



Annual Activity Report 2021

European Research Council
Executive Agency

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.....	9
D. Provision of information to the Commissioner	9
1. Implementation of the Agency's Annual Work programme - Highlights of the year	10
1.1. Management of Calls.....	10
1.2. Grant Management.....	13
1.3. Scientific follow-up.....	17
1.4. Feedback to policy.....	18
1.5. Support to the ERC Scientific Council	19
1.6. Implementation of ERCEA operating budget.....	20
1.7. Example(s) of EU-added value of ERC funded projects.....	21
2. MODERN AND EFFICIENT ADMINISTRATION AND INTERNAL CONTROL	22
2.1. Financial management and internal control.....	22
2.1.1. Control results.....	23
2.1.1.1 Implementation of the internal control system for the operational budget.....	32
2.1.1.2 Implementation of the internal control system for the operating budget.....	35
2.1.2. Audit observations and recommendations.....	36
2.1.3. Assessment of the effectiveness of internal control systems.....	38
2.1.4. Conclusions on the assurance.....	39
2.1.5. Declaration of Assurance	41
2.2. Modern and efficient administration – other aspects	42
2.2.1. Human resources management.....	42
2.2.2. Digital transformation and information management	43
2.2.3. Sound environmental management	44
2.2.4. Initiatives to improve economy and efficiency of financial and non-financial activities.....	44

THE ERC AND ITS AGENCY IN BRIEF¹



The mission of the European Research Council (ERC) is to attract the highest quality research in Europe through competitive funding and to support investigator-driven frontier research across all fields, on the basis of scientific excellence. Through open calls for proposals, ERC grants lead by starting and established researchers aim to offer funding opportunities and confer status and visibility on the best brains in Europe, while also attracting talent from abroad.

¹ The graph presents 2021 key figures.

Complementing the Commission's research grant portfolio, the ERC strives to build the European research base to respond to the needs of a knowledge-based society necessary to meet global challenges, with the potential of bottom-up frontier research, thus contributing to all headline ambitions of the von der Leyen's Commission.

The ERCEA, operating on the basis of the powers delegated to it by the European Commission, is the dedicated implementation structure administering the ERC action. Thus, it has a unique governing structure with the Scientific Council being responsible for the scientific programming and monitoring, while the agency ensures its day-to-day management as well as the one related to the grant management. Further to the delayed adoption of the new research and innovation framework programme, Horizon Europe (HE)² and in a view to maintain its call and evaluation planning, the agency ensured the adoption of the 2021 ERC Work Programme in February 2021³, in close cooperation with its parent Directorate General (DG) Research and Innovation and the Commission central services.

Hence, the ERCEA opened three calls for proposals for frontier research projects under the new HE framework programme for a total budget of EUR 1.5 billion, attracting 8 453 applications and implemented the last Horizon 2020 (H2020) calls, signing 653 new grant agreements. The ERCEA achieved excellent budget execution results reaching 100% for its operational⁴ and administrative budget.

In 2021, the ERC as well as the ERCEA, experienced organisational changes. The contract of the former and interim ERC President's, Professor Jean-Pierre Bourguignon ended on 31 August 2021 and the new ERC President, Professor Maria Leptin, took office on 1 November 2021. The troika of the three ERC Vice Presidents, Professor Eveline Crone, Professor Andrzej Jajszczyk and Professor Nektarios Tavernarakis, led the ERC during the transition months. In addition, the ERCEA Director, Waldemar Kütt, retired on 31 December 2021, and Laurence Moreau is the acting Director since 1st of January 2022. Moreover, in the management team, three managers moved to new functions within ERCEA, four (in addition to the director) left the agency and another four were newly seconded to it.

2021 was another challenging year considering the uncertainties related to the timely adoption of HE, the Brexit's impact and the longlasting global pandemic requiring staff's flexibility and resilience. Yet, thanks to its staff commitment and to the excellent collaboration with its governing bodies, the ERCEA maintained its outstanding performance.

² Regulation [\(EU\) 2021/695 of the European Parliament and of the Council of 28 April 2021 establishing Horizon Europe – the Framework Programme for Research and Innovation, laying down its rules for participation and dissemination, and repealing Regulations \(EU\) No 1290/2013 and \(EU\) No 1291/2013; Council Decision \(EU\) 2021/764 of 10 May 2021 establishing the Specific Programme implementing Horizon Europe – the Framework Programme for Research and Innovation, and repealing Decision 2013/743/EU.](#)

³ European Commission Decision C(2021) 930 of 22 February 2021, while the ERC Work programmes are under normal circumstances adopted during the summer of year n-1.

⁴ Related mainly to the implementation of H2020 actions and to the last FP7 transactions.

EXECUTIVE SUMMARY

This Annual Activity Report is a management report of the ERCEA Director to the College of Commissioners. Annual Activity Reports are the main instrument of management accountability within the Commission and constitute 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 Treaties⁵.

A. Highlights of the year

In 2021, the ERCEA began implementing the first ERC Work Programme under the new Framework Programme – Horizon Europe (HE), as well as continued to support the ERC Scientific Council in its endeavours to champion basic research in Europe. The agency provided its analytical input, among others, to the new mentoring programme to encourage and support applicants from countries with modest application rates, the endorsement of the San Francisco Declaration on Research Assessment (DORA), the Pact on Research and Innovation, and the new governance of the European Research Area (ERA), as well as the Conference on the Future of Europe.

Also, the ERCEA, under the guidance of the ERC Scientific Council Working Group on Science behind the Projects (SBP), continued its work on the portfolio analysis of ERC funded projects to identify projects contributing to the priorities of the von der Leyen's Commission with a particular focus on the following priorities: the European Green Deal, a Europe Fit for the Digital Age, as well as Promoting our European Way of Life in responding to health crises and ensuring the best possible care for diseases. The outcome of this analysis shall be published in 2022.

The ERCEA also closely monitored the state of play of the association of third countries to HE, in particular of Switzerland, the United Kingdom (UK) and Israel which traditionally achieved the highest success rates in ERC calls (20% of ERC funding regularly went to principal investigators working at UK host institutions). The political uncertainty around the UK's association has affected the ERC's ability to predict application numbers and the executive agency's human resources (HR) planning.

Last year, the ERCEA launched a continuous improvement programme to face the challenges resulting from the CBA⁶ and from the increasing workload. Eight projects scrutinizing different ERCEA processes were set in motion, and the first ones yielded results in the first semester of 2021. For example, the ERCEA will reduce the number of financial reports requested from projects from four to two and payments from five to three in HE. This is expected to save significant work in the mid-term for the Grant Management Department.

The ERCEA conducted three re-organizations in 2021. First, the Grant Management Department created equally sized units that no longer focus on specific ERC calls to achieve

⁵ Article 17(1) of the Treaty on European Union.

⁶ CBA: Cost Benefit Analysis; an exercise conducted by DG Budget.

a better spread of the work. Second, the internal communication team was downsized and moved from the HR Unit to the Communication Unit in order to profit from more synergies among communication professionals. Finally, the newly delegated feedback to policy activity will be coordinated in a new sector, “Scientific Impact and Feedback to Policy” in the Scientific Management Department.

Over the years, the ERC supported many excellent researchers and their teams, including Prof. Benjamin List and Prof. Giorgio Parisi, who became in 2021 the most recent ERC-funded Nobel Laureates respectively in Chemistry and Physics. ERC grantees have also been the recipients of numerous other prestigious prizes in a variety of research fields.

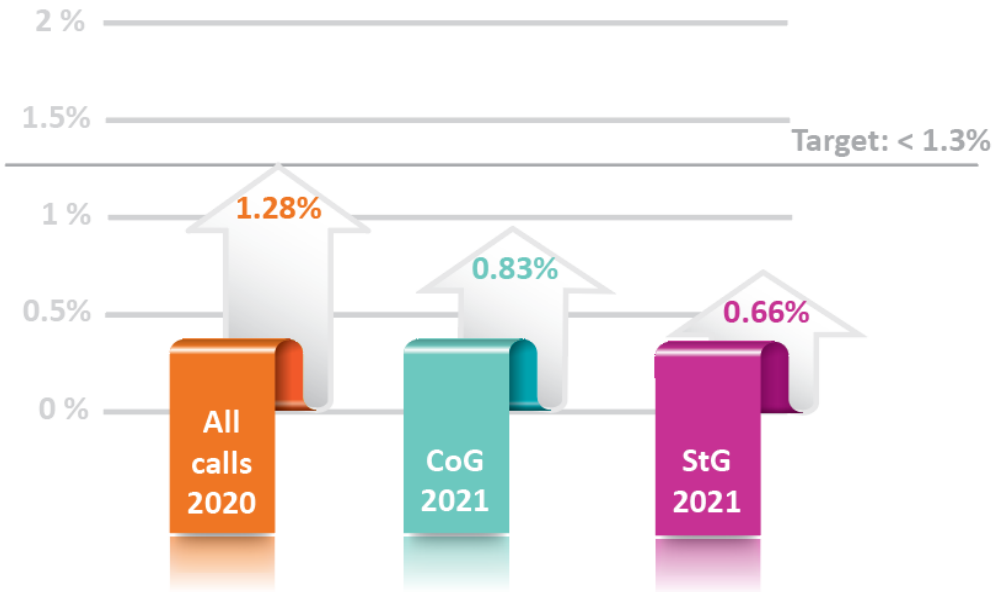
By the end of 2021, ERC grantees had won nine Nobel prizes and authored almost 200 000 peer-reviewed publications, of which 6.3% were among the top 1% of highly cited papers. This considerably exceeds the 1.8% target set for H2020, which is testament of the high quality knowledge created by ERC grants recipients.

Finally, the ERC Scientific Council welcomed in the autumn 2021 its new President, Professor Maria Leptin and both the Council and the ERCEA have assisted her in assuming her new role.

B. Key Performance Indicators (KPIs)

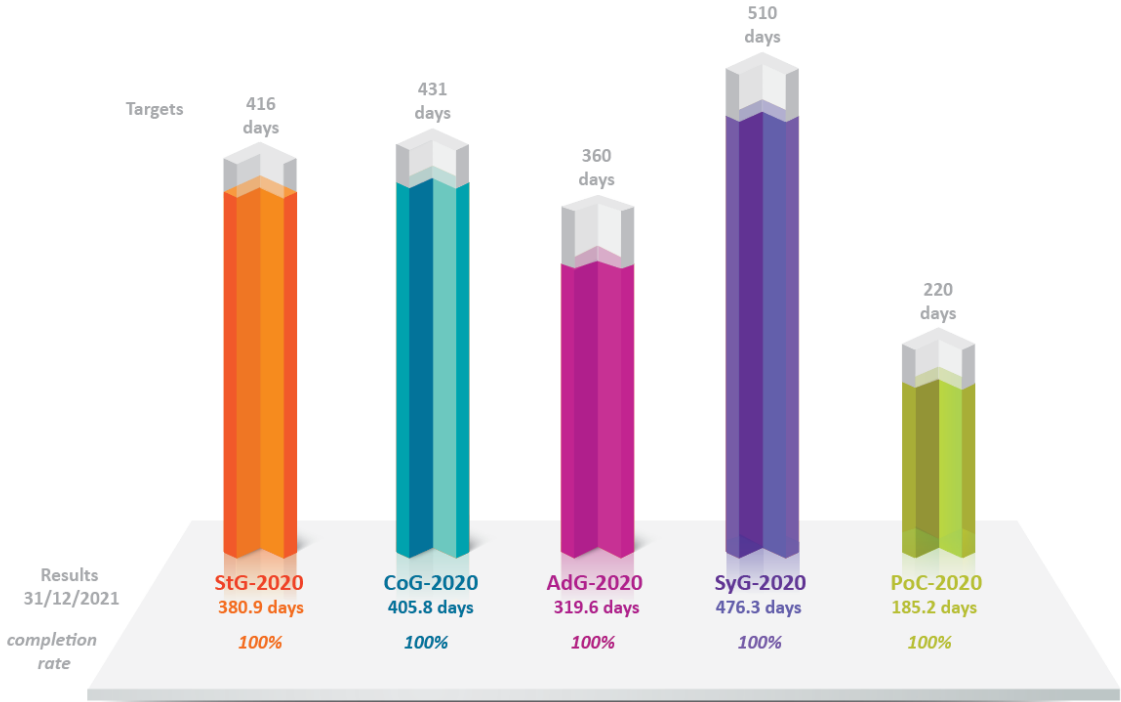
The results of ERCEA’s five key performance indicators⁷, together with their targets, reflect what was laid out in the agency’s 2021 Annual Work Programme for all its funding schemes: Starting Grants (StG), Consolidated Grants (CoG), Advanced Grants (AdG), Synergy Grants (SyG) and Proof of Concept Grants (PoC)

1. Overall percentage of redress cases received

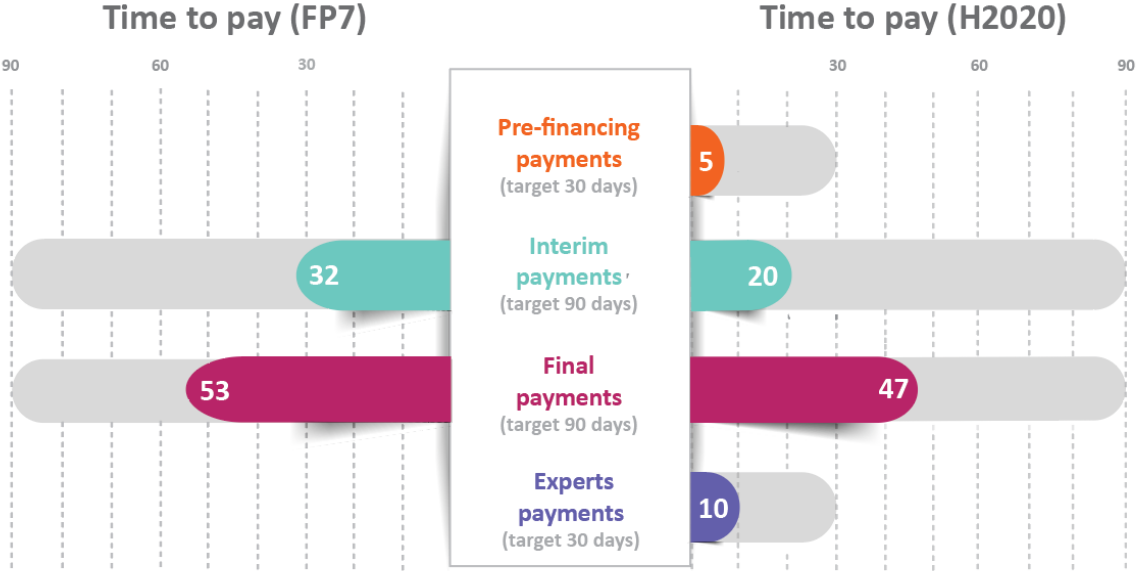


⁷ Namely: 1. Overall percentage of redress cases received; 2. Time to grant measured (average) from call deadline to signature of grants; 3. Time to pay; 4. Budget execution; 5. Estimated risk at closure.

2. Time to grant measured (average) from call deadline to signature of grants

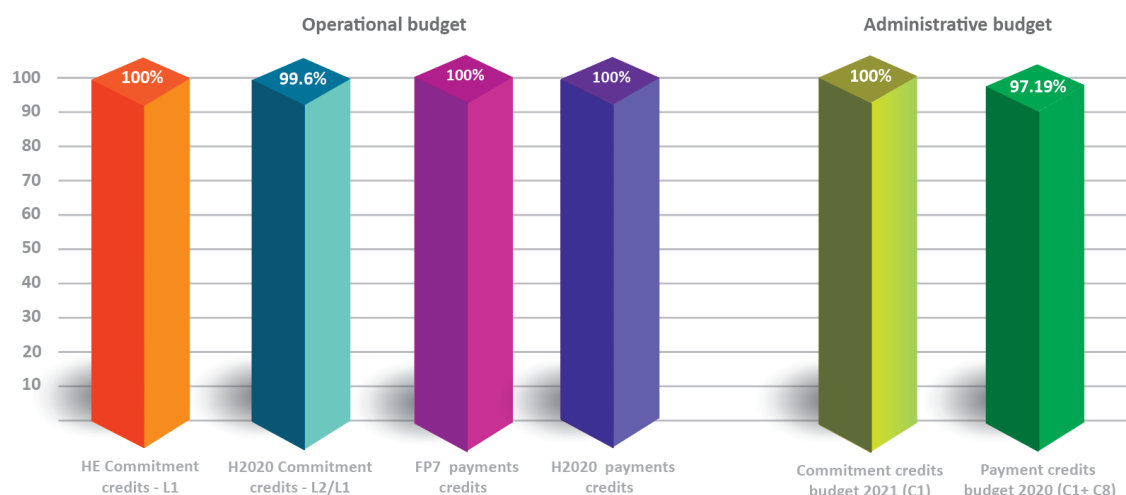


3. Time to pay⁸



⁸ Time to pay experts: 10.2 days for H2020 and 8.2 days for HE.

4. Budget execution



5. Estimated risk at payment / closure

The estimated overall risk at payment for expenditure amounts to EUR 31.9 m, representing 1.86% of ERCEA's total relevant expenditure for 2021 (target: <2%). This is the AOD⁹'s best, conservative estimation of the amount of relevant expenditure during 2021 which eventually may not be in conformity with the contractual and regulatory provisions applicable at the time the payments were made.

This expenditure will subsequently be subject to ex-post controls and a proportion of the underlying errors will be detected and corrected in subsequent years. The conservatively estimated future corrections for the expenditure of 2021 amount to EUR 11.74 m. This is the amount of errors that the agency conservatively estimates will be identified and corrected by controls planned to be carried out in subsequent years. The difference between those two amounts results in the estimated overall risk at closure of EUR 20.2 m, representing 1.18% of the agency's total relevant expenditure for the year 2021 (1.38% in 2020¹⁰).

All ERCEA key performance indicators have been met.

⁹ AOD: Authorising Officer by Delegation.

¹⁰ 1.79% were reported in the AAR 2020 (EUR 30 million) but, using the R&I methodology to calculate the adjusted average rate of recoveries and corrections (ARC), we calculated an estimated risk at closure of EUR 23 million for 2020 (1.38%).

C. Key conclusions on Financial management and Internal control

In line with the Commission's Internal Control Framework, the ERCEA assessed its internal control systems during the reporting year and concluded that the required internal control principles are present and functioning. Please refer to AAR section 2.1.3 for further details.

In addition, the ERCEA has systematically examined the available control results and indicators, as well as the observations and recommendations issued by the Internal Auditor and the European Court of Auditors. These elements have been assessed to determine their impact on management's assurance about the achievement of the control objectives. Please refer to Section 2.1 for further details.

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 Acting 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 Assurance¹¹.

D. Provision of information to the Commissioner

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

¹¹ Please refer to section 2.1.5

1. Implementation of the Agency's Annual Work programme - Highlights of the year

The management of the specific objectives delegated to the ERC by HE as well as H2020 programmes is defined in the annual ERC Work Programme. The ERC Work Programme 2021, which is established by the Scientific Council and adopted by the Commission, describes in detail the different funding instruments aiming at reinforcing excellence, dynamism and creativity in European research by providing attractive long-term funding to support excellent investigators and their research teams.

The H2020 Specific Programme started in 2014, in line with the policy priorities of the Juncker's Commission. It now contributes to the advanced knowledge needed to base on evidence the implementation of the headline ambitions of the von der Leyen Commission.

HE has established a number of common key impact pathway indicators (KIPs) for the whole framework programme but does not set specific targets for the ERC. Indeed, the Regulation stipulates that individual programme parts will contribute to these indicators to a different degree and through different mechanisms. It also foresees that additional indicators may be used to monitor individual programme parts, where relevant. Hence, as part of its mandate, the ERC Scientific Council will establish the modalities and methodologies (both quantitative and qualitative) to contribute to HE indicators, and will propose additional indicators if appropriate.

The ERCEA is contributing to the achievement of the specific objectives defined by its parent DG (DG Research and Innovation) to support the achievement of priorities of the von der Leyen Commission. Considering the bottom up nature of the ERC and its wide scope that addresses all research disciplines, the ERCEA is de facto contributing to the headlines ambitions of the von der Leyen Commission. However for the same reason, it is not possible to plan ex ante what the ERCEA will effectively deliver to support each Commission's objective nor to define related targets. The ERCEA will be able to illustrate its support to DG Research and Innovation and to the Commission's ambitions when the first HE calls are completed.

1.1. Management of Calls

The agency contributed in 2021 to achieving the von der Leyen's Commission's general objective "*An economy that works for people*"¹² as well as DG Research and Innovation's specific objective related to the implementation of HE. It also contributed to the DG's "*Open to the world*" objective by providing opportunities to non-EU researchers who wish to work in Europe and offering the possibility for one outside-ERA researcher to join a Synergy Grant team.

In 2021, the ERCEA implemented the HE specific objective "*Strengthening Frontier Research through the activities of European Research Council*", through the three calls for proposals shown below:

¹² Corresponding to the Commission objective "A new boost for Jobs, Growth and Investment"

Call identifier	Opening date	Closing date	Indicative n° of outputs	Output 31/12/21 ¹³
ERC-2021-StG – Starting Grant	25/02/2021	12/04/2021	413	397 (Main list)
ERC-2021-CoG – Consolidator Grant	11/03/2021	20/04/2021	317	on-going (step 2)
ERC-2021-AdG – Advanced Grant	20/05/2021	31/08/2021	250	on-going (between step 1 & step 2)

The call planning including the evaluation of the submitted proposals was strictly respected.



The number of proposals retained for funding (main list and reserve list proposals) of the 2021 calls met the ERC and ERCEA Work Programmes' targets. The evaluations of the 2021 Consolidator (CoG) and Advanced Grant (AdG) call are still ongoing at the time of writing, and results will be available later in 2022.

General objective: All Commission Priorities¹⁴			
Specific objective: DG Research and Innovation specific objectives related to the implementation of Horizon Europe FP			
From DG Research and Innovation 2020-2024 Strategic Plan			
Main outputs in 2021:			
Outputs	Indicators	2021 Targets	2021 Results
Launch of 3 HE calls	% of calls for proposals successfully launched according to agreed deadlines	100%	100%
Evaluation of calls	% of 2020 calls evaluated in 2021 % of 2021 calls evaluated in 2021	100% of 1 call ¹⁵ 100% of 1 call ¹⁶	100% 100%
Grants signed in 2021	Proposals selected under 2020 calls granted in 2021	100% ¹⁷	100%

The agency achieved its annual performance indicators, outputs and milestones and thereby successfully supported the ERC specific multiannual objective of strengthening frontier science in Europe.

¹³ Granting completion rate: StG 0%; for CoG 0%.

¹⁴ These are: 1) A European green deal, 2) A Europe fit for the digital age, 3) An economy that works for people, 4) A stronger Europe in the world, 5) Promoting our European way of life, 6) A new push for European democracy.

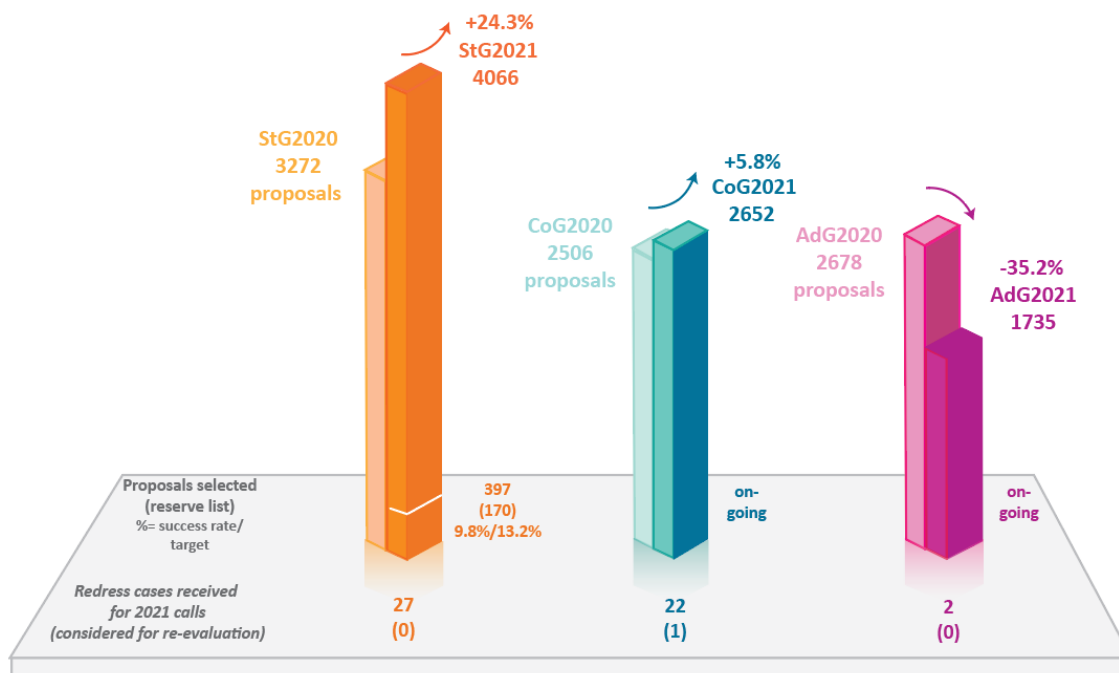
¹⁵ Namely ERC-2020-AdG which was completed in April 2021.

¹⁶ Namely ERC-2021-StG. The evaluation of ERC-2021-CoG and ERC-2021-AdG will be completed in 2022.

¹⁷ Covering all successfully concluded projects e.g. excluding terminations, withdrawals, etc.

Overall, in response to the 2021 ERC calls, applicants submitted a total of 8 453 proposals for only three calls due to the late adoption of HE (StG+CoG+AdG), a decrease of 10.3% in submissions compared to 2020. Although, the StG-2021 submissions increased by 24.3% and the CoG-2021 by 5.8%, the overall decrease is mostly due to the decrease in submissions to AdG-2021 (-35.2%). Also, the fact that there was no SyG nor PoC calls planned in the ERC WP 2021 impacted the number of submitted proposals. The SyG and PoC calls will be resumed in 2022.

Details can be observed in the graph below.



Following the withdrawal of Switzerland (CH) from HE association, CH host institutions became ineligible for evaluation (AdG-2021) and for granting (StG-2021 and CoG-2021). All applicants were duly informed and CH-based selected Principal Investigators under StG-2021 were given the opportunity to exercise portability¹⁸ before the signature of the grant.

In order to catch up with the calls calendar delayed by the late adoption of HE, three 2022 calls were open during the last quarter of 2021: the StG-2022 call on 23 September 2021, the PoC-1-2022 call on 14 October 2021 (with only one deadline) and CoG-2022 call on 29 October 2021.

¹⁸ This means that the Principal Investigator moves with the ERC grant in a Host Institution that is eligible to receive grants under HE.

1.2. Grant Management

The 2021 commitment credits (total amount of EUR 1.9 billion) were booked on the basis of the ERC Financing Decision (ERC Work Programme 2021). These credits will be used for financing the 2021 ERC calls within the next year.

653 grants resulting from the 2020 ERC calls were signed in 2021 for a total amount of EUR 1.48 billion. The granting activity for the 2020 calls started in the second quarter of 2020 (in line with the call calendar) with the PoC call, the latter being finalised by the end of 2021.

This year was earmarked with the start of a new framework programme delaying the call's calendar and therefore no grants were signed for the 2021 ERC HE calls.

The first call under HE was the ERC StG-2021 call whereas, in accordance with the ERC 2021 Work Programme, it had an early deadline for the dispatch of the information letters namely the 20th December 2021, while various IT tools and other operational decisions were still in evolution.

Following intense efforts and collaboration within the ERCEA departments and between ERCEA, DG Research and Innovation and the Common Implementation Center (CIC), 401 information letters were sent to applicants on 21 December 2021 as well as the invitation letters to successful applicants on the same date. This latter date was the last day that invitations could be electronically sent, as per the IT constraints of the end-of-the-year. It should be noted that the invitation and the information letters reflected the HE IT developments and the pending HE association agreements.

The following table shows the results of the evaluation of the "H2020" 2020 calls including signed grants and pre-financings paid in 2021, as well as of the HE 2021 calls.

Implementation of calls in 2021¹⁹

Calls implemented in 2021		Call deadlines		Indicative budget (EUR Mio)	Number of proposals				Grants signed		Preparation failed	Of which pre-financing paid EUR Mio
		Opening dates	Closing dates		Submitted proposals	Ineligible (% of submitted proposals)	Main list – invited (not reserve)	Success rate	Number	EUR Mio		
ERC-2020-StG – Starting Grant	H2020	17/07/2019	16/10/2019	677	3 272	0.6%	436	13.3%	56	86.7	0	53 (32.9)
ERC-2020-CoG – Consolidator G	H2020	24/10/2019	04/02/2020	657	2 506	1.4%	327	13.0%	297	597.1	0	245 (196.1)
ERC-2020-PoC – Proof of Concept	H2020	15/10/2019	1) 21/01/2020 2) 23/04/2020 3) 17/09/2020	25	531	3.4%	165	31.1%	64	9.6	0	64 (7.7)
ERC-2020-SyG-Synergy Grant	H2020	18/07/2019	05/11/2019	350	441	0.5%	33	7.5%	27	281.9	0	26 (110.9)
ERC-2020-AdG-Advanced Grant	H2020	14/05/2020	26/08/2020	492	2 678	2.5%	203	7.6%	209	506.4	0	154 (148.4)
ERC-2021-StG – Starting Grant	HE	25/02/2021	12/04/2021	619	4 066	0.96%	397	9.8%	0	0	0	0 (0)
ERC-2021-CoG – Consolidator G	HE	11/03/2021	20/04/2021	633	2 652	1.8%	on-going	on-going	0	0	0	0 (0)
ERC-2021-AdG Advanced Grant	HE	20/05/2021	31/08/2021	626	1 735	2.1%	on-going	on-going	0	0	0	0 (0)

¹⁹ Results in light grey were already reported in the 2020 AAR, while those in light orange refer to 2021.

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

Calls	Running projects 01/01/2021		Grants signed in 2021		Payments made in 2021		Projects closed in 2021		Running projects 31/12/2021	
	Number	Open balance Mio EUR	Number	Mio EUR	Number	Mio EUR	Number	De-commitments Mio EUR	Number	Open balance Mio EUR
FP7										
StG	44	3.7	-	-	11	1.4	40	2.0	4	0.3
CoG	92	13.1	-	-	43	7.9	76	3.1	16	2.1
AdG	82	8.2	-	-	14	3	74	3.8	8	1.5
PoC	-	-	-	-	-	-	-	-	-	-
SyG	16	19.2	-	-	11	7.6	6	0.8	10	10.8
Total FP7	234	44.2	-	-	79	19.9	196	9.7	38	14.7
H2020										
StG	2 597	1 621.9	56	86.7	1 698	521.6	251	10.0	2 402	1 177
CoG	1 905	1 364.8	297	597.1	1 434	589.9	203	12.6	1 999	1 359.4
AdG	1 361	1 168	209	506.4	925	467.2	100	8.8	1 470	1 198.4
PoC	400	14.1	64	9.6	220	13.9	145	0.3	319	9.5
SyG	72	433.3	27	281.9	63	177.6	0	0.0	99	537.6
Total H2020	6 335	4 602.1	653	1 481.6	4 340	1 770.2	699	31.7	6 289	4 281.9
HE										
StG	-	-	-	-	-	-	-	-	-	-
CoG	-	-	-	-	-	-	-	-	-	-
AdG	-	-	-	-	-	-	-	-	-	-
Total HE	-	-	-	-	-	-	-	-	-	-
Grand total	6 569	4 646.3	653	1 481.6	4 419	1 790.1	895	41.4	6 327	4 296.6

Each financial year, the agency processes grant agreements and budgetary commitments (so-called C8 credits) from the calls of the previous year, proceeds with the global commitments (per call - under C1 credits) and the granting for the calls of the given year as soon as the evaluation results become available.

Overall, the agency concluded 653 grant agreements in 2021 totalling to EUR 1 481.6 million. The related C8 credits linked to L1 (global) commitments for the 2020 calls reached 99.99% execution by means of L2 (individual) commitments.

The agency carried out 4 419 payments in 2021²⁰ (vs. 4 660 in 2020), representing a decrease of 5% compared to 2020. 4 340 payments related to H2020 and 79 to FP7.

In line with the programmes' maturity, H2020 payments were mainly interim payments (2 806 vs. 2 830 in 2020) for an amount of EUR 958.3 million. In addition, 871 pre-financing payments (vs. 1 199 in 2020) summing up to EUR 733.4 million and 663 final payments (vs. 267 in 2020) for a total of EUR 78.4 million were processed.

Payments related to FP7 concerned mainly final payments (70 vs 324 in 2020) as only 9 interim payments (vs. 40 in 2020) were handled, respectively worth EUR 17.6 million and EUR 2.3 million, amounted to a EUR 19.9 million.

At year-end, the total ERCEA grant portfolio encompassing both FP7 and H2020 projects counted a total of 6 327 running grant agreements, including 38 for FP7 worth EUR 14.7 million and 6 289 grants for H2020 worth EUR 4 281.9 million.

Throughout 2021, 3 772 expert payments were processed out of which 2 915 for the HE programme and 857 for H2020. A sharp decrease is observed in comparison with 2019 (6 802) and 2020 (5 006) expert payments, due to reduced experts travels to Brussels further to the COVID-19 pandemic.

During 2021, 1 895 new amendments were requested (1 888 for H2020 and 7 for FP7) by beneficiaries, and 1 880 amendments were signed, most of them directly linked to working conditions during the pandemic. The amendment activity continued to be significantly higher since the COVID-19 outbreak than before (701 and 2 138 amendments signed in 2019 and 2020 respectively for H2020).

Indeed, as in 2020, beneficiaries could postpone the action's start date via an amendment, provided the grant was already signed. For ongoing grants, the beneficiaries could request an extension of the action's duration up to six-month automatically via an amendment. The agency implemented its simplified and speedy amendment procedure put in place in 2020 for the above-mentioned cases, which further improved the time to amend (TTA) while dealing with a significant increased number of amendments.

²⁰ Expert payments excluded.

The highest number of H2020 amendments this year concerned the StG, followed by the CoG (as in 2020). Most of the H2020 as well as FP7 amendments dealt with changes of reporting periods or the actions' duration.

Furthermore, the agency registered 10 H2020 grant terminations that were mostly triggered by resignations of the Principal Investigators (15 in 2020).

1.3. Scientific follow-up

Scientific monitoring of mid-term and final reports

During the reporting period, 656 final scientific reports and 983 mid-term reports were assessed. The average number of days to assess the final reports²¹ ranged from 3 for StG to 56 days for SyG respectively. The average percentage of final reports assessments that exceeded 60 days was 0% (AWP 2021 target: 3%) for all calls.

For the Scientific assessment of completed projects (SAP2020) exercise, 225 projects were evaluated. Experts judged 18% as scientific breakthrough projects, 63% as major scientific advances, 18% as having incremental scientific contributions and only 1% as not resulting in an appreciable scientific contribution.

As this exercise was not conducted in 2021, a double evaluation is planned throughout 2022 (from February to December) with a random selection of 450 projects out of a pool of 1 140 completed projects. Panel members were nominated in September 2021 and approved by the Scientific Council in December 2021.

In 2021, the Science behind projects (SBP) exercise was launched to classify the scientific core aspects of the projects funded in 2018, 2019 and 2020 under the StG, CoG, AdG and SyG calls. This exercise complemented the data collected from the 6 708 ERC projects funded under H2020²². In the second half of the year, the SBP team and the Scientific Council focused their efforts on the analysis of these data and working on the SBP-H2020 final dissemination package. This package, which will include 25 panel, 1 SyG call, and 3 policy factsheets highlighting the rich and diverse project portfolio of the ERC, will be released in 2022.

The Scientific Council agreed, during its last plenary meeting of 2021, that the SBP activity plays a strategic role to capture and explore the scientific landscape behind the ERC project portfolio. Thus, they approved its continuity in HE.

Initiatives to support ERC applicants and International mobility agreements:

A number of European countries fund research visits to established ERC projects in order to develop researchers' potential before applying for their first ERC grant. In 2021, nine countries participated in the framework of Visiting Fellowship Programmes, with more than 800 ERC Principal Investigators (PI) having expressed their interest to host a visiting

²¹ The average number of days to assess the final reports was: 3 days for StG, 5 days for CoG, 4 days for AdG, 14 days for PoC and 56 days for SyG.

²² PoC not considered.

research fellow. So far, 22 fellows submitted a total of 24 applications for an ERC grant and 6 of them were successful (success rate of 25%).

In 2021, the ERC Mentoring Initiative was launched aiming at improving the number of successful applications from researchers based in European countries with a weaker performance in terms of funded ERC projects. Nine countries participated in 2021 and more than 750 ERC PIs and former ERC panel members have expressed their interest to support applicants as mentors. Local offices²³ will now organize sessions for pre-selected applicants who work on an ERC proposal, to help them strengthening the quality of their application, hence enabling them to get expert scientific feedback (or mock interviews) before submission.

The Implementing Arrangements are international agreements with non-EU funding agencies and science ministries supporting researchers to temporarily join ERC projects. In 2021 sixteen funding agencies from twelve countries participated (AR, AU, BR, CA, CN, IN, JP, KR, MX, SG, ZA, US)²⁴, with 800 ERC PIs having expressed their interest to host a visiting researcher.

Horizon Europe reporting templates

The ERCEA participated since January 2020 in DG Research and Innovation's working group on reporting templates for HE, together with representatives from the whole research family.

The ERC emphasis has been on keeping the reporting by grantees as simple as possible and in line with ERC objectives while providing for general HE provisions on Open Access and on impacts beyond the scientific ones. An agreement on key aspects has been reached in December 2021.

1.4. Feedback to policy

In December 2021, a new sector on Scientific Impact and Feedback to Policy was created as a result of the recommendations made by the Continuous Improvement project on Knowledge Management and Feedback to Policy, endorsed by ERCEA management and the Scientific Council.

Feedback to policy (F2P) is a newly delegated activity under HE for all implementing bodies, and the overall purpose of this new sector is to develop and coordinate the 'bottom up' F2P approach for ERCEA, as well as the related activities and outputs in close connection with the monitoring and analysis of scientific impacts of ERC funded research. The sector is attached to the Head of the Scientific Department and works in close cooperation with the other departments.

²³ NCP and universities based in 9 countries: Cyprus, Czech Republic, Estonia, Hungary, Italy, Malta, Poland, Slovakia and Turkey.

²⁴ Argentina, Australia, Brazil, Canada, China, India, Japan, South Korea, Mexico, Singapore, South Africa, United States.

1.5. Support to the ERC Scientific Council

ERCEA mandate to support the Scientific Council remains unchanged under HE. In 2021, the ERCEA continued to provide strategy support to the Scientific Council and its various Standing Committees, Working Groups, and the ERC Board with briefings, speeches, presentations, analyses, and reports in relation to the ERC's scientific strategy. In addition, it assisted the ERC President and Scientific Council Members in their activities related to institutional relations and networking. Furthermore, it coordinated the implementation of ERC's external communication and the ERC programme.

Also, the agency assisted the Scientific Council in initiating a mentoring programme to widen participation, and helped establishing further links with the European Innovation Council (EIC). Furthermore, it provided input to the Scientific Council on strategic issues like the position of the ERC on the association of third countries to HE, Open Science, the Pact for Research and Innovation in Europe and future governance of the European Research Area, as well as the Conference on the Future of Europe. Finally, the ERCEA assisted the Council in implementing the principles enshrined in the San Francisco Declaration on Research Assessment (DORA), which the ERC formally endorsed in 2021.

The ERCEA also continued developing its monitoring and evaluation tools in order to assist the Scientific Council in assessing the impact of ERC funding on frontier scientific knowledge, technology transfer, national research policies, host institutions and research careers.

Under the guidance of the Scientific Council Standing Committee on Programme Impact Monitoring and Evaluation (PRIME), the ERCEA is implementing the Council's Evaluation and Monitoring Strategy. As foreseen in the ERC's 2021 Work Programme, the ERCEA devised a proposal for a methodological framework to investigate the impact of ERC-funded research on the evolution of select fields of science, and its contribution to various breakthroughs in these fields. The agency contracted external experts who began their work. Moreover, it analysed the outcome of a survey on the involvement of ERC grantees in the creation of start-ups. Results thereof will provide input to the ongoing independent experts' analysis on how knowledge generated by ERC-funded projects contributes to major innovations.

In addition, the ERCEA started the process of compiling the ERC Funding Activities Report 2014-2020, based on the analysis of applicants' data and the outcomes of the ERC's peer review process under H2020. It is also working with the Monitoring, Evaluation, and Analysis Virtual Entity (MEAVE) contributing to the Commission's H2020 ex-post assessment, in particular by assessing the implementation of the excellent science pillar.

Finally, in autumn 2021, the ERC welcomed its new President, and both the Scientific Council and the ERCEA has provided her with continuous support to ensure a smooth transition into her new role.

In terms of performance, over 80 % of documents necessary for a Plenary Meeting were timely delivered a week in advance of the meeting, and the Scientific Council Members were compensated for their participation to the meetings within 30 days of said meetings, meeting the 2021 targets.

1.6. Implementation of ERCEA operating budget

The administrative budget for 2021 was initially adopted on 21 December 2020 for a total amount of EUR 51.3 million and it was subsequently amended once and modified five times by the ERCEA Steering Committee and the Director's decisions on budget line reallocations.

Considering the delay in the adoption of the HE and the constraints of the call calendar for StG-2021, an exceptional measure was implemented to create the necessary budgetary commitment to cover the related experts' contracts. Therefore, a first transfer of EUR 1.9 million was made from salaries to external meeting expenses in late February 2021, allowing the timely signature of experts contracts.

Then, a budget amendment was adopted through written procedure by the Steering Committee on 25 June 2021, in the framework of the Global Transfer Exercise. This first amendment encompassed the reinstatement of the EUR 1.9 million transferred in February, and included the last part of the subsidy as well as EFTA credits that were resulting from the adoption of the HE Programme, for a total amount of EUR 4.1 million. Hence, the administrative budget amounted to at EUR 55.4 million.

The four last budget transfers booked in the accounts during the last quarter resulted from the fine-tuning of several under consumed budget lines, further to the COVID-19 pandemic.

The administrative budget structure remained largely consistent with the ones from previous years, with the staff expenditure representing 78.84% (against 80.66% in 2020), whereas the budget costs for the building, ICT and other operating expenditure represented 18.6% (against 16.54% in 2020) and the programme management expenditure representing 2.6% (against 2.8% in 2020). The latter budget line was the most impacted as it covers expenditure linked to on-site presence (staff mission, external meetings and communication activities).

Hence, the agency achieved its targets by staying with the allowed six budget modifications/transfers per year and reached a budget execution of 100% in commitment credits.

1.7. Example(s) of EU-added value of ERC funded projects

2020-2026

URBISPHERE (SyG2019)
€ 12 720 904

A new way to forecast climate and urban planning for cities

Coupling dynamic cities and climate

Aims to forecast and project urban futures and climates in a dynamic framework considering weather, air quality, differential exposure and vulnerability of people at neighborhood to city scale. Will transform emergency/risk management, atmospheric forecasting and long-term urban development/adaptation strategies in the urban sphere.

Andreas Christen, Sue Grimmond, Joern Birkmann, Nektarios Chrysoulakis
(Germany, Greece, UK)

Mission objectives

Deliver 100 climate-neutral and smart cities by 2030

Ensure that these cities act as experimentation and innovation hubs to enable all European cities to follow suit by 2050

- INTELLIGENT**
 - Skills and employment
 - E-Government
 - Open data
- SOCIAL**
 - Re-skilling
 - Healthcare & safety
 - Crisis management
- GREEN**
 - Mobility
 - Renewable energies
 - Clean industry
 - Green manufacturing

2019-2024

MOCHA (CoG2018, SH2)
€ 1 999 125

Understanding and leveraging 'moments of change' for pro-environmental behaviour shifts

Seizing the moment for a greener world

Individual behaviour is instrumental to a profound response to climate change. 'moments of change' are individual expressions occurring when an individual situation shifts within a short time frame due to biographical and exogenous changes. Will explore moments of pro-environmental behavioural change across cultures and life courses and examine the impact of behavioural intervention.

Lorraine Whitmarsh
(University of Bath, UK)

2. MODERN AND EFFICIENT ADMINISTRATION AND INTERNAL CONTROL

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

The first subsection reports the control results and other relevant information that supports the management's assurance on the achievement of the financial management and internal control objectives²⁵. It includes additional information necessary to establish that the available evidence is reliable, complete and comprehensive. It covers all activities, programmes and management modes relevant to the agency.

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 provided on the basis of an objective examination of evidence 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. The results are explicitly documented and reported to the Director. The following reports have been considered:

- Management reports on control results;
- The contribution of the Head of Department in charge of Risk Management and Internal Control (RMIC), including the results of internal control monitoring at the agency, in particular the reports on recorded exceptions, non-compliance events and 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 available evidence. This approach provides sufficient guarantees as to the completeness and reliability of the information reported and results in a complete coverage of the budget delegated to the Director of ERCEA.

²⁵ 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, taking into account the multiannual character of programmes as well as the nature of payments concerned.

This section covers the control results and other relevant elements that support management's assurance. It is structured into 2.1.1 Control results, 2.1.2 Audit observations and recommendations, 2.1.3 Effectiveness of internal control systems, and resulting in 2.1.4 Conclusions on the assurance.

2.1.1. Control results

This section reports and assesses the elements identified by management which support the assurance on the achievement of the internal control objectives²⁶. The agency's assurance building and materiality criteria are outlined in AAR Annex 5. The AAR Annex 6 outlines the main risks together with the control processes to mitigate them and the indicators used to measure the performance of the relevant control systems.

Overview table (amounts in EUR million)

Risk-type / Activities	Grants (e.g. actual costs based, or lump sums, or entitlements)	Procurement (e.g. minor or major values)	Shared mngt (MS's OPs, PAs, etc) + EAC (for NAs)	Cross-delegations to other DGs (other AOXDs)	Contributions and/or funds to EE (EU Agency, EA, JU)	Delegation / Contribution agreements with EE (EIB, Int-Org, etc)	Other (describe any other expenditure not covered by the previous columns)	Total Expenditure	NEI, e.g. Revenues, Assets, OBS ((in)tangible or financial assets & liabilities)
FP7	19.9							19.9	
H2020	1 772							1 772	
HE	6.8							6.8	
Totals (coverage)	1 798.7							1 798.7	
<i>Links to AAR Annex 3</i>	<i>Overall total (m EUR); see Table 2 – payments made</i>						<i>Overall total (m EUR)</i>	<i>n/a</i>	<i>Table 4 – assets</i>

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

Operational and administrative payments 2021							
		Payments made²⁷				Total administrative Expenditure (EUR)	% of total (admin/operational)
		Pre-financing (EUR)	Payments against cost statements (EUR)	Experts' payments (EUR)	Total operational expenditure (EUR)		
2021	FP7		19.862.911,49		19.862.911,49	54.155.340,91	3%
	H2020	733.798.292,96	1.036.690.239,97	1.573.928,06	1.772.062.460,99		
	HE	207.131.50		6.550.463,09	6.757.594,59		
	Total	734.005.424,46	1.056.553.151,46	8.124.391,15	1.798.682.967,07		

The final available payment budget of EUR 1 701.7 million for H2020, EUR 16.9 million for FP7 and EUR 6.5 million for HE in voted credits²⁸ was fully consumed.

²⁶ 1) Effectiveness, efficiency and economy of operations; 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). The 2nd and/or 3rd Internal Control Objective(s) (ICO) only when applicable, given the DG's activities.

²⁷ The figures in this table include all types of credits (fund sources), like the voted credits and assigned revenue.

²⁸ Commitments voted for the year and EFTA ones (C1/EO).

Payment transactions for operational expenditures consist of pre-financing, interim and final payments as well as regularisation and expert 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.

In 2021, 58.6%²⁹ of the total amount executed were payments against cost statements, while the remaining 41.4%³⁰ of payments were pre-financing and expert payments, both assessed as low risk transactions in regard to the control objective related to the legality and regularity of underlying transactions. In addition, out of all 2021 payments against cost statements, 1.9% related to FP7 and 98.1% to H2020, compared to 5.7% for FP7 and 94.3% for H2020 at year-end 2020.

The 2018 Financial Regulation introduced additional reporting requirements in the AAR, which are presented hereafter:

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

Not such case.

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

Not such case.

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

According to the H2020 and HE Rules for Participation³¹, indirect eligible costs of grants are 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 FR in this case. This applies to all H2020 and HE 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**

Three grant agreements signed in 2021 derogated³² from the principle of non-retroactivity pursuant to Article 193 of the Financial Regulation.

1. Effectiveness of controls

In order to be considered effective, controls are expected to meet the internal control objectives (detailed hereafter) and for each of those controls, objectives result in benefits.

a. Legality and regularity of the transactions

ERCEA is using internal control processes to ensure the sound management of the risks relating to the legality and regularity of the underlying transactions it is responsible for,

²⁹ In 2020, 56.7% of the total amount executed concerned payments against cost statements, while the remaining 43.3% payments executed concerned pre-financings and expert payments.

³⁰ 43.3% of payments executed concerned pre-financings and expert payments in 2020.

³¹ Article 29 of Regulation (EU) No 1290/2013 of the European Parliament and of the Council of 11 December 2013 laying down the rules for participation and dissemination in “Horizon 2020 – the Framework Programme for Research and Innovation (2014-2020)” and Article 39 Regulation (EU) 2021/65 of the European Parliament and of the Council of 28 April 2021 establishing Horizon Europe – the Framework Programme for Research and Innovation, laying down its rules for participation and dissemination.

³² Anticipated project starting date is exceptionally accepted by the agency, for duly justified reasons, as to timely purchase equipment, recruit new staff or to maintain the continuity of the research team in case of successive grants.

taking into account the multiannual character of programmes and the nature of the payments concerned.

ERCEA FP7 and H2020 operational expenditures

The main indicators on legality and regularity³³ of EU Framework Programmes for Research and Innovation are:

- Representative detected error rate, based on errors detected by ex-post audits on a Common Representative Sample of cost claims across the Research and Innovation Family of DGs.
- Cumulative residual error rate, which is the extrapolated level of error after corrective measures have been implemented by the Commission services following the audits, accumulated on a multi-annual basis.

Due to its multi-annual nature, the effectiveness of the control strategy of the Research and Innovation Family DGs can be measured and assessed fully only in the final stages of the EU Framework Programme for Research and Innovation, once the ex-post control strategy has been fully implemented and systematic errors have been detected and corrected.

The general objective of this control system are:

- for FP7 (2007–2013) and the Research Fund for Coal and Steel (in DG Research and Innovation): to ensure that the cumulative residual error rate does not exceed 2% by the end of the Framework Programme's management cycle.
- for H2020: to obtain a cumulative residual error rate within a range of 2-5 % aiming to be as close as possible to 2%, without necessarily expecting it to be lower than 2%.
- for Horizon Europe, to ensure that the cumulative residual error rate does not exceed 2%³⁴.

Progress against these objectives is assessed annually based on the results of the implementation of the ex-post audit strategy and taking into account the frequency and importance of the detected errors along with cost-benefit considerations regarding the effort and resources needed to detect and correct the errors.

Because of the COVID-19 pandemic and related travel limitations during 2021, the Common Audit Service (CAS) – in line with the instructions of the Commission – postponed on-the-spot missions until further notice. To minimise the impact of COVID-19 on the implementation of the audit campaign, the CAS converted traditional audit assignments into desk audits, in line with international best practice and auditing standards.

Despite restrictions and other objective challenges due to the COVID-19 pandemic, the foreseen audit target was achieved. The CAS managed to finalise audits on 514

³³ These indicators are described in point 1.1 of annex 5.

³⁴ No representative error rate for Horizon Europe will be available in 2022 and 2023 as the ex-post audit campaign for the Programme is planned to be launched by the end of 2023, at the earliest.

participations corresponding to the 104.3% of the planned most probable scenario for 2021 target³⁵.

The following table presents the error rates calculated for the two Framework Programmes by the end of 2021:

	FP7 EX-POST AUDITS	H2020 EX-POST AUDITS
REPRESENTATIVE DETECTED ERROR RATE	1.51%	1.94%
CUMULATIVE RESIDUAL ERROR RATE	1.10%	1.22%

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 FP7³⁶, the ERCEA has adopted, since 2015, an alternative assessment to provide additional assurance on the ERC specific population. This is in line with AAR annex 7, in particular for the multi-annual (2009-2019) ERCEA residual error rate (based on ERCEA MUS sample).

In December 2020, the MUS sample was already fully completed with a multi-annual detected error rate that amounted to 1.51 % and a final residual error of 1.10%, positively supporting the ERCEA 2020 Declaration of Assurance³⁷ as well as the 2021 one. 2021 FP7 ex-post activity was mainly dedicated to finalise remaining audits of the corrective strand and non-joint ECA audits, with no impact on already known 2020 results, as these audits are not included in the MUS. The FP7 audit campaign is now fully completed, apart from 1 technical audit still ongoing and 1 audit for which preliminary results have not been communicated yet by the Court of Auditors.

Research family results³⁸ of the H2020 ex-post audits and expectations for H2020

In 2020, the Commission refined its methodology for calculating the Horizon 2020 error rates in line with the European Court of Auditors' observations in its 2018 and 2019 Annual Reports³⁹. The methodology applied is described in Annex 5 'Materiality criteria'. As of January 2020, DG R&I applied the revised methodology on a sample of 1 304 audit conclusions. This results in the following error rates for Horizon 2020⁴⁰ on 31 December 2021:

³⁵ Given the COVID-19 pandemic and related restrictions, the CAS developed scenarios for the closure of audit targets.

³⁶ Please refer to annex 5 for details.

³⁷ Ares (2021)2224544 – 31/03/2021

³⁸ Source of information: DG Research and Innovation - Common Audit Service.

³⁹ When calculating the multi-annual error rate, the Commission took into account the results of the audit re-performed by the ECA as part of Module 2 of the DAS 2018-2019.

⁴⁰ The Horizon 2020 audit campaign started in 2016. At this stage, four Common Representative Samples with a total of 629 expected results have been selected. By the end of 2021, cost claims amounting to EUR 31.8 billion have been submitted by the beneficiaries to the services. The audit coverage for Horizon 2020 is presented in annex 7. In addition to the Common Representative Samples, Common Risk Samples and Additional Samples have also been selected. The audits of 3 424 participations were finalised by 31/12/2021 (of which 514 in 2021).

- Representative detected error rate for the Research and Innovation Family DGs: 2.29%⁴¹ (1.94% based on ERCEA local representative sample),
- Cumulative residual error rate for the Research and Innovation Family DGs: 1.60% (1.22% for ERCEA, based on the Common Representative Sample).

In line with the Financial Statement⁴² accompanying the Commission's proposal for the Horizon 2020 regulation, a reservation is not necessary for the related expenditure if the cumulative residual error rate for the programme falls within the target range of 2-5%. In 2021, and despite the above-mentioned caveats, the cumulative residual error rate for Horizon 2020, calculated at 1.67%, more than fulfils this condition and is below the materiality threshold. Despite the absence of reservation, the root causes of errors have been identified and targeted actions taken to address any identified weaknesses.

Since Horizon 2020 is a multi-annual programme, the error rates, and the residual error rate in particular, should be considered within a time perspective. Specifically, the cleaning effect of audits will tend to increase the difference between the representative detected error rate and the cumulative residual error rate, with the latter finishing at a lower value.

These error rates are calculated on the basis of the audit results available when drafting the Annual Activity Report. They should be treated with caution as they may change subject to the availability of additional data from audit results.

The decrease of the error rates in year 2021 could be due, among other reasons, to the beneficiaries' increased knowledge of the eligibility rules and its inherent learning curve, as well as to the results of the communication campaigns, targeted webinars and trainings, addressed in particular to newcomers and SMEs.

Given the results of the audit campaign up until 2020, and the observations made by the European Court of Auditors in its Annual Reports, the Common Implementation Centre, in close cooperation with central Commission services, is defining actions aimed at significantly simplifying the rules, and paving the way for a significant reduction of the error rate in Horizon Europe. Actions were undertaken including further simplification, increased use of simplified forms of funding (including lump sums and unit costs), focused communication campaigns to more "error-prone" types of beneficiaries with higher than average error rates, such as SMEs and newcomers, and enhanced training to external audit firms performing audits on behalf of the Commission (the last three measures also target H2020 grants and beneficiaries). Focusing on the most common errors, these events will be straightforward, reaching more participants and achieving higher impact.

⁴¹ Based on the 418 representative results out of the 629 expected in the four Common Representative Samples.

⁴² The legislative financial statement accompanying the Commission's proposal 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 projects. The ultimate aim for the residual level of error at the closure of the programmes after the financial impact of all audits, corrections and recovery measures will have been taken into account is to achieve a level as close as possible to 2%."

In the context of further reducing the error rates, the Common Implementation Centre will revisit the existing tools for ex-ante controls. It will consult the stakeholders in order to collect their views on possible improvements in the grant management risk module.

ERCEA specific error rates for H2020

The CAS reported the ERCEA representative detected error rate of 1.94%. For this specific ERCEA random selection, 320 participations were selected (i.e. 80 participations to audit per year, starting from 2018), and 287 participations were audited by the end of 2021, thanks to first 13 audited participations already launched in 2017. The error rate represents the average of all negative error rates of each audited participation. The impact of the pandemic prevented the completion of 100 % of this multi-annual target, but the 90% completion rate provides a reliable audited sample, although not yet representative, to support the ERCEA detected error rate.

In line with the Financial Statement⁴³ accompanying the Commission's proposal for the Horizon 2020 regulation, a reservation is not necessary for the related expenditure if the cumulative residual error rate for the programme falls within the target range of 2-5%. In 2021, and despite the above-mentioned caveats, the cumulative residual error rate for Horizon 2020, calculated at 1.22%, more than fulfils this condition and is below the materiality threshold.

Horizon Europe

2021 was the first year of implementation of the Horizon Europe framework programme. The adoption of its Regulation later than initially planned, delayed the starting of its implementation. By the end of 2021, no payments were executed. Consequently, taking into account the absence of relevant expenditure, no detected error rate can be reported for HE in 2021.

ERCEA administrative expenditure

The 2021 result for ERCEA's administrative expenditure's error rate is 0.09%, below the target value of 1.5% and lower than the 2020 result (0.7%).

Conclusion on the overall risk at payment / closure

In the context of the protection of the EU budget, the agency's estimated overall risk at payment, estimated future corrections and risk at closure are consolidated at Commission level. ERCEA's portfolio consists of segments with a relatively low error rate. This is, respectively, thanks to the inherent risk profile of the programmes and the performance of the related control systems.

Through recoveries and financial corrections, ERCEA has in place an effective mechanism for correcting errors. During the reporting year, the executed corrective capacity amounted in total to EUR 3.54 million representing 0.20% of the relevant expenditure.

The benefit at ex-ante level control reached EUR 2.58 million, whilst recoveries and financial corrections following the results of ex-post controls amounted to EUR 0.96 million for H2020 in 2021.

⁴³ A cumulative residual error rate within a range of between 2-5 % and at the same time as close as possible to 2%, without necessarily expecting it to be under 2%.

ERCEA's relevant expenditure, estimated overall risk at payment, estimated future corrections and risk at closure are disclosed in Table 1.

The estimated overall risk at payment for 2021 expenditure amounts to EUR 31.9 million, representing 1.86% of the agency's total relevant expenditure for 2021. This is the AOD's best, conservative estimation of the amount of relevant expenditure during the year not in conformity with the contractual and regulatory provisions applicable at the time the payment was made.

This expenditure will subsequently be subject to ex-post controls and a proportion of the underlying errors will be detected and corrected in subsequent years. The conservatively estimated future corrections for 2021 expenditure amount to EUR 11.7 million. This is the amount of errors that the agency conservatively estimates will be identified and corrected by controls planned to be carried out in subsequent years.

The difference between those two amounts results in the estimated overall risk at closure of EUR 20.2 million, representing 1.18% of the agency's total relevant expenditure for 2021. Last year, the estimated overall risk at closure amounted to EUR 23 million⁴⁴, representing 1.38% of the agency's total relevant expenditure. This decrease of 14.5% is due to the evolution of the relevant expenditure from EUR 2 141 million in 2020 to EUR 1 719 million in 2021 as only three HE calls were launched in 2021. This is combined with a decrease of the average error rate by 0.18%.

For an overview at Commission level, the agency's estimated overall risk at payment, estimated future corrections and risk at closure are consolidated at Commission level in the AMPR⁴⁵.

Table 1 : Estimated risk at payment / closure (amounts in EUR million)

The full detailed version of the table is provided in Annex 9.

ERCEA	Relevant expenditure	Estimated risk (error rate %) at payment		Estimated future corrections and deductions		Estimated risk (error rate %) at closure	
		m EUR	%	m EUR	%	m EUR	%
(1)	(2)	(3)		(4)		(5)	
	<i>m EUR</i>	<i>m EUR</i>	<i>%</i>	<i>m EUR</i>	<i>%</i>	<i>m EUR</i>	<i>%</i>
<u>Operational budget:</u>							
FP7	64.49	0.97	1.51%	0.26	0.41%	0.71	
H2020	1 594.15	30.93	1.94%	11.48	0.72%	19.45	1.18%
HE ⁴⁶	6.55	0	0%	0		0	
Sub-total	1 665m EUR	31.9m EUR	1.86%	11.7m EUR	0.71%	20.2m EUR	1.18%
<i>Operating budget</i>	54.16	0.05				0.05	
Total ERCEA	1 719m EUR	31.9m EUR	1.86%	11.7m EUR	0.68%	20.2m EUR	1.18%

⁴⁴ EUR 30 million were reported in the AAR 2020 but, using the R&I methodology to calculate the adjusted average rate of recoveries and corrections (ARC), we calculated an estimated risk at closure of EUR 23 million for 2020.

⁴⁵ AMPR: Annual Management and Performance Report.

⁴⁶ Expenditure related to experts payments (EUR 6.5 million).

b. Fraud prevention, detection and correction

The ERCEA developed and implemented its anti-fraud strategy since 2011, on the basis of the methodology provided by OLAF and was last updated on May 2020. Its implementation is being monitored and reported to the management on a regular basis. All necessary actions have been implemented such as the fraud risk assessment, case handling and providing reinforced fraud prevention.

The ERCEA also contributed to the Commission anti-fraud strategy. It implemented 50% of OLAF's *financial* recommendations (1 out of 2) as further to several internal consultations and with DG Research and Innovation services, the Director decided not to implement one financial recommendation due to a lack of solid legal and contractual grounds.

The results achieved during the year thanks to the anti-fraud measures in place can be summarised as follows: at year-end, four open cases were registered in ERCEA's register of irregularities and potential fraud ("ERCEA Fraud Register"), all related to the management of ERC grants/proposals. One of these cases was under OLAF investigation and three cases were under ERCEA's reinforced monitoring – including an EDES case – as a precautionary measure to protect the agency financial interests. Finally, in 2021 two OLAF investigations were closed with no recommendations to be implemented.

On the basis of the available information, the ERCEA has reasonable assurance that the anti-fraud measures in place are effective.

The main outputs of 2021 are available in Annex 10.

c. Other control objectives: reliability of reporting

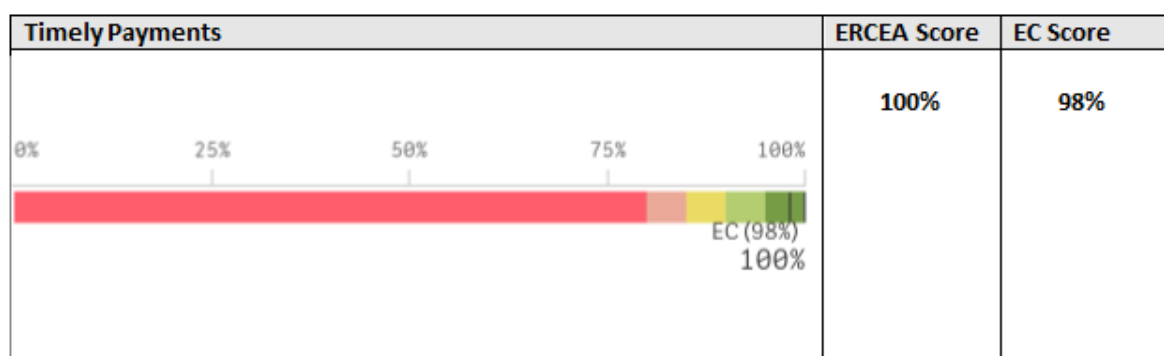
The implementation by DG Research and Innovation on 19 July 2021 of a new automated workflow integrated in Compass, EMI and Jagate, which leads to the electronic registration of experts contracts in the ABAC legal commitments module mitigated the risks associated with the open recommendation issued by DG BUDG on behalf of the Accounting Officer of the Commission following its evaluation in 2018 of the accounting internal control environment in ERCEA. The recommendation is therefore closed⁴⁷.

Regarding the validation of local systems, DG BUDG assesses on a continuous basis the accounting risk for each DG, service or Executive Agency according to a new methodology put in place in 2020. The new methodology aims at ensuring the appropriate documentation and reporting of controls results, the correction of any detected errors, the analysis of underlying causes for correction and that the comprehensiveness of the annual risk assessment scope. In 2021, the accounting risk for ERCEA, as assessed by DG BUDG, was low⁴⁸.

⁴⁷ Ares(2021)6678959 – 29/10/2021

⁴⁸ Ares(2021)7434888 – 02/12/2021

2. Efficiency of controls



In 2021, the “time to sign” (TTS) and “time to grant” (TTG) of 2020 calls met their AWP targets, confirming the excellent 2020 results. It reaffirms the effectiveness of all measures implemented in the past years for improving its KPI results (detailed results in section 2.1.1.1 and Annex 2).

ERCEA achieved its high efficiency in terms of “time to pay” as in the previous years, all types of payments⁴⁹ being well below their legal targets (detailed results in section 2.1.1.1).

3. Economy of controls

Operational budget	31/12/2021	31/12/2020
Total cost of fin. management & control⁵⁰ / total value of operational payments made (target: <3%)	2.8%	2.5%

4. Conclusion on the cost-effectiveness of controls

Cost-effectiveness indicators are provided for each control stage based on the number of posts allocated to activities, 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 2021 administrative versus operational payments, was taken into account as well as an indicator per framework programme.

The result of the overall cost effectiveness indicator in 2021 (2.8%⁵¹), higher as the one of 2020 (2.5%), is meeting the target of 3%.

While most costs of controls are quantifiable in monetary terms, most of their undeniable benefits are not. The controls related to the scientific evaluation of applications ensure that

⁴⁹ i.e. pre-financing, interim, final and expert payments.

⁵⁰ For a nearly 'pure' grant management DG/EA, this is approximated by comparing the administrative/operating budget to the total operational budget.

⁵¹ Details of the estimated cost of controls related to shared/pooled control activities carried out by by DG Research and Innovation (Common Implementation Centre; Common Audit Service) for the Research and Innovation family are reported in the Annual Activity Reports of DG RTD.

the most meriting projects are funded following the sole criterion of “excellence”. They allow ERCEA to fulfil its mission statement and operational objectives. Benefits of grant implementation controls can be measured by the low error rate (for H2020 and for FP7) resulting from ex-ante controls for both H2020 (0.17%) and FP7 (0.09%) - even if these are weakened by the deliberate limitation of the depth of the ex-ante controls as part of the overall control framework established for FP7 and H2020. This is also supported by the level of the ex-ante error rate on the operating budget (0.09% versus 0.7% in 2020), which remained below its target. Non-quantifiable benefits of ex-post controls also 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. Finally, the 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 that is provided to audited beneficiaries. Based on the most relevant key indicators and control results, ERCEA has assessed the effectiveness, efficiency and economy of its control system and reached a positive conclusion on the cost-effectiveness of the controls for which it is responsible.

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 2021, the global commitment budget of EUR 1 897.5 million was fully committed based on the 2021 ERC Financing Decision.

The execution of payments credits (H2020 of EUR 1 701.7 million, FP7 of EUR 16.9 million and HE of EUR 6.5 million) reached 100% for both grant implementation and experts.

The Grant Management Department achieved its budget execution target, preserving its excellent KPIs as in previous years, a high satisfaction of beneficiaries and researchers.

During 2021, the Grant Management Department ensured effective controls, a coherent interpretation and application of the rules across the units with the support of the Payments' Business Process (BPO) working groups and regular update of guides and procedures relevant to all key business processes as well as of all financial actors. Among those, the establishment of H2020 grant reduction procedure of ERCEA and the revision of the H2020 final and interim payment procedures, namely emphasising the importance of the effective implementation of reinforced monitoring.

Moreover, it provided continuous support to beneficiaries with the aim to prevent errors, and meet the target for legality and regularity of operations.

Several initiatives and activities were launched and/or completed by the Payments BPO working group during 2021, in view of further improving and/or simplifying internal processes related to H2020 financial reporting and payments and/or aligning to the latest developments in the common IT tools.

Moreover, the Payments BPO actively participated and crucially contributed to the preparative working groups for the implementation of HE, being systematically involved in written consultations for all major ex-ante guidance and reporting templates produced by the CIC. In cooperation with the legal department, it contributed to the drafting of the HE Annotated Model Grant Agreement (MGA) concerning the ERC specific technical needs, the preparation of the HE Supplementary Agreement, the definition of the HE Lump Sum scheme for ERC, and to the ERC provisions in the HE Lump Sum MGA for PoC. In relation to FP7 payments, the small amounts of the final payments, coupled with the COVID-19 context, entailed a higher risk of under-consumption. The latter was addressed by intense monitoring, timely pursuit of financial and scientific reports, which led to timely 100% execution of the related payment credits.

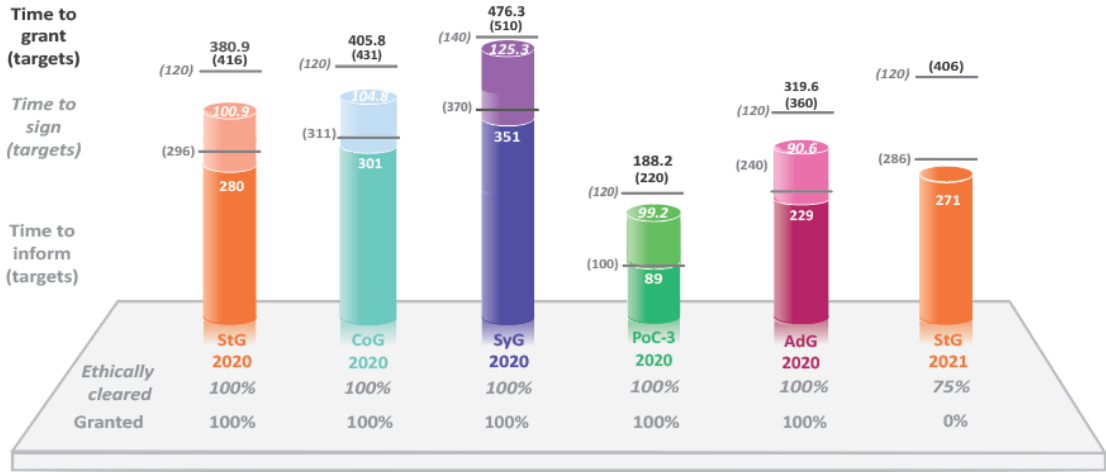
Other effectiveness indicators:

In 2021, each StG proposal was reviewed by an overall average number of 3.4 remote referees in addition to the reviews written by ERC panel members. This was in line with 2020 data (3.6) and exceeded the 2021 target (2). These expert reviews guarantee the quality of the evaluation process.

2. Efficiency

Time to inform, time to sign & time to grant (TTI, TTS & TTG)

In line with expectations, the COVID-19 pandemic further affected the ERCEA operations in 2021, producing a slowdown in some specific operational areas such as the granting activity. Indeed, an average increase of 2 days for the TTS indicator and of 8 days for the TTG indicator have been registered compared to the results of 2020 for the 2019 calls, though not jeopardizing the achievement of its objectives and targets.



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Time to ethical clearance (TTEC)

ERCEA continued to ethically clear proposals in a timely manner. The AdG-2020 call was cleared with an average of 49 days and the CoG-2020 call in an average 41 days. Ethical clearance for the PoC-2020 call, with an average of 68 days and for the StG-2020 being 62 days call, failed to meet the 45 days TTEC target. The PoC call has a slightly different workflow compared to the other calls. Indeed, due to the limited information that is submitted for the PoC proposals, additional information often needs to be requested and checked before starting the remote phase of the ethics screening. This supplementary step adds around one month to the process. For the SyG-2020, also complex proposals have a much bigger impact in the average TTEC and in depth checks increased the TTEC to 66 days.

On the other hand, for 2021 calls, so far 74.6 % of the StG-2021 proposals were cleared before the end of the year, with an average of 5 days. That was possible due to major ERCEA’s ethics process simplifications implemented for the first time to this HE’s first call. This new process, that increased the involvement and responsibility of the ethics officers, had a significant impact in the percentage of “quick” ethics clearances that raised from 45% to more than 70%.



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Time to pay H2020 – grants and experts

In 2021, Time To Pay (TTP) results for both FP7 and H2020 were well below their respective targets for all types of payments; mostly comparable with 2020 results and improving in the case of pre-financing payments for H2020. This result is reflected in the percentage of payments paid within the contractual timeframe, showing the achievement of the 95% on time target for almost all payment types.

The only deviation from the target is for the final FP7 payments where the percentage is slightly below the target with 92.8%. The programme has reached the latest implementation stage thus only few payments were processed over the year (in 2021 only 9 payments). As consequence, extreme values are weighting more on the average. This is coupled with the fact that during the final stage of the programme lifecycle, the probability

to process more complicated cases is higher compared to previous stages of the programme lifecycle.

Additional information can be found on the performance tables available in Annex 2.

3. Economy

Research Family harmonised KPIs	31/12/2021	31/12/2020
Average project mngt cost per running* project (staff FTE * standard staff cost)⁵² (ALL projects - Range of EUR 5.000 – 10.000)	4 685.36 EUR 0.7%⁵³	3 871.69 EUR 0.6% ⁵²
Average number (Range of 15 – 35) & value of running projects managed 'per' staff FTE (Range of EUR 1 Mio – 50 Mio)	21.46 41.6 EURMio	25.91 48.2 EURMio

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 2.8%⁵⁴ in 2021 (2.5% in 2020). It is below the agency's target of 3%.

Presented by process stages, the ERCEA costs related to call coordination, evaluation and selection of proposals is estimated at 0.80% of the total H2020 committed credits, and the costs related to grant preparation and signature at 0.32% of the total individual commitments. The ERCEA costs related to grant implementation stood at 1.66% of the total payments, while those of ERCEA ex-post controls were estimated at 0.03% of the total payments.

2.1.1.2 Implementation of the internal control system for the operating budget

1. Effectiveness

ERCEA 2020 AWP	2021 target	31/12/2021	31/12/2020
% budget execution commitments	99%	100%	99.73%
% budget execution payments (C1+C8)	99%	97.19%	99.43%
ERCEA 2021 AWP	2021 target	31/12/2021	31/12/2020

⁵² 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.

⁵³ Project management cost divided by the value of running projects.

⁵⁴ Details of the estimated cost of controls related to shared/pooled control activities carried out by DG Research and Innovation (Common Implementation Centre; Common Audit Service) for the Research and Innovation family are reported in the AAR of DG Research and Innovation.

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
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2. Efficiency

ERCEA 2021 AWP	2021 target	31/12/2021	31/12/2020
Number (and % of total) of late payments for the administrative budget	<20 (<1%)	2 0.38%	16 2.22%
Average time to pay (days)	15	12.1	10
% of error in transactions related to staff expenditure (salaries) detected through ex-ante checks	1.5%	0.09%	0.7%

3. Economy

Administrative budget	31/12/2021
Total cost of fin. management & control of the operating budget / total value of operating payments made	3%

4. Conclusion on the cost-effectiveness of controls

The result of the cost-effectiveness of managing ERCEA's administrative budget of 3% is assessed positively, considering the intensity of the ex-ante controls performed were commensurate to the related risks (in particular reputational risks), covering a lower volume of transactions than in 2020 (about 823⁵⁵) of low value (about EUR 18 276).

2.1.2. Audit observations and recommendations

This section sets out the observations, opinions and conclusions reported by auditors – including the limited conclusion of the Internal Auditor on the state of internal control. Summaries of the management measures taken in response to the audit recommendations are also included, together with an assessment of the likely material impact of the findings on the achievement of the internal control objectives, and therefore on management's assurance.

In 2020, the IAS issued a final report on the implementation of anti-fraud actions in the research area in ERCEA⁵⁶, which resulted in three important recommendations, related to

⁵⁵ Excluding salaries, 929 payments in 2020 of low value (about € 16 518).

⁵⁶ Ares(2021)669888.

awareness trainings to become mandatory for newcomers, to ensuring the straightforward notification of fraud cases to OLAF as well as to effective use of the reinforced monitoring tool and the timely initiation of EDES procedures. The related action plan has been implemented in 2021 for two recommendations, the last one being implemented with a slight delay (21 January 2022 instead of 31 December 2021). This is subject to the IAS independent assessment on the effective implementation.

For 2021, the IAS issued on 22 September 2021 a final report on H2020 grant management - phase III⁵⁷ which resulted in three important recommendations, related to the late submission of the scientific reports, provide, clear information on the use of the reinforced monitoring tool as well as to the documentation of communications with Principal Investigators (PI) in PPGMS. The related action plan for the two accepted recommendations has been submitted to the IAS on the 7 October 2021. The third important recommendation, related to the use of the PPGMS⁵⁸ tool was rejected by the agency, the latter considering that this communication tool is not adapted to the ERCEA specificities⁵⁹ which are best addressed through direct e-mail communication with the PIs. The agency will ensure that important communications are saved in the Grant Management IT tool. The risk⁶⁰ was assessed as low and accepted by the ERCEA.

In addition, the IAS issued on 27 January 2022 the audit report on the implementation of audit results in H2020⁶¹ with three important recommendations related to the awareness raising of PO's on H2020 Guidance (e-grants Vademecum), to the monitoring of the implementation of audit results and audit extensions and to the adequate monitoring of the timely implementation of ECA audit results. All recommendations have been accepted by the ERCEA. At the time of writing, the related action plan is under preparation, due for 18 February 2022.

IAS concluded⁶² in its contribution to the 2021 AAR process, based on the work undertaken in the period 2019-2021, that the internal control system audited are effective.

Further to its audit on the 2020 annual accounts, the European Court of Auditors gave in its final report a clean opinion regarding the fair view of the annual accounts as well as the regularity and legality of the transactions underlying the accounts. One observation was reported on legality and regularity of transactions which did not call the ECA's opinion into question. It related to a procurement procedure considered as irregular due to the incorrect application of the awarding criteria, the latter impacting the principle of equal treatment. Therefore, the payments related to the linked legal commitments (EUR 36.400) were considered as irregular. In its reply, the agency agreed on the procedure's irregularity as failing to properly apply the award criterion breached⁶³. However, ERCEA, upon detection of the error exercised all due diligence to restore the principle of equal treatment. Payments

⁵⁷ Ares(2021)5796452.

⁵⁸ PPGMS : Participant Portal Grant Management Service.

⁵⁹ PPGMS can imply a significantly longer and indirect chain of communication to the Principal Investigator (PI) and back to the Scientific Officer (SO), in case of additional information requests (SO to Financial Officer to Host Institution to PI and back to SO). Moreover, the PPGMS tool does not provide the communication capabilities that we currently see with e-mails, specifically for resolving issues with scientific publications.

⁶⁰ Risk that key exchanges are not properly uploaded and saved in the Grant Management IT tool impacting the effective monitoring of projects.

⁶¹ Ares(2022)642309.

⁶² Ares(2022)1091526 – IAS contribution to the 2021 AAR process (limited opinion).

⁶³ Art. 167§3 and 170§1 of the Financial Regulation.

were made in line with the legal commitments, ERCEA having decided to continue with the execution of the specific contracts in order not to jeopardise the timely implementation of the ERC communication strategy. Furthermore, considering the measures put in place by the agency, the Court reported in the annex of its report “that the actions taken to respond to 2018 Court’s observations”⁶⁴ are completed.

Further to the audit carried out in relation to Statement of assurance (SoA) for the financial year 2020, the ECA had no specific comments to make and therefore consider the audit as closed.

2.1.3. Assessment of the effectiveness of internal control systems

The Commission has adopted an Internal Control Framework based on international good practice, to ensure the achievement of its policy and management objectives. Compliance with the internal control framework is a compulsory requirement.

The ERCEA uses the organisational structure and the internal control systems suited to achieving its policy and internal control objectives in accordance with the internal control principles and has due regard to the risks associated with the environment in which it operates.

In 2021, to improve the effectiveness of the internal communication, the intranet pages on internal control have been enhanced with visual aids and a more friendly access to all components. It has been done in the context of the migration from the local agency’s intranet page to the corporate intranet of the Commission, MyIntraComm. In addition, an Internal Control Awareness Week has been organised across Executive Agencies in October 2021, with workshops delivered by all agencies attracting more than 600 participants in total.

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

As a first source of the annual effectiveness assessment, the ERCEA considered the results of its internal control monitoring criteria (ICMC), which allowed concluding overall the effectiveness of all principles. To complement this information, the ERCEA launched an internal control assessment (ICAT 2021) that involved the entire management team, all Heads of Sectors and 50% selected randomly agency’s. The participation rate amounted to 60% and resulted in an overall effectiveness of 87%.

The ICMC result regarding the percentage of staff having attended the training on ethics and integrity remained below its target (74% versus 85%), but was assessed as effective, considering the corresponding ICAT result of 95%. Also, the ICMC result of 47%⁶⁵ (target:

⁶⁴ 1- On the legality and regularity of the transactions, the Court considers that “The Agency should make sure that all EU and national legal provisions are respected when using IT consultants”. 2- On internal control, the Court notes that the Agency should use order forms for the recruitment of interim workers that include all the information requested by the law, i.e. the reason for using interim workers.

⁶⁵ Only trainings recorded in the IT system EU-Learn were taken into account for the calculation and the latest results were coming from 2019. Additional anti-fraud training sessions will be organised in 2022 for all staff.

80%) of staff members dealing with financial operations having attended a fraud training was assessed as effective looking at the related ICAT results (93%), echoed by the IAS report on the implementation of anti-fraud actions. Indeed, the latter recommends to strengthen the attendance of the relevant staff to anti-fraud trainings by making their attendance compulsory for newcomers.

Finally, the IT Masterplan activities reached 100% at year end.

During the year, 15 non-compliances and requests for exceptions were registered by several units (21 in 2020), out of which 2 linked to the COVID-19 pandemic (versus 8 in 2020). None of the non-compliances and requests for exceptions was considered the result of an internal control weakness.

The RMIC performed its continuous monitoring, using the quarterly management reviews of the agency's performance and indicators supported by the internal scorecards. In addition, the agency reached an implementation rate of audit recommendations within their deadline of 100%. Last but not least, the two yearly risks updates foreseen by the agency's risk management process were performed in 2021. At year-end, the risk register showed an implementation rate of mitigating measures related to medium and high risks within deadline of 50% (one action out of two postponed to 2022). It is underlined that none of the related identified risks materialised in 2021.

In summary, ERCEA assessed the internal control system during the reporting year and concluded that internal control principles are present and functioning well overall supporting the Declaration of Assurance.

2.1.4. Conclusions on the assurance

This section reviews the assessment of the elements already reported above (in Sections 2.1.1, 2.1.2 and 2.1.3), and the sub-conclusions already reached. It draws an overall conclusion to support 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 FP7, to H2020, to HE as well as the operating budget managed by ERCEA in 2021 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 in 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. 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.

Finally, the fraud prevention and detection mechanisms in place did not reveal any matter 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's 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 2021 of any significant weakness or reputational event that would have adversely affected the assurance provided below.

The RMIC reported her advice and recommendations on the overall state of internal control in the Executive Agency to the Executive Director and certified that the information provided in the present report and in its annexes is, to the best of her knowledge, accurate and complete⁶⁶.

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.

Further to the adoption of ERCEA Annual Activity Report by the Steering Committee on the 29 March 2022⁶⁷, the acting Director, in his capacity as authorising officer for the operating (administrative) budget and authorising officer by delegation for the operational budget has signed the Declaration of Assurance⁶⁸.

Finally, the publication of the final AAR 2021 will be published by Commission services⁶⁹.

⁶⁶ See Annex 1 of the AAR.

⁶⁷ Steering Committee decision StC240322/3.

⁶⁸ See section 2.1.5.

⁶⁹ https://ec.europa.eu/info/strategy/reporting/annual-activity-reports_en?page=1

2.1.5. Declaration of Assurance

Declaration of Assurance

I, the undersigned,

Acting 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 view⁷⁰.

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 European Research Council Executive Agency.

Brussels, 31/03/2022,

(Ares signed)

Laurence MOREAU.

⁷⁰ True and fair in this context means a reliable, complete and correct view on the state of affairs in the Executive Agency.

2.2. Modern and efficient administration – other aspects

This section covers the human resources, digital transformation and information management as well as sound environmental management. For an extensive reporting on all components, please refer to annex 10.

2.2.1. Human resources management

The ERCEA's HR Unit manages the agency's human resources and provides logistics and infrastructure support. The Unit acts as a strategic partner in alignment with the agency's objectives and priorities, actively supporting management and staff. In 2021, the HR Unit was highly involved in ensuring the smooth operations of the ERCEA and communication during the reporting period in the context of the COVID-19 pandemic.

Indeed, the agency launched a major workload exercise for determining staff needs in view of executing HE and against the background of budgetary constraints in particular the major uncertainties with regard to third countries credits. Proposals on optimisation of staff allocation were made and a final staff allocation decision will be made once the agency has clarity about the additional workload for managing third countries' operational credits and the respective additional staff.

During the year, ERCEA hired 27 new staff members reaching an occupation rate of 94.16% (i.e. 500 staff members) on 31 December 2021. The turnover rate was 7.7%, clearly above the turnover rate reported for 2020 (4.89%). Thus, the agency did not meet its annual recruitment target (occupation rate of 98%) due to new or expanding Executive Agencies recruiting intensively throughout 2021, resulting in the high number of vacant posts being filled by interim staff.

In view of filling current and future vacant posts, the agency organised 16 selection processes, adding a total of 122 candidates on the resulting reserve lists. Also, it supported the professional engagement and development of its staff. Notably, 10 ERCEA staff members changed contracts within the agency after succeeding in staff selection processes; vacant posts were generally published first internally: 42 internal publications led to 11 internal moves. Furthermore the ERCEA contributed to the Temporary Agent Inter-Agency mobility scheme, publishing 3 vacancies.

Together with the other Executive Agencies, the ERCEA was involved in an intense social dialogue with the Executive Agencies' Common Staff Committee, the Executive Agencies' Staff Committees and representatives of the Commission's trade unions, leading to harmonisation of practices in some particular HR domains. The ERCEA also successfully organised the elections of its local Staff Committee, nominated for the next three years. In view of the ongoing COVID-19 pandemic, the agency promoted staff's wellbeing with a number of trainings targeted to burnout prevention and exchange sessions with psychologists from the Medical Service. Supporting its staff in the different setups of remote working was also a major area of action. The ERCEA also chaired the inter-agency network of confidential counsellors.

The agency developed a new Learning and Development Strategy (LDS) that outlines the training offer for 2021 to 2023. It launched, together with other Executive Agencies, the inter-agency job-shadowing and Women Talent programmes. Furthermore, it released the Competency Framework's improved digital tool, in cooperation with EACEA, CINEA and REA, which provides staff with more possibilities to identify further professional developments. Finally, ERCEA training offer has put great emphasis on staff well-being and development of digital skills, adapted to remote working environment. In 2021, the overall training days per staff member stood at 5.45 days/staff (4.95 days in 2020).

The internal communication team was transferred from Unit D.2 (HR) to Unit A.2 (Communication) in June 2021, as related activities gained further importance in context of the new working arrangements.

This transfer was meant to not only focus internal communication on the core activities of the ERC but also strike a new balance between central ERC topics and strategic developments that are of general interest to all staff in addition to HR issues. This transfer was accompanied by new cooperation modalities and close ties between Unit A.2, the Staff Development (including Training) and Staff Engagement teams in Unit D.2 and Unit D.1 (IT Solutions and Services).

The ERCEA's Business Continuity Plan (BCP) remained active since the onset of the COVID-19 pandemic in March 2020, and throughout 2021. The ERCEA management involved the BC Desk Officer and Duty Officer in the COVID-19 Crisis Management Team (CMT), which provided support – together with the logistics, time management and IT teams – to agency's managers and staff.

2.2.2. Digital transformation and information management

Results related to document management are provided in annex 10.

The ERCEA continued to update its inventory of the data processing operations, in compliance with the Data Protection Regulation. Dedicated info sessions took place with the staff involved in the drafting of the different records in addition to the event for the Data Protection Day organised by the agency.

The Internal Rules governing restrictions of data subjects' rights approved by the ERCEA Steering Committee in December 2020 were published in the Official Journal of the European Union and on the ERC website.

The agency was very active in the network of the DPOs and worked in close collaboration with the other Executive Agencies for drafting common procedures on the handling of personal data.

Regarding the digital transformation, the Information & Technology Risk and Security Management cell of ERCEA Communication and Information Systems developed a quality assurance strategy for the security plans and implemented a vulnerability testing programme.

In addition, the cyber aware programme organised by DIGIT⁷¹ was promoted and disseminated to ERCEA staff by internal communication (e.g. European Cybersecurity Month in October 2021) and on two occasions by the agency: (i) the outcome of the phishing exercises periodically launched by DIGIT and the knowledge assessment in November 2021 and (ii) the cyber advice for the upcoming holiday season in December 2021. The ERCEA also provided also advice and support along the year on cybersecurity.

2.2.3. Sound environmental management

During 2021, ERCEA's achievements in Sound Environmental management include the following initiatives:

- In January 2021, the Green New Year Resolutions initiative was launched;
- The ERCEA contributed to the Cycling contribution scheme with 30 participants;
- In view of minimizing the use of bottled water, it installed water fountains on all floors;
- ERCEA is actively pursuing with OIB the installation of charging stations for electric cars and bikes in the garage.

In addition, ERCEA participated in the BEST action, in the Velomai as well as in the Sustainable Events competition where it received a Special award for the CO2 calculator it put in place. The agency has also been subject to an external EMAS audit, which resulted in positive references for the practices in place.

With regard to raising awareness on sound environmental management, the agency organised two editions of ERCEA Newcomers Green Virtual Coffee and included in all four editions of the ERCEA Greening Group Newsletter topics on consumption of energy, water, waste, food choices, biodiversity, environmentally responsible holidays. In addition, the ERCEA HR internal bulletin included environmental topics promoting corporate campaigns and initiatives of other DGs and institutions.

The Sound Environmental Management 2021 plan and corresponding indicators were not addressed entirely due to the prolonged pandemic and the fact that, for most time of the year, staff were not present in the office.

2.2.4. Initiatives to improve economy and efficiency of financial and non-financial activities

The agency has contracted an external service provider through a public procurement (open call for tender) to provide Artificial Intelligence (AI) based service (the "Prophy" tool) to support panel members with lists of the most appropriate experts for each and every proposal as well as Scientific Council Members with panel composition simulations based on aggregated expertise calculations. Indeed, the identification, nomination and recruitment of remote referees for the ERC evaluation process step 2 is critical to ensure the quality of the evaluation, involving high-volume and complex tasks for both for ERC panel members

⁷¹ DIGIT: Directorate General for Informatics.

and ERCEA scientific officers (SOs). The service is in place for 2021 StG and AdG calls for all Physical Science and Engineering, Life and Social Sciences. Developments for integrating the Synergy call are ongoing. Therefore, providing assistance to panel members in selecting the most appropriate experts for the remote referee task can significantly increase the rate of successfully recruited remote referees, thus improving the efficiency and economy of the related tasks of SOs. Additionally, providing assistance to the Scientific Council can help to review a larger pool of potential panel members more efficiently.

Moreover, the Scientific Management Department continuously improved the development of tools (e.g. re-applicant eligibility for all calls, domain pre-classification, panel creation and scheduling for Synergy calls) using machine learning algorithms developed by the Data Analysis Group to improve the efficiency of operations.

Last but not least, the Grant Management Department started to explore the possibility of introducing Artificial Intelligence (AI) in an effort to define ways to reduce the error rate while improving the economy and efficiency. Indeed, it contributed to jointly with the DG Research and Innovation and the Grant Management Key Users Group (GM KUG) to a pilot project being developed by DIGIT and CNECT. The Grant Management Department presented initial ideas during the GM KUG workshop that took place in November 2021, while more concrete outcome and actions are expected in 2022 from the Research Family CIC.