁶¹ End of 2017, 10 cases were registered in the "ERCEA Register".

⁶² Ares(2018)5458620 - 24/10/2018

⁶³ Ares(2018)4355007 - 23/08/2018

⁶⁴ Ares(2018)6077363

The ERCEA maintained its high efficiency in terms of Time to Pay observed also in previous years. All type of payments (i.e. pre-financings, interim, final and experts) are well below their legal targets (please see the detailed results in section 2.1.1.1).

The average Time to Amend (TTA) respectively of 13.5 for H2020 and 12.6 days for FP7 was within the set targets (45 days for both programmes). Furthermore, for H2020 the value of the indicator improved compared to 2017 (21.8 days) shows an overall efficiency gain of 8.3 days. This positive result proves the soundness of the changes introduced in the late 2017 related to the Compass/SyGMA amendment workflow, followed by the introduction of a comprehensive internal guide to the amendment process allowing also a coherent application of rules.

3. Economy

Operational budget	31/12/2018	31/12/2017
Total cost of fin. management & control⁶⁵ / total value of operational payments made (target:<3%)	2.7%	2.9%

4. Conclusion on the cost-effectiveness of controls

Cost-effectiveness indicators are provided for each control stage on the basis of the number of posts allocated which results from a workload assessment performed during the last quarter of the year. In addition, an overall, Agency-wide, cost effectiveness indicator, comparing the administrative versus the operational 2018 payments, is taken into account as well as per framework programme.

The result of the overall cost effectiveness indicator in 2018 (2.7%) is comparable to the one of 2017 (2.8%) and remains below its target value of 3%.

In terms of the costs/benefits analysis of controls, 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 allow the ERCEA to fulfil its mission statement and operational objectives. Also, benefits of grant implementation controls can be measured by the low error rate resulting from ex-ante controls – H2020: 0.14% and FP7: 0.37%, 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 and H2020. This is also supported by the low level of the same indicator on the operating budget, which remains stable at 0.5% compared to 2017. Finally, as non-quantifiable benefits of 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.

Based on the most relevant key indicators and control results, ERCEA has assessed the effectiveness, efficiency and economy of the control system and reached a positive conclusion on the cost-effectiveness of controls.

⁶⁵ For a nearly 'pure' grant management DG/EA, this is approximated by comparing the administrative/operating budget to the total operational budget.

2.1.1.1 Implementation of the internal control system for the operational budget

1. Effectiveness

- **Budget execution:**

The operational appropriations are dissociated appropriations, meaning that ERCEA manages separate budgets for commitments and payments. In 2018, the global commitment budget of € 1 885.04 million was fully committed on the basis of the 2018 ERC Financing Decision. In regards to the available payment budget for Horizon 2020 of € 1 430.30 million and for FP7 of € 280.73 million in voted credits⁶⁶ it was also fully consumed further to the signature of 729 grants mainly related to 2017 calls.

Indeed, throughout the year, 1 226 grant agreements for a total of € 2044.84 million were signed⁶⁷, a comparable volume of transactions as last year allowing to effectively meet ERCEA's objectives.

Finally, the execution of payments credits reached 100% for both grant implementation and experts.

As regards the parallel implementation of two framework programmes, the workload related to payments posed a particular challenge in 2018, as payments for both programmes increased in the number of transactions (+4.3% compared to 2017).

Thus, ERCEA achieved its budget execution target, preserving its excellent KPIs as in previous years, a high satisfaction of beneficiaries and researchers, a steady improvement and simplification of all its procedures and operations despite some technical limitations (e.g. processing of termination in absence of a complete COMPASS workflow and late implementation of the specific workflow for mid-term scientific reporting).

In 2018 the ERCEA continued to implement in parallel the two framework programmes. In this framework, the payments for the H2020 programme continued to increase significantly in the number of transactions in comparison to the decreasing numbers of payments for the FP7 programme (phase-out).

ERCEA achieved its budget execution target, preserving its excellent KPIs as in previous years, a high satisfaction of beneficiaries and further improvement and simplification of its procedures and operations. In this respect, improvements of the processes in COMPASS workflow have been achieved with the aim to facilitate beneficiaries and end-users.

The ERCEA Grant Management Tool was further enhanced, so as to bring about even further automation and harmonisation in the process, for example, following the Internal Audit Service 2017 Audit on the Closure of FP7 projects. The resulting action plan was timely implemented during the first quarter of 2018. Consequently, the FP7 procedures for payments and audit implementation were updated and a few technical improvements were put in place enabling, among others, the registration of beneficiaries' disagreements/complaints, improving traceability of operations, business continuity and management supervision of actors involved and bringing about increased efficiency, while maintaining high quality and control effectiveness, keeping risk at a minimum.

⁶⁶ Commitments voted for the year and EFTA ones (C1/EO).

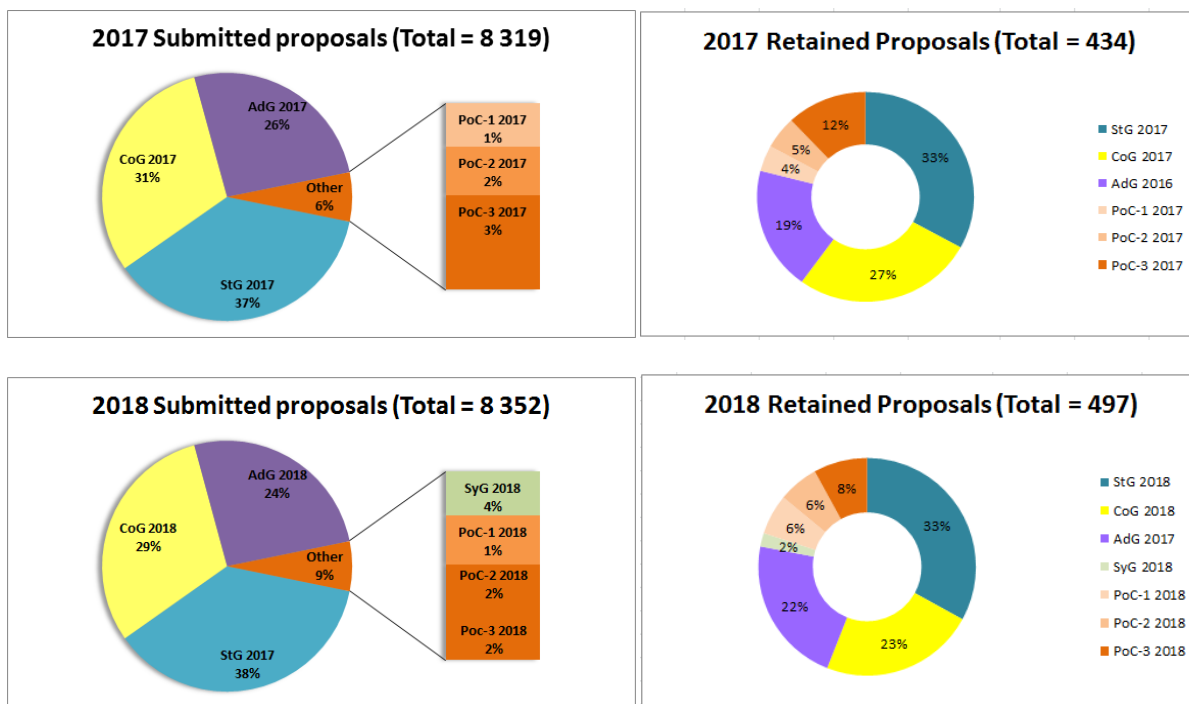
⁶⁷ On C8 commitment credits voted in 2017 and carried forward to 2018.

In regard to H2020, the ERC final reporting workflow was successfully seen through to implementation in COMPASS/SyGMA, duly serving the financial and scientific reporting needs, and following a long period of fruitful discussions with the CSC.

- **Other effectiveness indicators:**

In 2018, each proposal was reviewed by an overall average number of 3.4 remote referees in addition to the reviews written by ERC panel members, in line with year-end 2017 and exceeding the 2018 target, thus guaranteeing the quality of the evaluation process. In addition, the success rate per call met its target, with the exception of the CoG and the PoC.

The Agency received overall 3.9% more proposals compared to 2017 which still fell short of the expectations (AWP target: 5% increase), considering that the Call Synergy 2018 (with 300 proposals) was not existing in 2017. The distribution below slightly differs from the one showing the retained proposals⁶⁸.

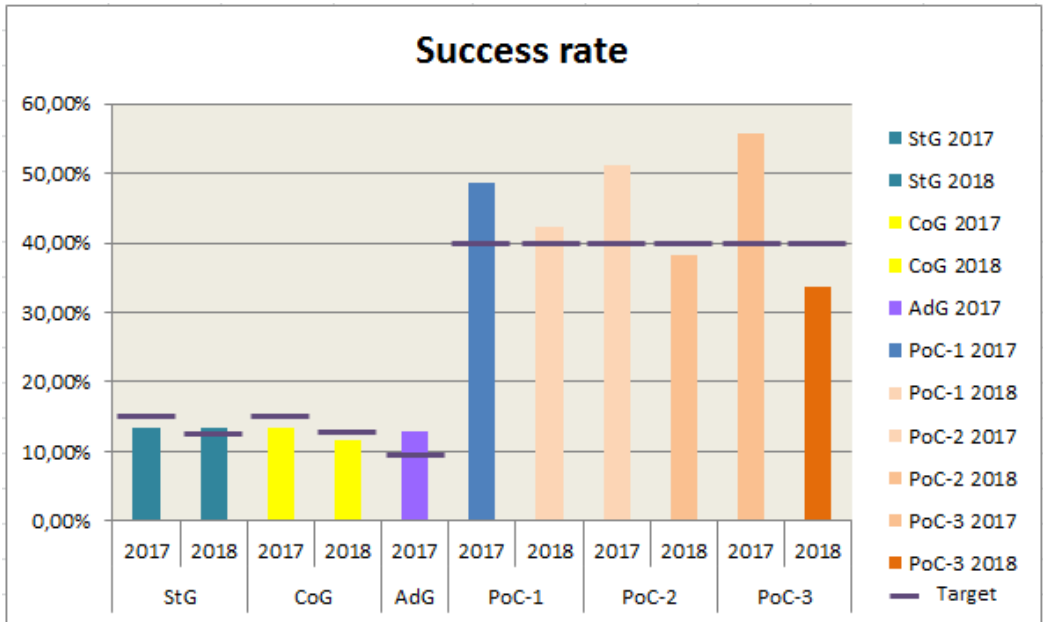


Explanatory note: Starting Grant (StG), Consolidator Grant (CoG), Advanced Grant (AdG), Proof of Concept (PoC). Source: ABAC Data Warehouse

The differences in the distributions of retained proposals are due to the evaluation of AdG 2017 being on-going at the time of writing, while the submitted proposals reflect the results to the 2018 call. Thus, the chart related to the 2018 retained proposals reflects the result of AdG 2017, as the submission and evaluation of this call is overlapping 2 calendar years.

Also, these differences are reflected in the success rates per call, in the range of 11.9% for CoG 2018 up to 38.1% for PoC 2018, both results being below their respective target. The other calls have results above their respective AWP targets: 12.9% for AdG 2017, 13.5% for StG 2018 and 9.2% for SyG 2018.

⁶⁸ It should be noted however that retained proposals consists of main list plus reserve list proposals.

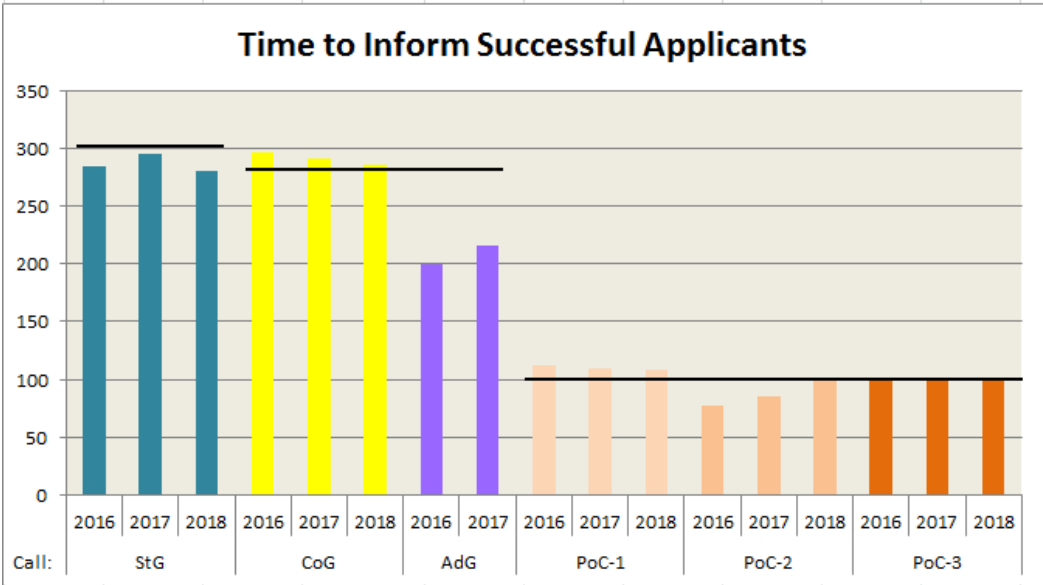


Source: ABAC

2. Efficiency

Time To Inform, Time To Sign & Time To Grant (TTI, TTS & TTG):

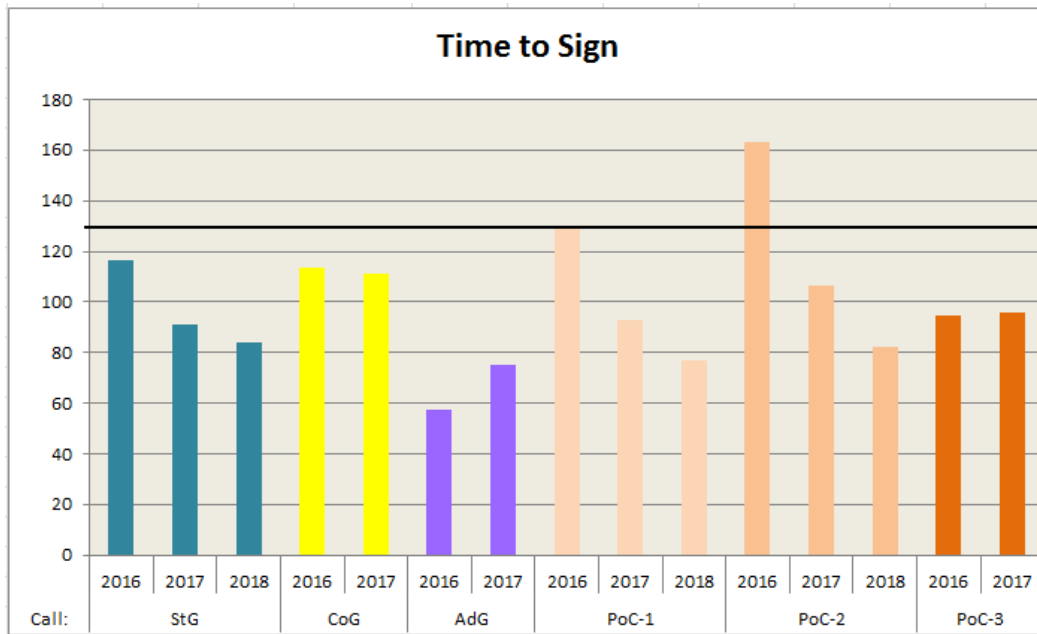
ERCEA's 2018 results of the Time to Inform successful applicants of three calls (out of seven), namely COG (+5 days), PoC1 (+8 days) and SyG (+42 days) exceeded their related targets due to constraints stemming from the Agency's call calendar. The Synergy Grant's deviations are explained by the reintroduction of this complex call with three evaluation steps instead of two as in the other main calls.



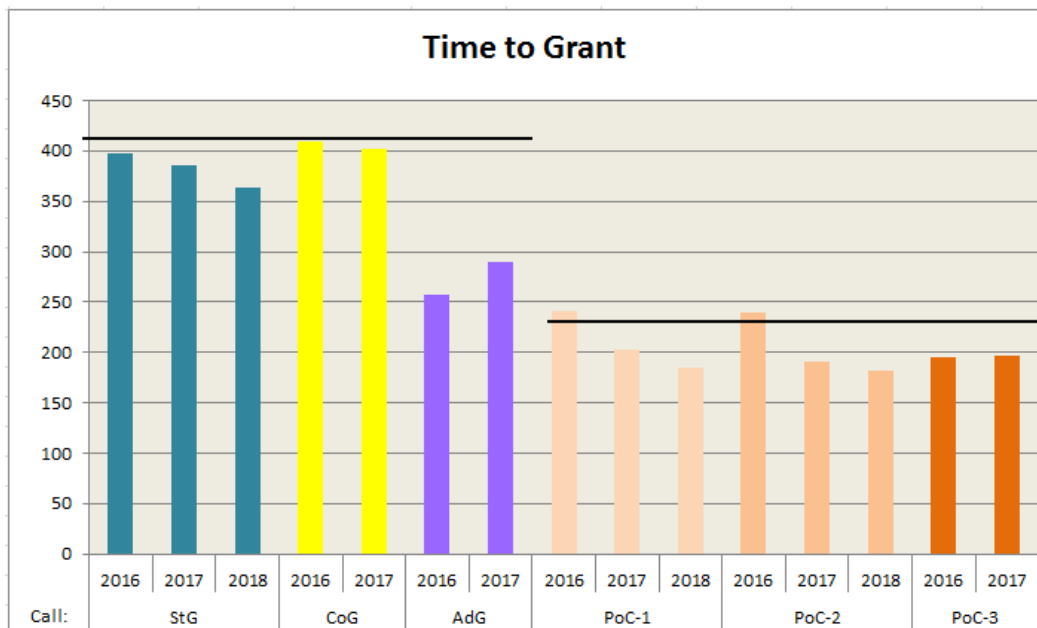
However, the Agency assesses that these shortcomings do not impact the efficiency of its operations, as the reduction of the TTS⁶⁹ - meeting all call targets - allowed to achieve

⁶⁹ H2020 legal framework rules the Time to Sign (TTS) which measures the period of time from the date of informing applicants of their successful evaluation result to the grant signature. Thus, the grant preparation process starts at the moment when the evaluation process ends, the triggering event being the date of the information letter to applicants.

the TTG targets for the 2018 calls completed considering respective completion rate⁷⁰ (signed in 2018).



The TTS and TTG results achieved in 2018 for the 2017 calls displayed a significant improvement compared to the results observed in 2017 for the 2016 calls, thanks to an effective strategic planning and resources attribution as well as granting process simplification. It is worth mentioning that concerning TTS the highest improvements was found in the PoC 2017 (deadline 1/2/3) calls and the StG 2017 call with a reduction of 45.7, 72.7, 23.3 and 29.7 days respectively. For TTG the most substantial gain concerned the PoC 2017 (deadline 1/2/3) calls with a decrease of 48.7, 64.7, 22.3 days respectively and for the CoG 2017 call of 24.2 days.



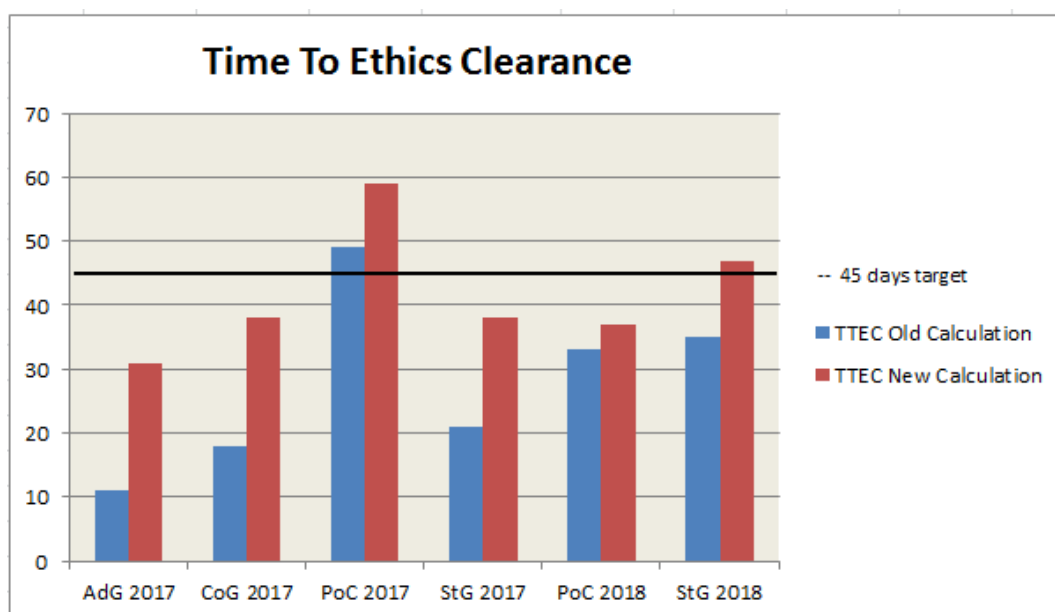
Source of data: Compass

⁷⁰ Completion rates for 2018 calls: for StG 86.6%; for CoG 17.2%; for PoC 59.4% and for SYG 11.1%.

Regarding the ethics review of proposals, 2018 has seen the fruits of the improvements to the ethics review process that were initiated in 2017. The speed at which grants are ethically cleared before granting has improved considerably over the last year. This is measured as the Time-To-Ethics-Clearance (TTEC) and is defined as the time between the sending of the invitation letter (in Compass) and the ethics clearance of the grant (in SEP)⁷¹. On average, this figure has gone down from about 60 days in previous years to about 35 days in 2018⁷². Consequently, this reduction in the time-to-ethics-clearance had a positive impact on the TTS since both processes run in parallel and the signature of the grant cannot be completed unless the ethics has been cleared.

In regard to ethics monitoring, about 1400 monitoring notes were produced during 2018, of which 500 related to amendments and 900 related to payments.

An important milestone in this domain was the deployment of a new IT tool to assist the ethics monitoring process, the Ethics Monitoring Tool (EMT) deployed early January 2018. This tool complements the functionality of Compass/SyGMA and allows the ethics team to follow-up on the ethics monitoring process related to payments and amendments, both for FP7 and H2020. This tool is expected to improve the efficiency of the ethics monitoring process as from next year.



Source of data: Compass and SEP

The ERCEA Ethics procedures updated in 2017 and implemented during 2018 ensured faster ethical clearance, and as a result the granting process did not encounter major delays as experienced the previous years. To this respect the new procedure, and the reinforcement of the ethics team, addressed the shortcomings encountered in the past.

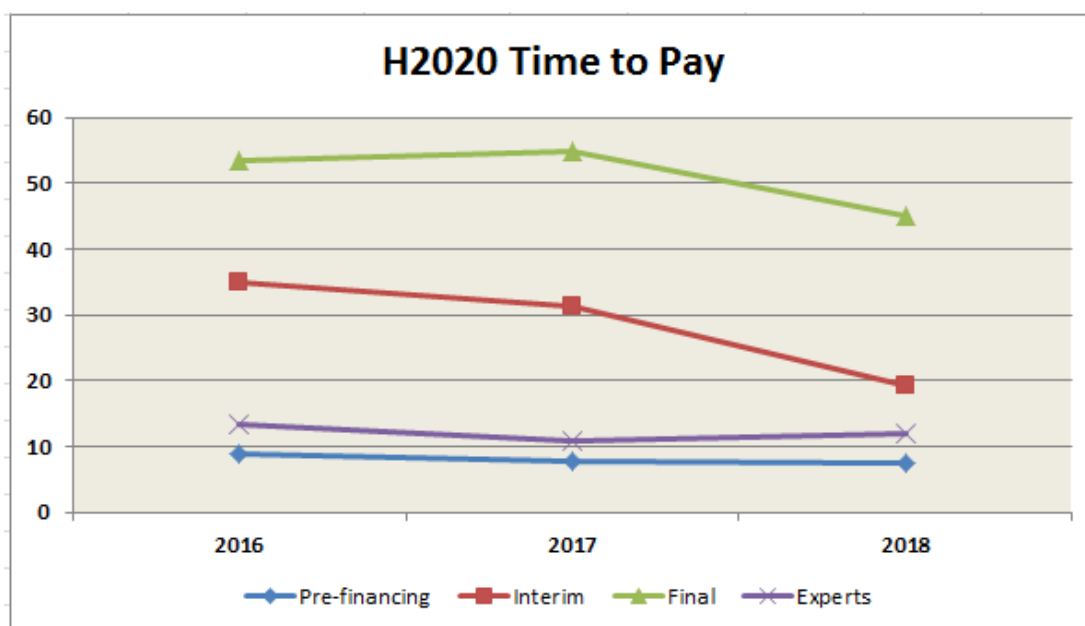
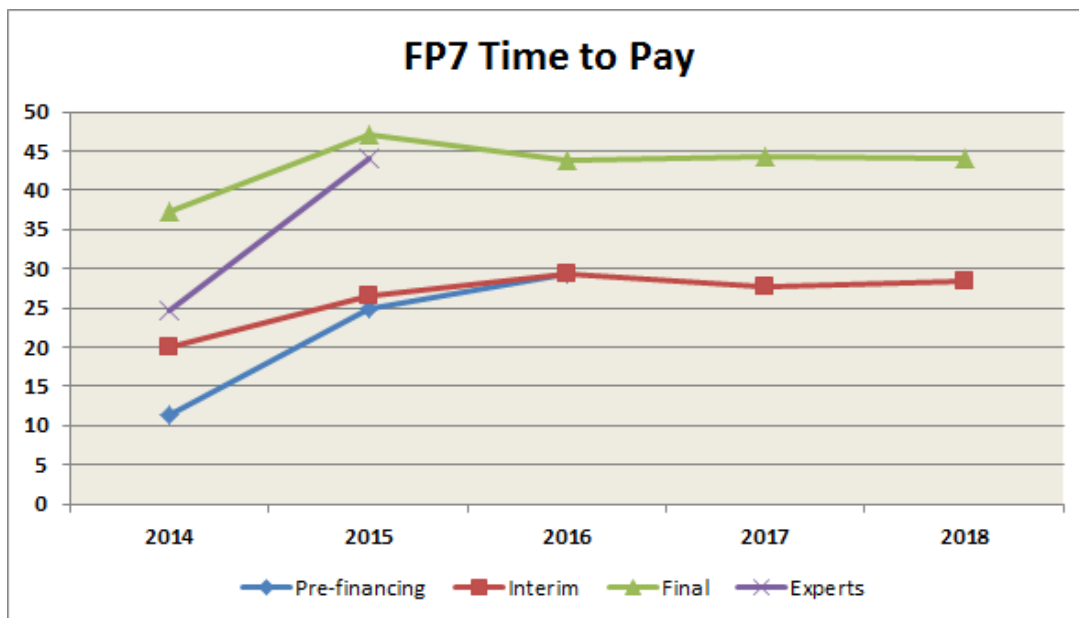
Time to pay FP7 and H2020 – Grants and experts:

The 2018 TTP results calculated in days related to both FP7 and H2020 are well below their respective target for all types of payments. Moreover, they are either comparable with corresponding 2017 results or even improving, as for H2020 interim and final payments. These results are also reflected in the % of payments paid within the contractual timeframe with almost⁷³ all payment types exceeding their target.

⁷¹ Time to Ethics Clearance reflects the number of days between the Invitation letter and the Ethics Clearance outcome. The Ethics process effectively starts once the scientific evaluations are completed, so before the invitation letter. Thus, proposals may be cleared before the invitation letter is sent.

⁷² The time-to-ethics clearance used to be calculated differently in the past. Therefore, the figures mentioned in the 2017 AAR cannot be compared with those in the 2018 AAR.

⁷³ H2020 Experts payments achieving 98.9% versus a target of 100%.



Source of data: ABAC Data Warehouse

3. Economy = the cost of controls

Research Family harmonised KPIs	31/12/2018	31/12/2017
Average project mngt cost per running* project (staff FTE * standard staff cost)⁷⁴ (ALL projects - Range of € 5.000 – 10.000)	€ 3 764.38	€ 3 425.58
Average number (Range of 15 – 35) & value of running projects managed 'per' staff FTE (Range of € 1 Mio – 50 Mio)	25.47 € 45.2 Mio	27.92 € 54.4 Mio

⁷⁴ 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.

4. Conclusion on the cost-effectiveness of controls

The result of ERCEA's overall cost effectiveness indicator, which compares the administrative budget to the total operational budget, reached 2.7%⁷⁵ in 2018, and is at comparable level to the 2017 (2.9%), below the agency's target value of 3%.

In addition, the results of ERCEA's overall cost effectiveness per framework programme are 4.9% for FP7 and 2.3% for H2020, reflecting the more intensive internal control system of FP7 compared to H2020 - which is trust-based - as well as by the different maturity levels of the two consecutive programmes.

Finally, the costs related to call coordination, evaluation and selection of proposals is estimated at 0.87% of the total H2020 committed credits and the ones related to grant preparation and signature at 0.32% of the total individual commitments. The costs related to grant implementation stood at 1.35% of the total payments, while those of ex post controls at 0.34% of the total audited amount.

2.1.1.2 Implementation of the internal control system for the operating budget

1. Effectiveness

ERCEA 2018 AWP	2018 target	31/12/2018	31/12/2017
% budget execution commitments	99%	99.6%	99.8%
% budget execution payments (C1+C8)	99%	99.5%	99.1%

ERCEA 2018 AWP	2018 target	31/12/2018	31/12/2017
No material findings related to the sound financial management and legality and regularity of budget's underlying transactions in the financial report of the CoA	0	0	0

2. Efficiency

ERCEA 2018 AWP	2018 target	31/12/2018	31/12/2017
Number (and % of total) of late payments for the administrative budget	< 20 (<1%)	25 1.69%	12 0.6%
Average time to pay (days)	15 days	12.93	13.9
% of error in transactions related to staff expenditure (salaries) detected through ex-ante checks	< 1.5%	0.6%	0.5%

The number of late payments exceeded the target mainly due to non-compliance reports.

⁷⁵ DG RTD, as the lead DG, ensures the overall effective coordination within the Research and Innovation Family. Its Common support service (CSC) provides common services (legal support, ex-post audit, IT systems and operations, business process.) to all entities implementing H2020. The CSC ex-ante controls costs represent 0.46% of the total H2020 budget implemented in 2018 while the part dedicated to ex-post audits accounts for 0.12%.

3. Economy

Administrative budget	31/12/2018
Cost of fin. management & control / total value of operating payments made	2.4%

4. Conclusion on the cost-effectiveness of controls

ERCEA assessed positively the result of the cost-effectiveness of managing ERCEA administrative budget of 2.4% considering the intensity of ex-ante controls performed which is commensurate to the related risks, in particular reputational. These controls cover a high volume of transactions per year (about 1 700⁷⁶) of low value (about € 8 000⁷⁴).

2.1.2 Audit observations and recommendations

This section reports and assesses the observations, opinions and conclusions reported by auditors in their reports as well as the limited conclusion of the Internal Auditor on the state of internal 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, the 2018 audit results support the Declaration of Assurance as issued recommendations were rated important by the IAS and accepted by the ERCEA.

Indeed, the Internal Audit Service issued two final reports in 2018. The first one relating to the audit on the "H2020 grant management (Phase II) in ERCEA"⁷⁷ resulted in one recommendation touching on the enhancement of the effectiveness and efficiency of the ethics monitoring process. The Agency's action plan has been approved by the IAS⁷⁸ and will be implemented throughout 2019.

The second audit related to "Dissemination and exploitation of Horizon 2020 results"⁷⁹. It resulted in one recommendation highlighting areas for improvement as regards the monitoring of compliance with dissemination and exploitation contractual obligations and reporting requirements. At the time of writing, the action plan, which is been coordinated with the Research Family, was not yet finalised.

During 2018, the ERCEA fully implemented the action plans resulting from the audits on "Human Resources management in ERCEA" (2016) and "Closure of FP7 projects in ERCEA" (2017). Both were closed by the IAS in June 2018.

The IAS concluded⁸⁰ in its contribution to the 2018 AAR process, based on the work undertaken in the period 2016-2018, that the internal control systems audited are effective.

Based on the above, the ERCEA management believes that the recommendations issued in 2018 do not raise any assurance implications. Furthermore, these are being implemented as part of the Agency's continuous commitment to further improve its internal control system.

⁷⁶ Excluding salaries

⁷⁷ Ares(2018)6101661, dated 28/11/2018.

⁷⁸ Ares(2019)555905, dated 31/01/2019.

⁷⁹ Ares(2019)557337, dated 31/01/2019; the audit covered multi-DG, with DG RTD/CSC being the lead auditee.

⁸⁰ Ares(2019)929063, dated 15/02/2019

Further to its audit on the 2017 provisional annual accounts related to the administrative budget, the Court of Auditors gave a clean opinion regarding the true and fair view as well as the regularity and legality of the annual accounts. However, the Court observed that the Agency had not introduced e-submission by the end of 2017: the on boarding process had been started in 2018 and the Agency is since the end of 2018 ready to use e-submission. The Court also noted that "In 2017, the Commission's Internal Audit Service issued an audit report on the processes related to the closure of FP7 projects. The Agency prepared an action plan to address any potential areas for improvement and submitted an implementation report to the IAS for follow-up purposes." The ERCEA replied that following the action plan established by the Agency and agreed by the IAS, all actions were timely implemented by the ERCEA and submitted on 9 April 2018 to the IAS for its follow-up⁸¹.

Further to its audit on the reliability of the 2017 provisional annual accounts related to the operational budget, the Court reported in its statement of assurance (SoA) for the financial year 2017 (clearing letter CL-9258) that a technical mistake in the year-end cut-off calculation due to the use of a wrong de-commitment rate was discovered. This resulted in a change of accounting methodology between 2016 and 2017.

The Agency officially agreed on 11 June 2018⁸² that a different de-commitment rate was applied for the cut-off calculation at year end of 2017, departing from its related cut-off methodology regarding the de-commitment rate. However, the Agency noted that this technical mistake resulted in an underestimation of the cut-off amount below DG BUDG's materiality threshold of €50 m for correction, thus not affecting the reader's opinion of the EC annual accounts.

2.1.3 Assessment of the effectiveness of the internal control systems

The Commission has adopted an Internal Control Framework based on international good practice, aimed to ensure the achievement of policy and operational objectives. In addition, in regards to financial management, compliance with the internal control framework is a compulsory requirement.

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

ERCEA has assessed its internal control system during the reporting year and has concluded that it is effective and that the components and principles are present and functioning as intended.

Since mid-2017, ERCEA undertook the necessary steps to implement the Internal Control Framework (ICF) adopted by the Commission in April 2017. The Head of the Resources and Support Department was appointed as ERC Risk Management and Internal Control (RMIC) officer. Also, the Agency defined and communicated as part of the 2018 AWP process its list of internal control monitoring criteria.

Furthermore, to ensure the effective implementation of this framework, ERCEA pursued the transition exercise started during the second semester 2017⁸³ by performing a comprehensive compliance assessment of its internal control system with the characteristics which underpin the principles of the ICF. This exercise showed that out of the 50 characteristics of the ICF, 30⁸⁴ are aligned to the previous framework⁸⁵, thus complying with the ICF.

⁸¹ Closed by the IAS in June 2018.

⁸² Ares(2018)3048056

⁸³ Cf. 2017 ERCEA AAR p. 42.

⁸⁴ Including characteristic 40 being not applicable to Executive Agencies, as in the remit of DG Research and Innovation: "Impact assessment and evaluation of expenditure programmes, legislation and other non-spending activities are performed in accordance with the guiding principles of the Commission's better

Out of the total of 20 characteristics identified as new or with an expanded scope, ERCEA is already compliant with 10⁸⁶ mainly as the related requirements were enshrined in another source (Staff regulations, Financial Regulation, AAR instructions, procedures...). As regards the remaining 10⁸⁷, the prudent approach in assessing compliance allows to take the opportunity of this transition to identify some improvements. The latter will benefit ERCEA's internal control system as for example by fostering the tone at the top through the definition of expected behaviours related to the standard of conduct, the staff's accountability for the performance of internal control responsibilities, by highlighting the links of day-to-day business to internal control matters via a leaflet and a video. This assessment resulted in an action plan which includes above mentioned actions as well as some updates of procedures and strategies to reflect recent developments as well as the update of the intranet pages.

For the ICF effectiveness assessment⁸⁸, the Agency followed the Implementation guide related to the Internal Control Framework of the Commission⁸⁹. Indeed, the Agency defined, the list of its internal control monitoring criteria as a first source of its annual self-assessment. The latter was communicated to Commission's Central Services end of 2017 as part of the Agency's 2018 Annual Work Programme process. The 2018 results⁹⁰ allow concluding to the overall effectiveness of all principles, with minor improvements to be implemented. Although the awareness of ERCEA staff on ethics and integrity (principle 1) has risen by 8% compared to the benchmark of 60%, the result is below the target of 80%. Also, the awareness of staff on fraud prevention, detection and handling potential fraud and irregularities (principle 8) has risen from 42% to 73% in 2018, reaching almost the target of 80%.

The above assessment was complemented by ERCEA continuous monitoring performed by the Head of Department in charge of the risk management (RMIC). The main instruments used were the quarterly review by Management of the Agency's performance and indicators, supported by the internal scorecard, which also includes internal control indicators. In addition, the implementation rate of audit recommendations within deadline has reached 100%, a significant improvement compared to 2017. Also, the Risk Register shows at year end an implementation rate of mitigating measures related to medium and high risks within deadline at 56%, as in 2017 (i.e. 5 out of 9 actions were implemented on time, the remaining 4 being postponed). It is underlined that none of these risks have materialised.

In summary, the ERCEA assessed the internal control system during the reporting year and concluded that internal control principles are present and functioning, although minor area for improvement have been identified, resulting from the transition to the Internal Control Framework, however without having impact on the declaration of assurance.

regulation guidelines, to assess the performance of EU interventions and analyse options and related impacts on new initiatives."

⁸⁵ Internal Control Standards for effective management (SEC (2007)1341, updated in June 2014).

⁸⁶ Characteristic n°2 (standard of conduct), n°6 (DAS signed by Dir & RMIC), n°7 (RMIC prepares and coordinates the AAR), n°11 (competence framework), n° 18 (mission), n° 21 (objectives as basis for committing resources), n° 36 (Control over technology), n°48 (risk based periodical assessment), n°49 (deficiencies), n°50 (remedial actions).

⁸⁷ Characteristic n° 1 (tone at the top), n° 3 (alignment to standards), n°10 (reporting lines), n° 15 (accountability for the performance of internal control responsibilities), n° 24 (risk tolerance), n° 33 (control integrated in a control strategy), n° 37 (security of IT systems), n° 38 (appropriate control procedures to achieve objectives), n°45 (communication to external parties on internal control to 1/3rd parties) n°47 (knowledge management).

⁸⁸ This assessment is pending the results for 3 indicators stemming from the Staff opinion survey.

⁸⁹ Version 2018.

⁹⁰ Please refer to annex 11 for details.

2.1.4 Conclusions on the impact as regards assurance

This section reviews the assessment of the elements reported above (in Sections 2.1.1, 2.1.2 and 2.1.3) and draws the overall conclusion supporting the declaration of assurance and whether it should be qualified with reservations.

Overall Conclusion

The information reported in the AAR covers both the operational budgets related to the FP7 Ideas and to the H2020 Excellence Frontier Research programmes as well as the operating budget managed by the ERCEA in 2018 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.

Management's assessment is based on 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" and reports on measures implemented to prevent, detect and mitigate fraud.

As demonstrated throughout the report, the results of performance and control indicators positively support the five statements of the declaration of Assurance. Although few exceptions were noted relating to the efficiency component of the sound financial management in the evaluation phase, these do not impair the declaration of assurance. Indeed, neither the Agency's budget execution nor its reputation was impacted. Also, the Agency effectively achieved its operational objectives, its granting and payment efficiency, provided evidence of the legality and regularity of its underlying transactions and of its overall cost-effectiveness.

The assessment of the internal control system resulted in an overall positive conclusion, supporting the Declaration of assurance. In addition, the Agency sees the implementation of the ICF as an opportunity to improve some aspects of its internal control systems.

Last but not least, fraud prevention and detection mechanisms in place did not reveal anything that would adversely impair the Declaration of Assurance.

The 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"). Management confirms the non-occurrence in 2018 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 has signed the Declaration of Assurance.

2.1.5 Declaration of Assurance

DECLARATION OF ASSURANCE

I, the undersigned,

Executive Director of 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 view⁹¹.

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 work of the Internal Audit Service and the lessons learnt from the reports of the Court of Auditors 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 European Research Council Executive Agency.

Brussels, 27/03/2019

Signed in ARES

Pablo AMOR

⁹¹ True and fair in this context means a reliable, complete and correct view on the state of affairs in the DG/Executive Agency.

2.2 Other organisational management dimensions

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 three initiatives show how these principles are implemented in our Agency:

The evaluation of the 2018 Synergy call, which used a redesigned evaluation process (different from the one used in the 2012 and 2013 Synergy calls), ran smoothly and more efficiently with the support of three software-based tools developed by the B2 data analysis group (Step 1 domain classification using a machine learning algorithm, Step 2 dynamic formation of panels and Step 3 schedule optimiser for interviews).

As in previous years, the grant management department ran in 2018 two types of training for the benefit of the ERC beneficiaries: PI centric events (aimed at the Principal Investigators) and (ii) HI events (aimed at the administration of the hosting institutions).

While the two types of events converge in their scope to explain the rules and procedures under which the ERC grants are implemented under FP7 and H2020 framework programmes, in order to mitigate the risk of errors and to facilitate the effective and efficient implementation of the projects, they differ very much in approach and content.

The **PI events** bring together the researchers and focus on the rights and obligations of the PI as the central pillar of the individual ERC grants, with great emphasis on their legal obligations such as time commitments, professional and scientific conduct and integrity, dissemination and open access, portability, selection and fostering of a performant team, etc. In 2018, the ERCEA continued the same approach towards trainings, organised five PI centric events in Germany, Belgium, Greece, The Netherlands and Denmark reaching to over 250 PI. PIs continue to value very much these events stating that they feel these are "a special service just for them" and there is an increasing demand for early stages training, meaning training of PIs as soon as possible after the signature of their grants, so that they can set the ground for sound management of the grants from the very beginning (trend to be followed in 2019).

In addition, the ERCEA provided in 2018 its tailor-made **Host Institution (HI) Event** training programme for Financial Administrators of ERC grants by delivering hands-on/interactive case-studies in all areas of the H2020 Grant Management Lifecycle (Grant Preparation, Financial Reporting, Amendments and Audit). Key focus is placed on H2020 financial issues that create the most difficulties and result in the highest percentage of areas (Personnel Costs, Internal Invoices, etc.).

Out of a total of 44 HI Events (FP7/H2020) since their introduction in 2009, six events took place in 2018: Belgium (2), Greece, Denmark, Portugal and Austria with an additional two beneficiary initiated mini events in Italy (Pavia and Rome). The H2020 HI Events started in 2016 and have reached out to date to 41% of all ERC Host Institutions with more than 300 Host Institutions having participated (82% of the top 100 beneficiaries). The events enhance the positive communication channels between the beneficiaries and the ERCEA staff. Increasing the financial administrators' knowledge helps reduce weaknesses in HIs' internal control systems and subsequently contributes to maintaining a low ERC error rate.

Building on the experience gained from the first years of granting in H2020, ERCEA further simplified its granting process by updating related internal procedure with the aim

of improving the Agency's efficiency, as illustrated by the improved TTS results in 2018 compared to 2017.

As regards FP7, ERCEA effectively managed the increase of 13,7% of final transactions (vs 2017), reflected in efficiency gains thanks to a series of enhancements introduced in the ERC management tool (CPAY). Under H2020, the increase in transactions compared to 2017 reach 28,4% in 2018 (+38,2% payment appropriations vs 2017) and the efficiency was improved by IT improvements as well as the development of ERC-specific solutions ensuring time savings and high quality in operations. Thus, the increased workload required only 2 additional posts.

This section covers also the human resources and information management as well as external communication⁹².

2.2.1 Human resources management

In 2018, the ERCEA hired 69 new staff members, and exceeded its target occupation rate of 98% by reaching 99.2% by the end of the year. The Agency employed 494 agents on 31 December 2018. The average turnover rate was 7.4%, slightly below the 7.7% rate of 2017.

The internal mobility scheme continued to be enhanced in the effort to support the professional engagement and development of the Agency's staff. Over the period, two new career officers have been trained and appointed. A total of 55 positions were published internally, including all new posts as well as posts becoming vacant, resulting in 10 internal mobility moves. Moreover, 19 agents changed their type of contract by moving to a higher function group or changing grade within the Agency after having succeeded in staff selection processes.

The target of 9% comes from an interpretation of "mobility" that encompasses also *mobility in the interest of the service* – i.e., the percent of staff moving between services no matter the reason of the move. Indeed, our figure of 2.1% refers only to *mobility following internal publication* ("internal mobility"). Therefore, 9% target is unrealistic in this context given the specificity of our organisation.

As foreseen, the Agency organised nine specific selection processes (5 FG IV, 1 FG III, 2 SNE and 1 TA) in 2018, in view of filling current and future vacant posts. A total of 64 CAs and 16 SNEs were included on the resulting Reserve Lists.

In view of increasing the number of SNE staff in ERCEA and in accordance with the staffing foreseen in the ERCEA financial statement, the Agency organised an awareness event of SNE positions for the Permanent Representations and the selection efforts led to the secondment of five SNEs. One selection process made use of the newly launched Contract Agent Job Market in the context of the new Implementing Rules which came into effect in the ERCEA in February 2018, for which the Agency provided information and guidance to the staff. The Agency also continued to support TA 2(f) Inter-Agency Mobility, publishing five posts and recruiting on one agent. The ERCEA participated in a joint Research Agent TA selection with the REA.

In view of preparing its staff allocation decision for the year 2020, the Agency performed a workload assessment across all departments with a harmonized methodology for the operational departments on the one hand and the horizontal services on the other.

As in 2017, the ERCEA training offer focussed on staff empowerment, collaborative working and collaborative managerial excellence: 135 training actions have been organised in-house throughout 2018, which together with Commission training offer,

⁹² For an extensive reporting on all components, please refer to Annex 2.

brought the ERCEA staff to an average number of 5.2 formal training days per staff member. With a view to adapt the staff's talent, skills and competencies to new requirements, HR established a mapping of skills and competencies through a pilot project focusing on four job profiles as recommended by the IAS audit of 2016.

The Agency launched a job-shadowing exercise with DG RTD which was well received by the staff of both organisations and will be implemented in 2019.

Following the agreement between the ERCEA, the REA, DG RTD and OIB, the ERCEA transformed the seventh floor of building COVE A into a state-of-the-art evaluation facility, which has been in use since September and was inaugurated by the Commissioner for Research and Innovation as the "Kafatos Evaluation Center" in December. The challenging office space situation experienced in 2018 was addressed by converting the majority of the liberated 24th floor evaluation rooms into office space.

Internal Communication in 2018 worked towards ensuring a regular flow of information to the Agency's staff through the intranet, e-mails (including a new bi-weekly e-Bulletin), audio-video productions as well as the INSIDE magazine.

In view of enhancing knowledge sharing and collaboration across the organisation, the working group dedicated to "Knowledge Management" worked on the development of a strategy and implementation of concrete actions.

In its aim to keep the Agency's staff engaged, ERCEA staff also elected a new Staff Committee in June 2018 and achieved a participation rate of 82% in the EC Staff Survey 2018 – the best Commission-wide.

Objective: The Executive Agency deploys effectively its resources in support of the delivery of the Commission's priorities and core business, has a competent and engaged workforce, which is driven by an effective and gender-balanced management and which can deploy its full potential within supportive and healthy working conditions.

Indicator 1: Percentage of female representation in middle management
Source of data: ERCEA

Baseline (2017: 35%)	Target 2019: 50% Results 2018: 38,5%
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Indicator 2: Percentage of staff who feel that the Agency cares about their well-being
Source of data: Commission staff survey

Baseline (2016: 58%)	Target 2018: 60% Results 2018: 69%
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Indicator 3: Staff engagement index
Source of data: Commission staff survey

Baseline (2016: 70%)	Target 2018: ≥ 70% Results 2018: 73%
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Main outputs in 2018:

Output	Indicator	Target	Result 2018
To support Agency's core business by providing the required number of staff on time	Occupation rate at year end	98%	99.2%

To develop internal mobility in order to offer more career development prospects to staff	% of staff movements within the ERCEA ⁹³	9%	2.1%
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2.2.2 Information management aspects

Data Protection

In 2018, the Commission adopted an action plan⁹⁴ in the context of the implementation of the Regulation on data protection in the EU institutions (Regulation 2018/1725).

In order to ensure compliance with this regulation, the ERCEA took several actions. An inventory of the data processing operations has been made and new templates have been drafted (for record of processing personal data, Specific Privacy Statement and Data Protection Impact Assessment). The controllers are frequently reminded by the Data Protection Officer (DPO) about the necessity of complying with the data protection general rules, in particular as regards lawfulness, data minimization and storage limitation for each processing operation they are responsible of.

In addition, all notified (to the DPO) processing operations have a correspondent specific privacy statement (SPS) giving in a clear and easily understandable language all mandatory information as required in Articles 15 and 16 of the new Regulation.

Some restrictions of data subjects' rights apply in the framework of a list of activities (e.g. for antifraud, whistleblowing, disciplinary and administrative procedures). Internal rules governing restrictions of data subjects' rights have not been published by the Agency considering that we don't have yet the official opinion of the Legal Service of the Commission to confirm if the Executive Agencies (EAs) can publish legally binding internal rules in the Official Journal. The issue has been discussed at Research family level, in particular in the DPOs forum, and it was agreed that the DG responsible for each procedure in which a restriction is envisaged (eg. fraud, HR, EDES etc) would have to include the Executive Agencies in their internal acts.

Last but not least, a training programme has been organized by the DPO for all staff members of the Agency. The training is provided per unit and is tailor-made with real case studies applicable to their field of activity.

Other information management aspects

Results are provided in Annex 2.

2.2.3 External communication activities

The ERC has a mandate to communicate with the scientific community, key stakeholders and the general public on its news and achievements. Its 2018 communication activities followed 3 main objectives⁹⁵:

Attract the best ideas and the brightest minds

The focus of this objective is to target excellent researchers around the world and raise

⁹³ Number of staff movements within the ERCEA divided by the average number of staff over the year.

⁹⁴ Cf. C(2018)7432.

⁹⁵ See Annex 2.4 for detailed KPIs and results.

awareness of the ERC funding schemes and international agreements. To do so, ERC took part in global scientific gatherings and organised international campaigns in the USA and Brazil. It also promoted content related to career paths and opportunities across many of its own media, collaborating with EU Delegations outside Europe, the Euraxess offices, the National Contact points and other key partners.

Share the passion for frontier science

The variety of research covered by the ERC provides a rich source of content to communicate beyond the research community. This year, the ERC used this communication potential to reach science media and journalists, as well as to create its own news stories. These stories presented as videos, podcasts and articles populated its website, the newly created online magazine, as well as ERC's social media channels. In addition, for the first time, efforts were made to create a network with the Host Institutions' communication offices – a useful partner in spreading the stories of ERC grantees, for example, when announcing the results of new ERC calls.

Position the ERC as a success story for Europe

To demonstrate the relevance and the added value of the ERC for Europe and its citizens, the ERC organised several communication activities targeting decision-makers at international, EU and national levels, key influencers and opinion-leaders, as well as members of the public who have an interest in research related topics. These included a joint STOA-ERC event at the European Parliament in Strasbourg and its annual participation in the World Economic Forums in Davos and Tianjin. Press activities were organised to enhance the ERC's visibility and reputation for excellence and to support its broader narrative within the European Union. The ERC President and the members of its Scientific Council took part in numerous communication and media occasions to promote this message.

These external communication actions supported the wider corporate narrative on the added value of the EU, its budget and the Horizon 2020 programme for research and innovation. The ERCEA cooperated closely with DG COMM and DG RTD throughout the year.