



**2016**

# **Annual Activity Report**

**Research Executive  
Agency**

# Table of Contents

<b>REA IN BRIEF</b>	<b>4</b>
<b>EXECUTIVE SUMMARY</b>	<b>6</b>
A) IMPLEMENTATION OF THE AGENCY'S ANNUAL WORK PROGRAMME – HIGHLIGHTS OF THE YEAR .....	6
B) KEY PERFORMANCE INDICATORS (KPIs) .....	8
C) KEY CONCLUSIONS ON FINANCIAL MANAGEMENT AND INTERNAL CONTROL (EXECUTIVE SUMMARY OF SECTION 2.1) .....	12
D) INFORMATION TO THE COMMISSIONERS .....	13
<b>1. IMPLEMENTATION OF THE AGENCY'S ANNUAL WORK PROGRAMME – HIGHLIGHTS OF THE YEAR</b>	<b>14</b>
1.1 EXCELLENT SCIENCE – MARIE SKŁODOWSKA-CURIE ACTIONS (MSCA) AND THE FP7 PEOPLE PROGRAMME .....	15
1.2 EXCELLENT SCIENCE - FUTURE AND EMERGING TECHNOLOGIES (FET-OPEN) .....	17
1.3 INDUSTRIAL LEADERSHIP – SPACE AND THE FP7 PREDECESSOR ACTION .....	19
1.4 SOCIETAL CHALLENGE 2: 'FOOD SECURITY, SUSTAINABLE AGRICULTURE AND FORESTRY, MARINE AND MARITIME AND INLAND WATER RESEARCH AND THE BIOECONOMY' .....	20
1.5 SOCIETAL CHALLENGE 6: EUROPE IN A CHANGING WORLD - INCLUSIVE, INNOVATIVE AND REFLECTIVE SOCIETIES .....	22
1.6 SOCIETAL CHALLENGE 7: SECURE SOCIETIES - PROTECTING FREEDOM AND SECURITY OF EUROPE AND ITS CITIZENS AND THE FP7 PREDECESSOR ACTIONS IN SECURITY .....	23
1.7 SPECIFIC OBJECTIVE: SPREADING EXCELLENCE AND WIDENING PARTICIPATION (SEWP) .....	25
1.8 SPECIFIC OBJECTIVE: SCIENCE WITH AND FOR SOCIETY (SWAFS) .....	26
1.9 FP7 - CAPACITIES SPECIFIC PROGRAMME - RESEARCH FOR THE BENEFIT OF THE SMES (RSME) .....	27
1.10 ACTIVITY – ADMINISTRATIVE AND LOGISTICAL SUPPORT SERVICES .....	28
<b>2. ORGANISATIONAL MANAGEMENT AND INTERNAL CONTROL</b>	<b>31</b>
2.1 FINANCIAL MANAGEMENT AND INTERNAL CONTROL .....	31
2.1.1 CONTROL RESULTS .....	33
Coverage of the Internal Control Objectives and their related main indicators:	34
2.1.1.1 Control effectiveness as regards legality and regularity	34
2.1.1.1.1 Assessment of inherent risks of the programmes/activities managed	35
2.1.1.1.2 Control results as regards legality and regularity	38
2.1.1.1.3 Comments on the control results	46
2.1.1.1.4 Conclusion on the control effectiveness as regards legality and regularity	48
2.1.1.2 Cost-effectiveness and efficiency	52
2.1.1.2.1 Stage one: Programming, evaluation and ranking of proposals	52
2.1.1.2.2 Stage two: selection of proposals and conclusion of grant agreements	55
2.1.1.2.3 Stage Three: Monitoring of the grant agreement execution	57
2.1.1.2.4 Stage four: Ex-post controls and recoveries	61
2.1.1.2.5 Indicators related to the administrative and logistical supports services	62
2.1.1.2.6 Assessment of REA's relative level of cost-effectiveness	63
2.1.1.3 Fraud prevention and detection	66
2.1.1.4 Safeguarding of assets and information, reliability of reporting	68
2.1.2 AUDIT OBSERVATIONS AND RECOMMENDATIONS .....	69
2.1.2.1 Audits by the European Court of Auditors (ECA)	69
2.1.2.2 Follow-up of actions resulting from ECA audits of previous years	70
2.1.2.3 Commission's Internal Audit Service (IAS)	70
2.1.2.4 Actions resulting from IAS audits of previous years	72
2.1.3 ASSESSMENT OF THE EFFECTIVENESS OF THE INTERNAL CONTROL SYSTEMS .....	73
2.1.3.1 Management's assessment of the effectiveness of the internal control systems	73
2.1.3.2 REA control system and operating procedures	73
2.1.3.3 Six-monthly reporting of the Authorising Officers by Sub-Delegation (AOSDs)	74
2.1.3.4 Register of exceptions, analysis of internal control weakness or control failures recorded during the year	74
2.1.3.5 REA risk assessment exercise	75
2.1.3.6 Assessment of the functioning of the internal control system	75
2.1.3.7 The opinion of the Internal Control Coordinator (ICC) on the REA's state of control	75
2.1.4 CONCLUSIONS AS REGARDS ASSURANCE .....	76
Overall conclusion	78
2.1.5 DECLARATION OF ASSURANCE AND RESERVATIONS .....	78
<b>DECLARATION OF ASSURANCE</b>	<b>79</b>

2.2	OTHER ORGANISATIONAL MANAGEMENT DIMENSIONS .....	84
2.2.1	HUMAN RESOURCE MANAGEMENT .....	84
2.2.2	INFORMATION MANAGEMENT ASPECTS .....	85
2.2.3	EXTERNAL COMMUNICATION ACTIVITIES .....	85
2.2.4	SPECIFIC EFFORTS TO IMPROVE 'ECONOMY' AND 'EFFICIENCY' OF SPENDING AND NON-SPENDING ACTIVITIES .....	86
	Evaluation of proposals	87
	Support services – Revision of the rules for legal and financial viability checks	88

## REA IN BRIEF

The Research Executive Agency (REA) is an autonomous body with its own legal entity, which was set up by a Commission Decision in 2007 with the aim of implementing parts<sup>1</sup> of the Seventh Framework Programme for Research and Technological Development (FP7). In November 2013, the European Parliament and the Council adopted Horizon 2020 (H2020) – the new Framework Programme for Research and Innovation for the period 2014-2020 – which entered into force as of 1 January 2014. The Commission extended the REA's mandate to include the management of parts of H2020 from 2014 to 2024. Previously, REA managed FP7 research projects for a value of approximately 12% of the FP7 budget and it now manages nearly 20% of the H2020 budget. The REA is the largest of all six EU executive agencies.

In line with the Framework Regulation for Executive Agencies and with the Commission Guidelines for the establishment and operation of Executive Agencies, REA operates under the full control of the Commission and is, like its parent Directorates-General (DGs), located in Brussels. It is managed by a senior official seconded from the Commission, the Director, and by a governing board composed of parent DGs' representatives, the Steering Committee. The Agency's senior and middle managers (Heads of Department and Heads of Unit) are seconded Commission officials as well. The cooperation with Commission services is specified in the Memorandum of Understanding (MoU), which complements the Delegation Act by establishing the modalities and procedures of interaction between the six parent DGs<sup>2</sup> and the Agency.

In practice, REA assists the Commission in achieving its objectives in the field of research and innovation and the EU strategies to foster growth by ensuring an optimal implementation of the delegated parts of the Horizon 2020 and FP7 Framework Programmes. To this end, it delivers services to the research community (i) implementing its programme and implementation tasks supporting the EU funding for research and innovation and (ii) providing efficient and effective administrative and logistical support services to participants in the Framework Programmes and to other Commission services. By maintaining close contacts with beneficiaries and by providing a high visibility of the European Union, REA acts as promoter of the European Research Area and EU research and innovation policies. The Agency has developed a performance-based and service-oriented culture and strives to reach ambitious targets. Its performance is monitored using Key Performance Indicators (KPIs).

The Juncker Commission, which took office at the end of 2014, set ten priorities, identifying specific areas for action. By managing the parts of the Research Programmes that have been delegated to it and by promoting projects in Excellent Science, Industrial Leadership and Societal Challenges, REA contributes specifically to several priorities such as "A New Boost for Jobs, Growth and Investment", "A Connected Digital Single Market", "A Resilient Energy Union with a forward-looking Climate Change Policy" and, indirectly, those related to the EU in a global world (Priorities 6, 7 and 8)<sup>3</sup>. Moreover, by coupling research and innovation, it helps encouraging a world-class science in Europe, removing barriers to innovation and facilitating collaboration between the public and private sectors.

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<sup>1</sup> The People Specific Programme, the Capacities Specific Programme (Research for the benefit of SMEs) and the Cooperation Specific Programme (Space and Security themes)

<sup>2</sup> DG Research and Innovation (RTD), DG Education and Culture (EAC), DG Communications Networks Content and Technology (CNECT), DG Internal Market, Industry, Entrepreneurship and SMEs (GROW), DG Agriculture and Rural Development (AGRI) and DG Migration and Home Affairs (HOME)

<sup>3</sup> 'A Reasonable and Balanced Free Trade Agreement with the U.S.' (Priority 6), 'An Area of Justice and Fundamental Rights based on Mutual Trust' (Priority 7) and 'Towards a New Policy on Migration' (Priority 8)

The following H2020 actions and predecessor actions under FP7 have been delegated to REA:

- The Management of Horizon 2020 – Excellent Science – Marie Skłodowska-Curie actions (MSCA) and the FP7 People Programme (MCA) from DG EAC;
- The Management of Horizon 2020 – Excellent Science – Future and Emerging Technologies (FET Open) from DG CNECT;
- The Management of part of Horizon 2020 – Industrial Leadership – Space Research actions and the actions of the Space theme of the FP7 Cooperation Programme from DG GROW;
- The Management of part of Horizon 2020 Societal Challenge 2 from DG RTD and DG AGRI;
- The Management of part of Horizon 2020 Societal Challenge 6 from DG RTD and DG CNECT;
- The Management of part of Horizon 2020 Societal Challenge 7 and the actions of the Security theme of the FP7 Cooperation Programme from DG CNECT and HOME;
- The Management of part of Horizon 2020 Specific Objectives "Spreading Excellence and Widening Participation" and "Science with and for Society" from DG RTD;
- The Management of part of FP7 Capacities – Research for the benefits of the SMEs from DG RTD.

As an EU funding body, REA's main tasks relate to the management of the project lifecycle. This includes the publication of the calls from the H2020 work programme, the organisation of proposal evaluations, the preparation and conclusion of grant agreements and the monitoring of the resulting projects for Horizon 2020 and FP7, in line with the applicable financial and administrative rules. REA ensures, through its high-quality project evaluation and review process, that the funded projects have a real impact in tackling societal challenges and in boosting European competitiveness.

In addition, REA assists its six parent DGs in the Commission in the management of programmes and the achievement of its policy objectives by collecting information on project implementation and results, by promoting the ex-post publicity and dissemination of the results by the projects in accordance with the strategy for dissemination and exploitation of research results, by providing a focussed policy feedback whereby key projects results are signalled to the Commission services to support their policy development activities, by making recommendations on the future development of the programme, in particular with respect to call implementation and grant management issues, and by playing an important role in the communication related to funding opportunities, project results and success stories.

Finally, REA provides logistical and administrative support services. This includes participant validation to the whole of Horizon 2020 as well as to some other non-research EU programmes (such as justice, education, competitiveness or agricultural promotion) and the management of expert contracting and payments. This activity covers the experts ('evaluators') for all bodies implementing Horizon 2020 (except for the experts employed by the European Research Council) as well as the expert monitors ('reviewers') for FP7 and H2020 actions delegated to REA. In 2016, the mandate of the REA has been extended to provide validation services to 3 new DGs (AGRI, HOME and JUST). A new major extension of REA's mission with regard to the registration and validation of participants is expected with the SEDIA (Single Electronic Data Interchange Area) project. The goal of the project is notably to provide centralised validation for stakeholders of the European Commission specifically through grants or contracts. An extension of REA's mandate will be necessary for 1 January 2018.

## EXECUTIVE SUMMARY

The Annual Activity Report is a management report of the Director of the Research Executive Agency 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 Treaties.<sup>4</sup>

### a) Implementation of the Agency's Annual Work Programme – Highlights of the year

The mission of REA is to fund projects that have a real impact in terms of tackling societal challenges and boosting European competitiveness.

Therefore REA invests a lot in the evaluation of the proposals to make sure that only the very best projects with the highest scientific excellence ranking and the highest chances of success and impact are funded. Proposals are selected by the most qualified experts in the field within a database of almost 120,000 experts. The quality of its evaluation process is widely recognised - by independent observers as well as by the external evaluation of REA finalised in March 2016.<sup>5</sup>

REA is also monitoring the projects under its responsibility to ensure that they deliver on the agreed objectives. By the end of 2016, 95.8% of the closed FP7 projects managed by REA achieved all or most of their objectives, which demonstrates the high quality of key procedures in place for proposal evaluation and scientific and financial grant management.

The high quality of the projects funded by REA can also be illustrated by the 2016 award of the Nobel Prize for Chemistry to three researchers who were involved as scientists in charge of eight projects within the Marie Skłodowska-Curie actions and predecessor actions. Marie Curie fellows were also involved in a major breakthrough in fundamental physics that has been awarded to the discovery of the gravitational waves. Since the creation of the Agency, the REA has supported 68,000 fellows (more than 8,000 in 2016) through the MSCA under H2020 and the FP7 People Programme (MCA).

REA funds projects that address major concerns of European citizens, such as migration challenges. In 2016, REA has funded various projects to better understand the migration process and to facilitate the integration of migrants in the European labour market. REA is also committed to the translation of the research it funds into real market opportunities. It participates in the Innovation Radar Pilot launched by the Commission that aims at identifying the most promising projects with a real innovative and market value from different actions across H2020.

From the beginning of FP7 to date, the projects managed by REA resulted in the issuing of more than 600 patents and REA's "success stories" account for about 22% of all success stories provided to the Research common pool.

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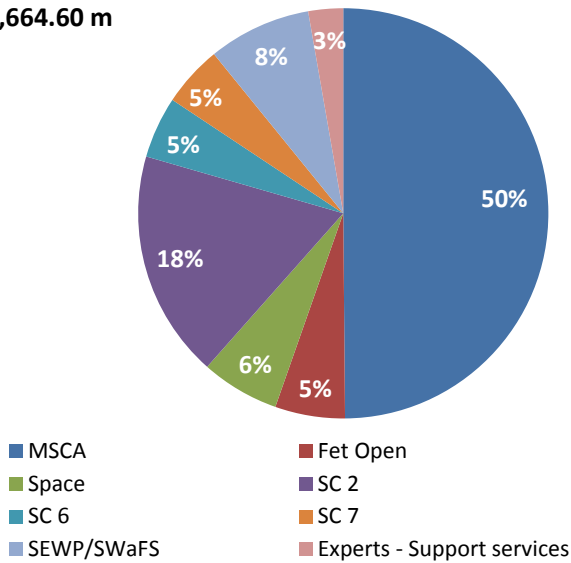
<sup>4</sup> Article 17(1) of the Treaty on European Union.

<sup>5</sup> Evaluation of the Operations of the REA (2012-2015), Ref. Ares(2016)1305406 of 15/03/2016.

**2016 was a year of heavy workload for REA.**

**Budget executed in 2016 - H2020 Commitment appropriations:**

€ 1,664.60 m



In 2016, REA launched 22 calls (Work Programme 2016 calls) for a total value of €1,664.60 million.

At the time of reporting, REA had evaluated over 12,800 proposals for the 2016 calls (compared to over 15,000 proposals for the 2015 calls) out of which 1,674 proposals were main listed.<sup>6</sup>

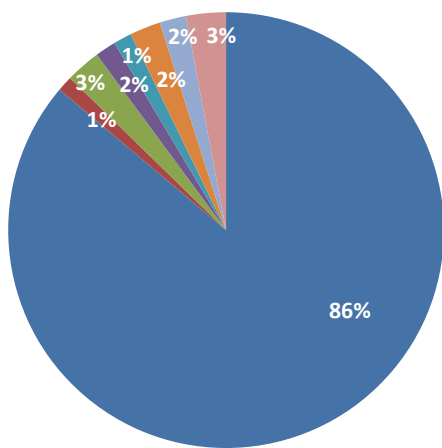
The overall success rate for the 2016 calls was at 13.3% (compared to 11.1% for the 2015 calls).

By the end of December 2016, the Grant Agreement Preparation (GAP) was closed for 7 calls while it was still on-going for 15.

Overall, in 2016 REA signed about 1,700 grants from the 2015 and 2016 calls for proposals.

**Portfolio of grants managed by REA at 31/12/2016:**

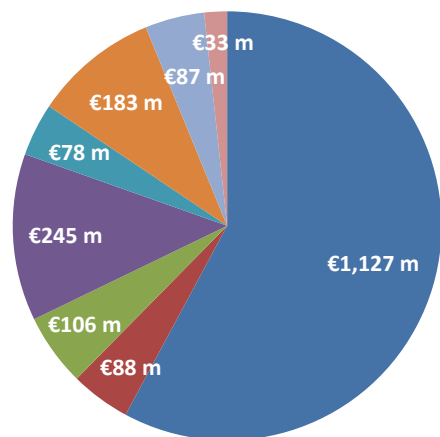
6,658 grants



- H2020- MSCA and predecessor actions
- H2020 - Fet Open
- H2020 -Space and predecessor actions
- H2020 -SC 2
- H2020 -SC 6
- H2020 - SC 7 and predecessor actions
- H2020 -SEWP and SWAFS
- FP7 - SME

**Portfolio of grants managed by REA - amounts still to be disbursed:**

€ 1,947.85 m

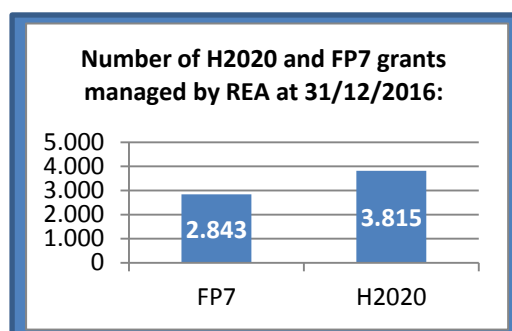


<sup>6</sup> The significant decrease in the number of evaluated proposals between the 2015 and 2016 calls may, amongst others, be explained by the changing nature of the calls from one year to the next. For details, please refer to Part 1, section 'key achievements' for each activity.

At the end of 2016, REA managed a total of 6,658 grants (H2020 and FP7 combined). Out of these, there were 3,815 active H2020 projects, compared to 2,190 at the end of 2015. For the 2016 calls, 321 grants had been signed by end-December.

For H2020, REA executed 100% of its budget in commitment and payment appropriations (the latter for the amount of €1,235.41 million, including payments to experts for an amount of €42.55 million). The H2020 payments processed in 2016 relate mostly to pre-financing as only about 200 interim payments were made.

For FP7, REA still managed a stock of about 2,843 running projects at the end of the year, while 1,987 FP7 grant agreements were closed during the year and over 2,800 payments were made, for about €407.53 million. Even though the number of FP7 projects will be decreasing over the next years, the workload related to the winding down of FP7 projects remains significant for the next two years.



The good performance achieved in terms of 'Time-To-Pay' (TTP) was maintained in 2016 with 95.4% of the project-related payments made on time. Both, the grant agreement signature and the processing of payments were facilitated by a fully electronic workflow for H2020<sup>7</sup>.

In terms of administrative and logistical support services provided, the performance was very good. REA supported nearly 200 calls with more than 6,700 experts on-site. More than 7,300 entities had their legal status validated and over 7,700 LEAR (Legal Entity Authorised Representative) extended mandates have been validated. 13,100 experts' contracts were signed and nearly 21,000 expert payments were made (for an amount of €42.55 million) within an average TTP of 11 days.

## b) Key Performance Indicators (KPIs)

This subsection shows the five key performance indicators (KPI) most relevant for REA as set out in the Annual Work Programme 2016, i.e. the indicators which measure the most critical aspects of its performance and give useful insights into its most significant achievements. The following key performance indicators have been retained:

- 1. Full implementation of the operational budget;**
- 2. Rapid conclusion of grant agreements (TTG - 'Time-To-Grant');**
- 3. High quality of the grant management;**
- 4. Legality / regularity of financial transactions;**
- 5. Providing efficient support services to the Research DGs and other client services.**

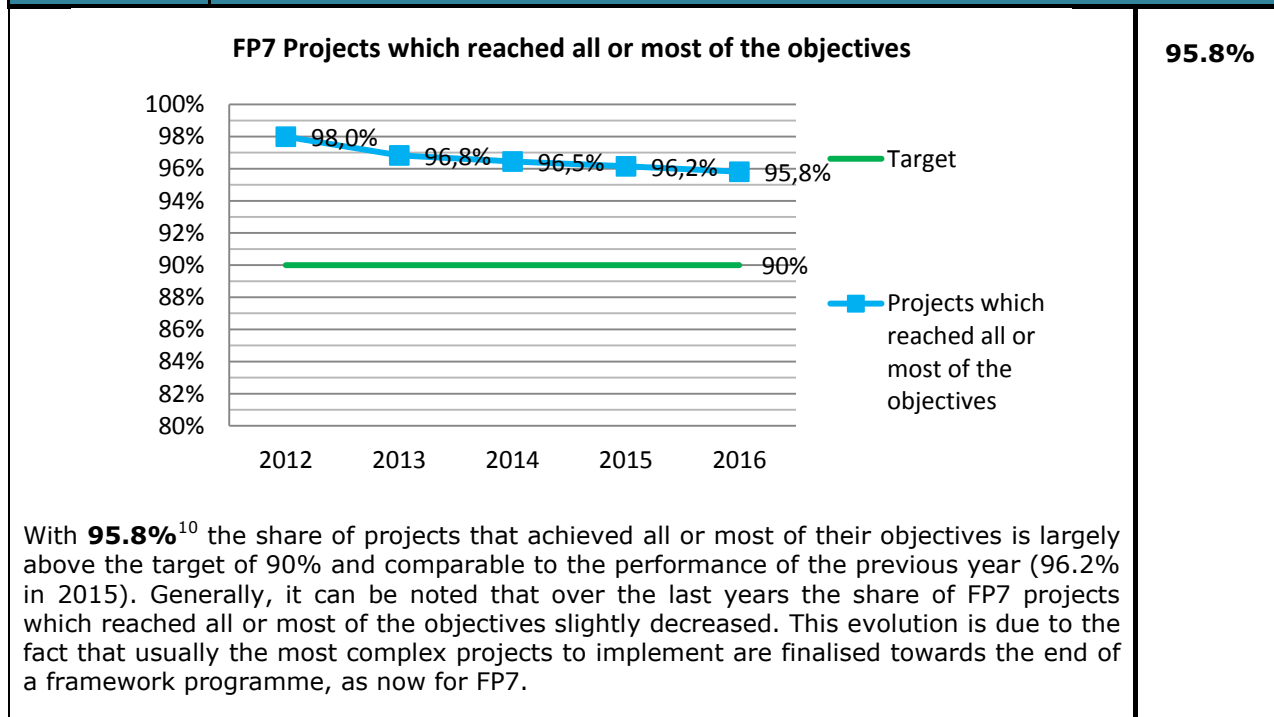
<sup>7</sup> Cf. Section 1.3 on the specific efforts to improve 'economy' and 'efficiency' of spending and non-spending activities.

Result indicator	Target	Latest known results at 31/12/2016																											
<b>KPI 1 😊</b>	<b>Full implementation of the operational budget</b>																												
<b>Target</b>	<b>100% execution of commitment and payment appropriations</b>																												
	<table border="1"> <thead> <tr> <th>2009</th> <th>2010</th> <th>2011</th> <th>2012</th> <th>2013</th> <th>2014</th> <th>2015</th> <th>2016</th> </tr> </thead> <tbody> <tr> <td>100.0%</td> <td>100.0%</td> <td>100.0%</td> <td>100.0%</td> <td>100.0%</td> <td>100.0%</td> <td>100.0%</td> <td>100.0%</td> </tr> </tbody> </table>	2009	2010	2011	2012	2013	2014	2015	2016	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	<p><b>100%</b> execution of commitment and payment appropriations</p>											
2009	2010	2011	2012	2013	2014	2015	2016																						
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%																						
	<p>As in previous years, the <b>operational commitment and payment appropriations</b> from the EU general budget (excluding earmarked revenue) were fully executed in 2016.</p>																												
<b>KPI 2 😊</b>	<b>Rapid conclusion of grant agreements (TTG - 'Time-To-Grant')</b>																												
<b>Target</b>	<b>100% within 8 months (245 days)</b>																												
	<p>REA has steadily improved its TTG performance since the Agency's autonomy. With <b>99%</b> of all grants agreements <b>signed in 2016 (calls 2015 and 2016)</b> in less than 245 days, the results were excellent - the best ever achieved by REA. The average TTG performance stands at <b>193 days</b> (against 203 in 2015), 52 days below the target.<sup>8</sup></p> <p>For the 2016 calls, the TTG performance for only one activity, LEIT – Space, was available at the time of reporting (97%)<sup>9</sup>. For the other activities, the 8-months TTG period was still at the end of 2016.</p>	<p>Share of grants signed in 2016 within 245 days:</p> <p><b>99%</b></p> <p>Average TTG (in days):</p> <p><b>193</b></p>																											
	<p align="center"><b>TTG - Performance per activity and year of the call</b></p> <table border="1"> <thead> <tr> <th></th> <th>MSCA</th> <th>Fet Open</th> <th>Space</th> <th>SC 2</th> <th>SC 6</th> <th>SC 7</th> <th>SEWP</th> <th>SWaFS</th> </tr> </thead> <tbody> <tr> <td>■ Calls 2015</td> <td>100%</td> <td>96%</td> <td>97%</td> <td>100%</td> <td>97%</td> <td>92%</td> <td>100%</td> <td>100%</td> </tr> <tr> <td>■ Calls 2016</td> <td></td> <td></td> <td>97%</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>			MSCA	Fet Open	Space	SC 2	SC 6	SC 7	SEWP	SWaFS	■ Calls 2015	100%	96%	97%	100%	97%	92%	100%	100%	■ Calls 2016			97%					
	MSCA	Fet Open	Space	SC 2	SC 6	SC 7	SEWP	SWaFS																					
■ Calls 2015	100%	96%	97%	100%	97%	92%	100%	100%																					
■ Calls 2016			97%																										

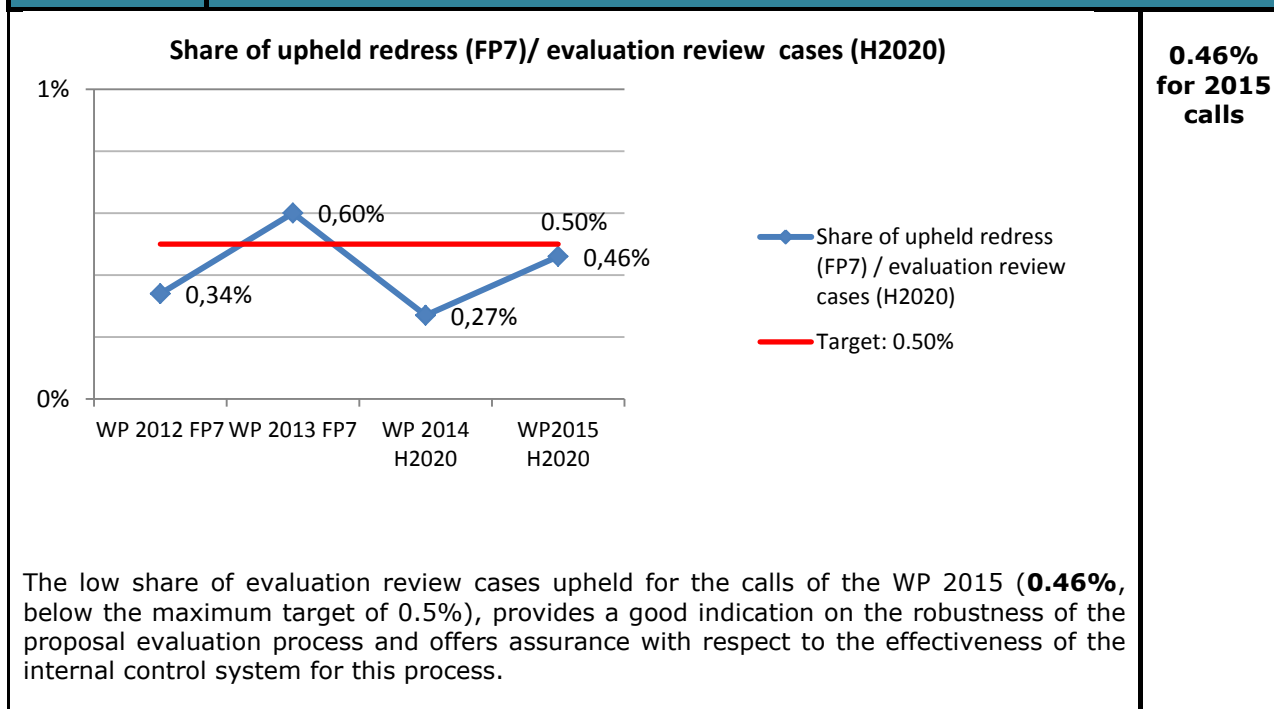
<sup>8</sup> Data extracted from CORDA.

<sup>9</sup> Data extracted from CORDA. Only one grant signature was delayed due to the need for a security scrutiny of the proposal.

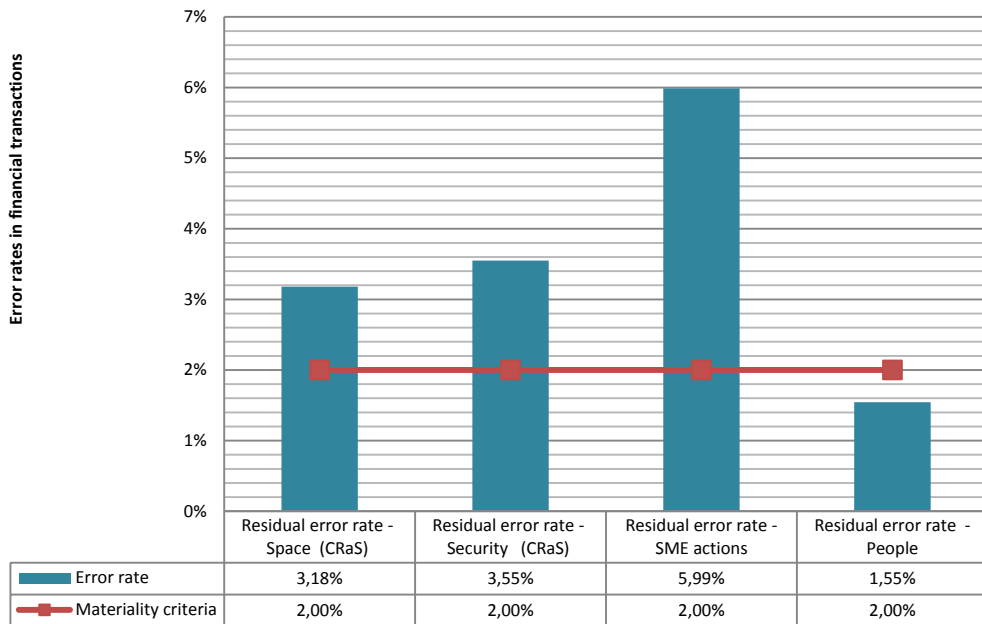
<b>KPI 3</b> 😊	<b>High quality of the grant management</b> 3.1. Share of projects that achieved their objectives
<b>Target</b>	<b>90% of FP7 closed projects achieved most of their objectives</b>



<b>KPI 3</b> 😊	<b>High quality of the grant management</b> 3.2. Share of redress (FP7)/ evaluation review cases (H2020) upheld in comparison with the number of proposals evaluated
<b>Target</b>	<b>Max. 0.5% of proposals evaluated</b>



<sup>10</sup> This indicator is extracted from the Corda database, and is one of the indicators of DG RTD. The statistics are based on the Project assessment reports (FP7 projects).



Regarding the **error rate in financial transactions**, based on the audits completed under the first, the second and the third Common Representative audit Sample (CRAS), the residual error rate is at **3.18%** for the **Space** theme of the FP7 Cooperation Programme and at **3.55%** for the **Security** theme. Both are above the materiality criterion of 2% and, therefore, call for maintaining the reservation made in the AAR 2015. Two other activities implemented by the Agency have a different risk profile: the **Research for the benefit of SMEs actions** of the FP7 Capacities Programme and the FP7 **People Programme**. For these activities, the CRAS representative error rate alone cannot be taken as a reference and the REA is relying on detected error rates from a wider range of control data to provide indications on the likely residual error rates for each of these activities. The residual error rates for these two activities are estimated at **5.99%** for the **SME actions** and at and **1.55%** for the **People Programme**. Hence, the reservation made in the AAR 2015 for the SME actions will be maintained for 2016.

For H2020 only a limited number of interim payments have been processed so far and the ex-post controls have not yet started. As a result, there are no indications available on the error rate for the H2020 spending.

<b>KPI 5 😊</b>		
<b>Providing efficient support services to the Research DGs and other client services</b>		
Target	Participant validation: 95% of validations performed within the 90 days from the "raise priority" date <sup>11</sup>	😊
Target	Expert contracting: 100% of expert contracts signed in less than 10 calendar days <sup>12</sup>	😊
Target	Expert payment: 100% of experts paid within 30 days	😊
	<b>2015</b>	<b>2016</b>
<b>Participant validation</b>		92.4%
<b>Expert contracting</b>	97.9%	99.3%
<b>Expert payment</b>	96.1%	99.6%
<p>Under the new mandate, REA provides administrative and logistical <b>support services</b> to the whole of H2020 and to certain other programmes. Its performance is very good, with <b>92.4% of participant validations</b> performed within the target, <b>99.3% of expert contracts</b> signed in less than 10 days and <b>99.6% of experts' payments</b> made within the deadline. While it was the first year of measurement for the KPI on participant validation, the performance for expert contracting and payment improved in comparison with 2015 (97.9% and 96.1% respectively).</p>		

### c) Key conclusions on Financial management and Internal control (executive summary of section 2.1)

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

The Commission has adopted a set of internal control standards, based on international good practice, aimed to ensure the achievement of policy and operational objectives. The financial regulation requires that the organisational structure and the internal control systems used for the implementation of the budget are set up in accordance with these standards. REA has assessed the internal control systems during the reporting year and has concluded that the internal control standards are implemented and function as intended. Please refer to AAR section 2.1.3 for further details.

In addition, REA has systematically examined the available control results and indicators, as well as the observations and recommendations issued by internal auditors and the European Court of Auditors. These elements have been assessed to determine their impact on the management's assurance as regards the achievement of control objectives. 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 Director, in his capacity as Authorising Officer (AO) for the administrative budget and Authorising Officer by Delegation (AOD) for the operational budget, has signed the Declaration of Assurance albeit qualified by a reservation concerning FP7 Space and Security themes and a reservation concerning FP7 SME actions.

<sup>11</sup> The priority setting for validations is automatically set by the PDM system.

<sup>12</sup> The indicator is measured from the moment the contract signature process is launched in COMPASS until the signature of the contract by both parties.

In terms of risk management, REA continued to implement actions addressing the AAR reservations of last year. In 2016, the Agency pursued its ongoing efforts to give guidance and feedback to the participants and certifying auditors and carried on with its control and audit work in order to further reduce the FP7 residual error rate. In addition, on the basis of the results of the desk audit campaigns on SME beneficiaries, REA continued strengthened ex-ante controls for current projects of the SME actions, applying them for all reporting periods for which final deliverables were submitted as of 1 January 2015.

The AAR 2016 contains an analysis of costs and benefits of controls. One should give due consideration to the fact that "control" refers not only to verifications and checks for which benefits in terms of corrected errors can be quantified but include all management processes for programme implementation. In this context, REA's administrative budget, as a share of the operational budget, serves as a good indicator on the costs of control. In line with previous years, REA's operating cost remains below 3% of the operational budget. It should be highlighted that many benefits of such controls are qualitative and therefore very difficult to measure.

## **d) Information to the Commissioners**

In the context of the regular meetings during the year between the Director and the parent DGs on management matters, also the main elements of this report and assurance declaration, including the reservations envisaged, have been brought to the attention of the Agency's Steering Committee and to the parent DGs' Directors-General, who have taken these into consideration in their reporting to Commissioner Carlos Moedas, responsible for Research, Science and Innovation, Commissioner Tibor Navracsics, responsible for Education, Culture, Youth and Sport, Vice-President, Andrus Ansip, responsible for the Digital Single Market, Commissioner Elżbieta Bieńkowska, responsible for Internal Market, Industry, Entrepreneurship and SMEs, Commissioner Phil Hogan, responsible for Agriculture and Rural Development, and Commissioner Dimitris Avramopoulos, responsible for Migration, Home Affairs and Citizenship and Commissioner Julian King, responsible for the Security Union.

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

Overall, REA contributed to achieving the Commission's objectives by managing the activities it has been entrusted with. The key actions performed by REA in order to contribute to the achievement of these objectives have been identified in the REA AWP 2016. They are listed below.

As regards **programme and project implementation** tasks supporting the funding for research and innovation actions, REA is responsible for the management of the project life cycle:

- On the basis of the H2020 work programme, the agency autonomously manages the calls for proposals, the evaluation of the proposals and the launch and conclusion of grant award procedures.
- REA monitors the resulting projects, for Horizon 2020 and FP7, according to the applicable financial and administrative rules, making the necessary checks before paying out the grant.

In addition, the Agency assists the Commission in the management of the programmes:

- by collecting information and data about the implementation and the results of the projects,
- by promoting the ex-post publicity and dissemination of results by the projects in accordance with the strategy for dissemination and exploitation of research results,
- by providing a focussed policy feedback whereby key project results are signalled to the Commission services to support their policy development activities,
- by making recommendations on the future development of the programme, in particular with respect to call implementation and grant management issues,
- by playing an important role in informing on funding opportunities and project results.

As to the **policy feedback loop**, it serves the Commission's policy-making and programming activities. It mainly comprises feedback to the parent DGs on issues relevant to the researchers and institutions as well as to the projects and programmes. Therefore, REA staff, in coordination with the Commission, organises and contributes to meetings and conferences, liaising with national ministries and funding bodies, project coordinators and Commission representatives sharing information about new developments. REA also provides analysis of project portfolios, policy briefs and policy synthesis reports. Moreover, REA contributes to the adaptation of monitoring modalities to facilitate cooperation and exchange and participates in workshops in order to share best practices. REA's reports to the parent DGs on success stories, project implementation and statistics also provide input for the interim evaluation of H2020 and the Work programme 2018-2020.

In addition to its programme implementation tasks, REA also provides various **administrative and logistical support services** to participants and Commission services/Agencies/Joint Undertakings implementing H2020 and, to a lower extent, FP7, which include:

- the planning of the calls for proposals and contests for prizes and support for their publication,

- the general logistical support for the evaluations,
- the contracting and payment of the independent experts involved in the evaluation of all the proposals received (except for experts supporting the ERC),
- the validation of legal entities and notably the Legal Entity Authorised Representative (LEAR)<sup>13</sup>,
- the preparation of the assessment of the financial viability of these legal entities.

Other (non-research) EU programmes benefit from REA's support services (such as justice, education, competitiveness or agricultural promotion), in particular with regard to participant validation.

**This section provides result indicators on the implementation of the Agency's Work Programme 2016, by programme implementation tasks.**

## 1.1 Excellent Science – Marie Skłodowska-Curie actions (MSCA) and the FP7 People Programme

### Contribution to the achievement of Commission's objectives

DG EAC has delegated the management of the Marie Skłodowska-Curie actions (MSCA) of H2020 and the Marie Curie Actions of the FP7 People Programme to REA.

In executing the management of the Marie Skłodowska-Curie actions and their predecessor actions under FP7, REA helps DG EAC to contribute to the overarching Commission general objective 1 "A New Boost for Jobs, Growth and Investment". Through the MSCA, DG EAC aims at ensuring the optimum development and dynamic use of Europe's intellectual capital of researchers in order to generate new skills and innovation and, thus, to realise its full potential across all sectors and regions.

The Marie Skłodowska-Curie actions offer funding possibilities for training and career development of researchers around an excellent research project. They provide support to individuals and organisations and boost scientists' overall mobility.

### Examples of EU added value of projects managed by REA

Like all EU funded research projects, MSCA focus on projects that cannot be efficiently realised by Member States acting alone, in particular when addressing issues with a cross-border dimension. The added value of these EU programmes resides also in the guarantee that all Member States, associated countries and third countries can participate in and benefit from mobility, exchanges of experience, transfer of good practices or policy support. They enable continent-wide competition to select the best proposals, thereby raising levels of excellence and providing visibility for leading innovation.

Outstanding researchers and exceptional results are a good example of what European mobility can achieve in fostering excellence in research in Europe. As illustrated by the following examples, many MSCA projects have a great potential in terms of discovering

<sup>13</sup> LEAR Extended mandate – After being validated, every entity is required to appoint a Legal Entity Authorised Representative (LEAR) who is in charge of:

- providing the Commission with up-to-date legal and financial data (including — on request — supporting documents) on the entity, via the Beneficiary Register;
- maintaining and updating this data (i.e. enabling it to be used for contracting and other transactions between the entity and the Commission);
- entering and updating on the website the names of any persons authorised to act as legal representatives and signatories for their organisation through the electronic platform for interaction with beneficiaries (the H2020 Participant Portal).

new applicable solutions to various challenges within the EU.

The **Innovative Training Networks (ITN)** calls aim to enhance the creative and innovative potential of researchers at all career levels by creating opportunities for cross-border and cross-sector mobility, by encouraging them to broaden or deepen their skills by means of mobility, by opening attractive career opportunities in universities, research institutions, research infrastructures, businesses, SMEs and other socio-economic groups all over Europe and beyond. This is illustrated by the **GraWIToN project**, a training programme for early stage researchers aiming at the detection of gravitational waves predicted in Einstein's Theory of General Relativity, which was proved already at mid-term stage of the project. This opens a new era in space observation, gravitational astronomy and new possibilities concerning the prediction of the frequency of gravitational waves. The project was awarded the 2016 Special Breakthrough Prize in Fundamental Physics.

The objective of **Individual Fellowships (IF)** calls is to enhance the creative and innovative potential of experienced researchers wishing to diversify their individual competence in terms of skill acquisition at multi- or interdisciplinary level through advanced training, international and cross-sectoral mobility. **DendroBAP** is an example of a project with highly innovative potential aiming at developing new bone adhesives for complicated fractures and dental composites to be used in surgical treatment under local anaesthesia. This technique could replace the wide-spread use of screws, which may not only have a high impact regarding scientific dissemination but also a very good outreach visibility for citizens.

The **COFUND** scheme aims at stimulating regional, national or international programmes to foster excellence in researchers' training, mobility and career development, spreading the best practices of MSCA. The EU added value may be illustrated by the **ALERT** project, an inter-sectorial doctoral training programme, in which highly skilled young researchers work together with well-established scientists to tackle the emergence of resistant bacteria to which the current overuse of antibiotics has led. ALERT's long-term ambitions are to establish a strong international network which will continue beyond the funding period and the involvement of the prominent 2016 Nobel Prize laureate Prof. Feringa in this project will increase its dissemination impact.

The **RISE** scheme promotes international and inter-sector collaboration by supporting joint research or innovation projects carried out through staff exchanges and networking activities between research and business organisations. RISE involves organisations from the academic and non-academic sectors (in particular SMEs), based both within and outside Europe. **GRAGE** is an example of a project bringing together such a wide range of cooperation partners. Scientists from different academic backgrounds, institutions and countries develop ideas targeting elderly people living in urban contexts. Using a mix of methodologies, this project aims to improve the understanding of factors that influence the elderly's attitudes, values and behaviour and is expected to have a series of returns for citizens as well as business opportunities for European companies.

5 calls (budget: €829.81m)

11,121 proposals submitted

1,456 proposals main listed

13.3% success rate

### REA key achievements for 2016

By the end of the year, the grant agreement preparation (GAP)<sup>14</sup> was finalised for three out of the five 2016 calls under MSCA (ITN, RISE, NIGHT). All 232 grants for these three calls were signed on time. For the other two calls (IF and COFUND) evaluations were finalised in January 2017.

The number of proposals submitted to the 2016 calls (11,121) increased by almost 600 in comparison with the

<sup>14</sup> GAP for the proposals on the main list.

number of proposals submitted to the 2015 calls (10,531). 1,456 proposals were main listed (including the IF and COFUND calls for which evaluations were completed in January 2017). The overall success rate for all MSCA 2016 calls (including the IF and COFUND) was at 13.3%,<sup>15</sup> exactly the same as for the 2015 calls. The grants for the IF and COFUND calls are expected to be signed by mid May 2017 at the latest.

However, as shown by the success rate, still a lot of proposals which met the H2020 criterion of excellence could not be funded. Therefore, as announced by Commissioner Tibor Navracsics during the celebration of the 20th anniversary of the MSCA on 29 November 2016, the MSCA will as of early 2017 award the 'Seal of Excellence' to all proposals for postdoctoral fellowships (for the IF call) obtaining a score above 85%. This will enable the applicants to encourage other funders, at national or regional level, to finance their project. It will also contribute to further strengthen the MSCA as a benchmark for how nations and regions can keep, attract and develop the best research talent.

Overall, the REA signed 1,483 MSCA grants in 2016 (for 2015 and 2016 calls). The portfolio of MSCA projects managed by the REA at the end of 2016 counted 5,735 projects, of which 3,244 H2020 and 2,491 FP7.

1,483 grants signed

5,735 running projects

In terms of execution of the budget planned for payments for 2016, a total of 3,942 payments have been processed during the year and REA had executed 100% for H2020 (€586.65m) and for FP7 (€293.23m).

## 1.2 Excellent Science - Future and Emerging Technologies (FET-Open)

### Contribution to the achievement of Commission's objectives

DG CNECT has delegated the management of the H2020 Future Emerging Technologies - (FET)-Open actions to REA.

In executing the management of the FET-Open actions, REA helps DG CNECT to contribute to the overarching Commission general objective 1 "A New Boost for Jobs, Growth and Investment". Through the FET-Open actions, the Commission aims at supporting the early stages of joint science and technology research for radically new future technological possibilities, which can be the seeds for future industrial leadership and for tackling society's grand challenges in new ways.

The objective of FET-Open is to fund novel ideas using a bottom-up selection process in order to build up a diverse portfolio of targeted projects. Early detection of promising new areas, developments and trends, along with attracting new and high-potential research and innovation players, will be key factors.

The FET-Open scheme has been considered to participate in the preparatory phase of 'European Innovation Council' (EIC)<sup>16</sup> that aims to develop and scale-up ground-breaking, high-risk, high-gain innovation, able to create future markets and boost prosperity in Europe.

### Examples of EU added value of projects managed by REA

<sup>15</sup> It should be noted that this is an average rate for MSCA and there is a high variance between the calls, ranging of from 7.0% for ITN and 29.7% for COFUND, and up to 37.2% for the specific NIGHT call.

<sup>16</sup> COM/2016/0733 final - Europe's next leaders: the Start-up and Scale-up Initiative.

A programme as FET Open could only be launched at European level as such a bottom-up programme aiming at developing radically new future technologies needs a critical mass of potential applicants to function. Besides, as the research funded is so innovative, there might be only a very limited number of specialists in the field at national level. The EU added-value of the programme as well as the ground-breaking character of the research projects funded are illustrated by the example below.

The Living Architecture (**LIAR**) project that brings together three universities, one research organisation and two private companies from four different EU countries will develop blocks able to extract resources from sunlight, waste water and air. The bricks will be able to fit together and create 'bioreactor walls', which could then be incorporated in housing, public buildings (schools, hospitals) and office spaces. Each block will contain a microbial fuel cell, filled with programmable synthetic microorganisms. Robotically activated, each chamber will contain a variety of microorganisms specifically chosen to clean water, reclaim phosphate, generate electricity and create new detergents. Such a system has far reaching impacts on the building performance (resilience, resource recycling), manufacturing and design with ecosystems.

### REA key achievements for 2016

1 call (budget: €91.45m)

646 proposals submitted

41 proposals main listed

6.4% success rate

At the end of 2016, evaluations for the topic FET Innovation Launchpad (first cut-off date) were still on-going; the evaluation process was finalised in January 2017. While the GAP was completed for the FET-Open Coordination and Support Actions topic, with all 3 grants signed on time, it was still on-going for 2 grants of FET-Open research and innovation actions (RIA, first cut-off).

Out of 646 proposals submitted, 547 were submitted for RIA, 10 for CSA and 89 for the new call FET Innovation Launchpad.

As regards RIA, this represents a significant decrease of more than 30% in comparison with the last cut-off of September 2015 (804 proposals submitted for the 3<sup>rd</sup> cut-off of the 2014-2015 call). 56% of proposals in RIA were resubmissions from previous FET-Open cut-offs. Out of 544 proposals evaluated for RIA, 22 were main listed which represents a success rate of 4.0% - slightly higher than the one of the September 2015 cut-off (1.4%).

For CSA, 10 proposals were evaluated and 3 main listed.

For the call Innovation Launchpad, 88 proposals were evaluated out of which 16 were main listed, corresponding to a success rate of 18.2%.

Hence, while the success rates for the CSA and Innovation Launchpad calls are above REA's average success rate for the 2016 calls (at 13.3%), the success rate for the RIA call remains largely under this average success rate which may be explained by the multidisciplinary character of the FET-Open activity based on a bottom up approach and a low call budget. The overall success rate for all 2016 FET-Open cut-offs was at 6.4%.

In total, the REA signed 37 FET-Open grants in 2016 (from cut-off dates in September 2015 and May 2016). The portfolio of FET-Open projects managed by REA on 31 December 2016 counted 76 projects.

37 grants signed

76 running projects

In terms of execution of the budget planned for payments for 2016, 64 payments have been processed during the year for a total amount of €105.81m and the budget execution was excellent with a rate of 100%.

## 1.3 Industrial Leadership – Space and the FP7 predecessor action

### Contribution to the achievement of Commission's objectives

DG GROW has delegated the management of the activity "Space" of the H2020 specific objective "Leadership in Enabling and Industrial Technologies" of "Industrial leadership"<sup>17</sup> and the actions of the Space theme of the FP7 Cooperation Programme to REA.

In executing the management of the H2020 Space activity and the FP7 predecessor action, REA helps DG GROW to contribute to the overarching Commission general objective 1 "A New Boost for Jobs, Growth and Investment". Through this programme DG GROW aims to maintain and build global leadership in enabling technologies and space in order to ensure that space will remain accessible to Europe and safe to operate in the long run as well as to develop and exploit space infrastructure to meet future Union policy and societal needs.

Thus, Europe has an interest in ensuring that its industry continues to thrive in this fiercely competitive market. "Industrial Leadership" aims to speed up the development of technologies and innovations that will underpin tomorrow's businesses across all sectors, including space, and encourage them to invest more in research and target areas where they can work with the public sector to boost innovation.

### Examples of EU added value of projects managed by REA

Satellites and space technology play an important role in meteorology, communication, broadcasting, environmental management, navigation or disaster management which impact our lives every day. Hence, the European space industry is considered of strategic importance. The successes of EU Space research have helped putting the European Union on the global map as a major player, which could have hardly been achieved by a single EU Member State. Europe develops its own satellite infrastructure through the European Space Agency (ESA) and its own system for monitoring the Earth with the COPERNICUS services.

In line with this, the objectives of space research activities launched in 2016 were to bring concrete Earth Observations applications to the European market, to reduce the impact of space debris and to contribute to habitat management in space. As regards this last objective, REA has selected and funds eight projects that have matured the technologies needed for an exploration mission to the Moon and Mars, including housing, space suits, food supply and its sustainability, as well as sample extraction, and analysis and curation. The project **REGOLIGHT** is particularly emblematic of the cutting-edge technology that is developed in the space projects, as the objective is building a 3D printer and validating this new technology in a relevant environment that will use solar energy to build brick from dust of the moon for future lunar exploitation. The potential impact of such a project is huge. The transfer to ground application is envisaged by using dust from the desert to build brick for housing.

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<sup>17</sup> With the exception of the 'SME instrument', the 'Fast Track to Innovation' full-scale pilot, Galileo-related activities, and projects indirectly managed by third parties).

## REA key achievements for 2016

2 calls (budget : €102.31m)

160 proposals submitted

30 proposals main listed

18.8% success rate

The evaluation of the two 2016 space calls had been completed during the first semester (160 proposals evaluated). In comparison with 2015, the number of proposals evaluated had decreased significantly, especially for COMPET with a decrease of 35% (100 in 2016 against 154 in 2015). This resulted in a much higher success rate for the activity (18.8%, up from 12.6% in 2015). By the end of the year, out of 30 main listed proposals, 29 grants had been signed, all before the TTG target. One proposal had to undergo security scrutiny; the grant signature was therefore delayed and still pending subject to implementation of the requirements from the security scrutiny.

In relation to the H2020 ad hoc calls, one proposal for a Framework Partnership Agreement (FPA on Space surveillance and tracking) was received in October 2016. The signature of the FPA is scheduled for late February 2017. The ad-hoc call inviting pre-identified beneficiaries to submit two proposals for Specific Grant Agreements was also launched at the end of the year with submission target date mid-March 2017 (right after signing the FPA).

In total, 35 grants were signed in 2016 (in addition to the 29 grants for the 2016 calls, 6 were signed for the 2015 calls).

35 grants signed

At 31 December 2016, there were 171 running Space projects, out of which 102 H2020 projects and 69 FP7 projects.

171 running projects

In terms of execution of the budget planned for payments for 2016, a total of 140 payments have been processed in 2016 consuming all payment appropriations available (€102.31m for H2020 and €18.22m for FP7).

## 1.4 Societal Challenge 2: 'Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy'

### Contribution to the achievement of Commission's objectives

DG AGRI and RTD have delegated the management of part of Horizon 2020 Societal Challenge 2 – Food security, sustainable agriculture and forestry (SC-2), marine and maritime and inland water research and bioeconomy to REA.

In executing the management of part of the H2020 Societal Challenge 2, REA contributes to the overarching Commission general objective 1 "A New Boost for Jobs, Growth and Investment". This scheme is fully embedded in the Commission's vision and contributes as well to "A Connected Digital Single Market", developing "A Resilient Energy Union with a Forward-Looking Climate Change Policy" and "A Deeper and Fairer Internal Market with a Strengthened Industrial Base".

The aim of the programme is to support research and innovation which contribute to a more productive, sustainable and resource-efficient production while fostering related ecosystem services, recovery of biological diversity as well as competitive and low carbon supply chains. This will accelerate the transition to a sustainable European bioeconomy, bridging the gap between new technologies and their implementation and contribute to boost investment, employment and economic growth in the EU It will benefit from

synergies with actions launched under the Horizon 2020 focus area "Industry 2020 in the circular economy" to foster economic, social and environmental prosperity by positioning Europe as a front runner in moving to a circular economy and society.

### Examples of EU added value of projects managed by REA

Ensuring sufficient supply of safe, healthy and high quality food and bio-based products in the context of natural resources scarcities and climate is crucial to Europe's long-term prosperity and well-being. Investments in this societal challenge will enable Europe to take leadership in the concerned markets, providing healthy food products and help to further develop sustainable land, seas and oceans management and bioeconomy markets. Cooperation at EU level allows tackling these challenges in a more efficient way as food security concerns all member states and solutions are often interdependent.

The innovative character of the research funded under SC-2 in the domain of sustainable food security is illustrated by the project **FRESH-DEMO** that won the Global Food Industry Award in 2016. The project brings together seven private companies, one university, one research organisation and one European association based in seven different EU Member States. Dry mist generated through a new technology will provide a cool, humid, and bacteria-free climate, which has the ability to significantly reduce waste in the distribution chain by extending the shelf life and hygienic properties of fruit and vegetables. This project aims at using a novel technique of conservation based on ultrasonic technology, combined with natural water acidifier, to preserve the quality and freshness of products.

The objective of the project **NOMORFILM** – a project in the field of marine research, health and life sciences – is to search for antibiofilm compounds isolated from microalgae that will be particularly useful in the treatment of infections and tissue inflammation and could be incorporated in the manufacturing of medical prosthetic devices. Sixteen European organisations from various horizons (universities, private companies, research organisations) from eight EU countries participate in this project that aims to not only improve patient care and cut health costs, but also open up new business opportunities. Effective marketing of these infection-resistant devices will be carried out through manufacturing and distribution companies participating in the project.

### REA key achievements for 2016

4 calls (budget: €298.18m) -  
single & two-stage calls

366 proposals submitted

55 proposals main listed

37.2% success rate

For the **single-stage calls**, 75 proposals were submitted out of which 73 were evaluated and 21 main listed, representing a considerable increase in comparison to the numbers of the 2015 single-stage calls (46, 44 and 7, respectively). The success rate for the single-stage calls was at **28.8%**, significantly higher than in 2015 (15.9%).

For the **two-stage calls**, 291 proposals were submitted out of which 289 were evaluated at first stage. 75 proposals were evaluated at second stage out of which 34 were main listed which corresponds to a success rate of **45.3%**<sup>18</sup>, much higher than in 2015 (11.7%). This represents an

important decrease of almost 40% in submission compared with the 2015 two-stage calls for which 461 proposals had been submitted, 441 evaluated at first stage, 171 evaluated at second stage and 20 main listed.

Hence, the overall success rate for the 2016 calls (single and two-stage calls together) of 37.2% was considerably higher than the one for the 2015 calls (12.6%). Generally, it can

<sup>18</sup> The introduction of the rule that the projects selected at the end of the first stage may represent three times or at the minimum two and a half times the available budget, increased the success rate.

be noted that the success rate is largely above the other success rates of the calls that REA manages. This is due to the fact that this activity includes the two-stage calls, for which the success rates are calculated on the basis of the results for the second stage having inherently high success rates.

By the end of the reporting period, the GAP for the main listed proposals was finalised for three out of the four single-stage calls, with 20 grants signed by end-December, all within 245 days. One grant agreement could not be signed on time following a request for extension of deadlines to conclude grant preparation from the coordinator's side and partners to finalise their validation processes<sup>19</sup>.

For the two-stage calls, the GAP was still running at the end of December 2016.

Overall, 51 grants were signed in 2016 (from 2015 and 2016 calls). At the end of 2016, REA managed a total of 103 running projects under this activity.

51 grants signed

103 running projects

In terms of execution of the budget for payment appropriations for 2016, 61 payments have been processed during the year, thereby consuming 100% of the budget (€106.87m).

## 1.5 Societal Challenge 6: Europe in a changing world - inclusive, innovative and reflective societies

### Contribution to the achievement of Commission's objectives

DG CNECT and DG RTD have delegated the management of part of Horizon 2020 Societal Challenge 6 – "Europe in a changing world - inclusive, innovative and reflective societies" to REA.

In executing the management of part of the H2020 Societal Challenge 6, REA helps DG CNECT and DGRTD to contribute to the overarching Commission general objective 1 "A New Boost for Jobs, Growth and Investment" The programme supports research projects to support EU policies on reducing inequalities and social exclusion in Europe, overcoming the economic and financial crisis, and tackling unemployment, all of which are prerequisites for sustainable European integration.

Research and Innovation can help to overcome prevailing economic instability and ensure that Europe is resilient to future downturns, demographic change and migration patterns. Thus, research performed under Societal Challenge 6 "Europe in a changing world - inclusive, innovative and reflective societies" aims at fostering a better understanding of Europe and addresses these EU-wide issues by exploring new forms of social and technological innovation to tackle them.

### Examples of EU added value of projects managed by REA

Europe is confronted with major socio-economic challenges which significantly affect its common future. These challenges are enormous and call for a common European approach based on shared scientific knowledge that social sciences and humanities, among others, can provide. They must be tackled together because they interact in complex and often unexpected ways. In a nutshell, the EU added-value of this programme consists in creating synergies by uniting researchers from all over Europe to solve pan-European issues.

<sup>19</sup> In parallel, a mistake in the amount of the EU requested contribution was detected in the Commission Decision issued by the parent DGs. The grant agreement will be signed when the corrigendum of the Commission Decision will have been adopted.

The **ADEMU** project perfectly illustrates this in the field of macroeconomics, reassessing the EU's overall fiscal and monetary framework and building resilience to shocks and sustainability at EU level to overcome the economic crisis. Involving economists, political scientists and legal scholars from seven different EU countries, it studies the mechanisms of policy coordination among member states and aims at contributing to immediate and structural actions, such as Economic and Monetary Union (EMU) reforms towards a Fiscal Union. Given the relevance of the topic, dissemination of the findings is expected to be very high and to benefit the development of European strategies, to ensure a better and fairer life for all citizens and prepare the Union for future global challenges.

## REA key achievements for 2016

3 calls (budget : €80.65m)

247 proposals submitted

21 proposals main listed

8.5% success rate

A total of 247 proposals were submitted to the three SC-6 calls in 2016 which represents a significant drop in comparison to the number of proposals submitted the previous year. In 2015, 945 proposals had been submitted, with some calls being oversubscribed by a factor of 2.4.

246 proposals were evaluated, out of which 21 have been main listed. Due to the lower number of submissions, the success rate has increased to 8.5% on average (from 3.4% for the 2015 calls) with a high variance between 5.2% for CULT-COOP and 27.3% for CO-CREATION (topics 8 and 9).

Due to some inconsistencies in the Work Programme having an impact on the eligibility of proposals, the call for two topics of CO-CREATION (2 and 3) had to be cancelled. It was published with a new deadline of 15 November 2016.

As regards the calls with the February 2016 deadline, 16 grants have been signed so far, all on time. For two projects grant signature was delayed, one being submitted to a security scrutiny, the other having been granted an extension in order to sort out some complex issues on procurement.

Overall, 52 grants have been signed in 2016 (2015 and 2016 calls together). At 31 December 2016, there were 90 active projects under management.

52 grants signed

90 running projects

In terms of execution of the budget for payment appropriations for 2016, 85 payments have been processed thereby consuming 100% of the available budget (€115.44m).

## 1.6 Societal Challenge 7: Secure societies - Protecting freedom and security of Europe and its citizens and the FP7 predecessor actions in Security

### Contribution to the achievement of Commission's objectives

DG HOME and CNECT have delegated the management of part of Horizon 2020 Societal Challenge 7 "Secure societies - Protecting freedom and security of Europe and its citizens" – to REA.

In executing the management of part of the H2020 Societal Challenge 7 and FP7 Security research, REA helps DG HOME and DG CNECT to contribute to the overarching Commission general objectives 1 "A New Boost for Jobs, Growth and Investment", 7 "An Area of Justice and Fundamental Rights based on Mutual Trust" and 8 "Towards a New Policy on Migration".

The Horizon 2020 Secure Societies Challenge is about undertaking the research and innovation activities needed to protect our citizens, society and economy as well as our infrastructures and services, prosperity, political stability and well-being and to enhance the resilience of our society. The primary aims are to foster secure European societies against natural and man-made disasters, fighting crime and terrorism, improving cyber- and border security and supporting the Union's external security policies through conflict prevention and peace building.

### Examples of EU added value of projects managed by REA

In a context of significant transformations, growing global interdependencies and threats, the protection of EU citizens, society and economy is key to its prosperity, political stability and well-being. Therefore, the development of solutions is best tackled at European level to maximize their efficiency and enlarge their impact. Two examples of REA funded projects illustrate this:

**ResiStand** – "Increasing disaster Resilience by establishing a sustainable process to support Standardisation of technologies and services" focuses on improving the crisis management and disaster resilience capabilities of the EU and individual Member States through standardisation.

To enhance the cyber-security at European-level **SafeCloud** - "Secure and Resilient Cloud Architecture" is re-architecting cloud infrastructures to ensure the privacy, integrity and security of data located there. Based on the principles of partitioning and entanglement, the project already provided high quality scientific and cutting-edge technological results after the first year such as mechanisms for secure storage, secure communications and privacy preservation. The project is expected to increase citizens' trust in cloud computing infrastructures, which is essential for the competitiveness of modern economies and reinforces EU priorities such as the Digital Single Market.

### REA key achievements for 2016

Evaluations for the three SC7 2016 calls were finalised towards the end of 2016. 297 proposals had been submitted to the three calls; 277 were evaluated by REA. This represents a significant decrease of 40% in comparison to the 2015 calls for which 462 proposals had been evaluated. 39 proposals have been main listed out of which 19 will be managed by REA.<sup>20</sup> With 14.1%, the success rate is significantly higher than last year (8.2% for the 2015 calls). This may be explained by a much lower subscription, mostly due to additional eligibility criteria set out in the calls (participation of practitioners). The GAP for the three calls was opened in January 2017 and is expected to close before the end of April 2017.

- 3 calls (budget : €79.63m)
- 297 proposals submitted
- 39 proposals main listed
- 14.1% success rate

In 2016, while no SC7-grant was signed yet for the 2016 calls, the REA signed 29 grants from the 2015 calls.

- 29 grants signed (calls 2015)

By 31 December 2016, REA managed a total of 154 running projects under this activity, out of which 68 were H2020 projects and 86 FP7 projects.

- 154 running projects

In terms of execution of the budget for payment appropriations for 2016, a total of 172 payments have been processed during the year, thereby consuming 100% of the budget for H2020 (€116.58m) and FP7 (€60.73m).

<sup>20</sup> The other 20 projects will be managed by the parent DGs for reason of their specific policy relevance and/or the security classification. When the mandate of REA will be extended to manage security sensitive projects, some of the projects will be transferred to REA.

## 1.7 Specific Objective: Spreading Excellence and Widening Participation (SEWP)

### Contribution to the achievement of Commission's objectives

DG RTD has delegated the management of the H2020 Specific Objective 'Spreading Excellence and Widening Participation' (SEWP) to REA.

In executing the management of the H2020 Specific objective SEWP, REA helps DG RTD to contribute to the overarching Commission general objective 1 "A New Boost for Jobs, Growth and Investment". Its aim is to fully exploit the potential of Europe's talent pool and to ensure that the benefits of an innovation-led economy are both maximised and widely distributed across the Union in accordance with the principle of excellence.

Despite a recent tendency for the innovation performances of individual countries and regions to converge, sharp differences among Member States (MS) still remain. SEWP projects are thus targeted at low-performing MS in terms of research and innovation, with a view to widen participation in Horizon 2020 and contribute to the realisation of the European Research Area (ERA), by "Teaming" excellent research institutions with lower-performing counterparts to create or upgrade centres of excellence and "Twinning" institutions through staff exchanges, expert visits and training courses. The action "ERA Chairs" also brings outstanding researchers to universities and research organisations to help them attracting and maintaining high quality human resources and to implement the structural changes necessary to achieve excellence on a sustainable basis.

### Examples of EU added value of projects managed by REA

The targeted support provided through strong cooperation between MS can clearly be considered an EU added value. By connecting pools of excellence, the joint activities launched under this objective enhance institution building/networking and learning from the experience of advanced partners, and promote synergies with the European Structural and Investment Funds.

This is fully reflected by **HURMUR** "Human rights – mutually raising excellence", a project aiming at expanding the research area of human rights in Europe. In cooperation with two world-leading institutions, a university from the Baltic region will develop research excellence in this field as well as the capacity to become a leader in the region, by participating in state-of-the-art research and becoming involved in global research and regional dissemination networks. The transnational cooperation will help to initiate new research and development opportunities across Europe, exploring the changing nature of human rights in contemporary society, increase the dissemination capacity and build bridges between Estonian, Baltic and Russian human rights research and activist communities, thereby helping to reduce the research and innovation divide within the EU.

### REA key achievements for 2016

1 call (budget : €94.00m)

30 proposals submitted

10 proposals main listed

33.3% success rate

A total of 30 proposals have been submitted and evaluated and for the SEWP call (WIDESPREAD-01-2016-2017 Teaming 2 - first wave). At the end of December 2016, the 10 projects were under GAP. The success rate for this call was at 33.3%.

In 2016, 2 grants were signed from the 2015 calls, while no grant has been signed yet for the 2016 calls. The REA managed 88 SEWP projects at the end of 2016.

2 grants signed  
(2015 calls)

88 running projects

In terms of execution of the budget for payment appropriations for 2016, 62 payments have been processed during 2016, thereby consuming 100% of the budget (€23.13m).

## 1.8 Specific Objective: Science with and for Society (SwafS)

### Contribution to the achievement of Commission's objectives

DG RTD has delegated the management of the H2020 Specific Objective 'Science with and for Society' (SwafS) to REA.

In executing the management of the H2020 Specific objective SwafS, REA helps DG RTD to contribute to the overarching Commission general objective 1 "A New Boost for Jobs, Growth and Investment".

The objective of SwafS is to develop innovative ways to build effective cooperation between science and society, to recruit new talents, to build capacities and to pair scientific excellence with social awareness and responsibility. It supports projects that involve the citizens in the processes defining the nature of the research affecting their everyday lives. Broader understanding between the specialist and non-specialist communities on objectives and the means for achieving them will maintain scientific excellence and allow society to share ownership of the results.

### Examples of EU added value of projects managed by REA

The strength of the European science and technology system depends on its capacity to harness talent and ideas. This can only be achieved if a fruitful and active dialogue between science and society is developed to ensure the responsibility of science and to enable the development of policies more relevant to citizens. Improving the cooperation between science and society in all Member States is an increasingly crucial issue. Research impacts the society as a whole and there is a need for European cooperation promoting participation in all Member States, which can only be initiated at European level.

For instance, the **EDU-ARCTIC** project provides a large-scale programme to strengthen schools' science education and links Arctic research to school education throughout Europe. Dedicated to teenagers, it will offer the opportunity to get insights in the R&I process by giving them access to lecture transmissions from polar stations and participating in arctic competitions and environmental monitoring in their own surroundings. The interaction with real-time scientific work will contribute to increase their interest in choosing scientific careers and promote scientific skills. Therefore, this project, benefitting from a high outreach visibility within Europe, perfectly matches the objectives of SwafS.

### REA key achievements for 2016

1 call (budget: €41.02m)

138 proposals submitted

22 proposals main listed

16.2% success rate

A total of 138 proposals has been submitted to the SwafS-2016 call, 136 have been evaluated. Out of these, 22 proposals have been main listed. With 16.2%, the success rate was significantly above the rate of the 2015 calls (6.1%) which may be explained by the lower number of evaluated proposals (380 in 2015). The GAPS for SwafS-2016 were on-going at the time of reporting.

In 2016, 24 SwafS-grants were signed by the REA, one for the SwafS-2016-topic 25 which had an advanced call deadline and 23 for the 2015 calls. At 31 December

24 grants signed

44 running projects

2016, there were 44 running grants.

In terms of execution of the budget for payment appropriations for 2016, 30 payments have been processed in 2016, thereby consuming 100% of the budget (€36.07m).

## 1.9 FP7 - Capacities Specific Programme - Research for the benefit of the SMEs (RSME)

### Contribution to the achievement of Commission's objectives

DG RTD has delegated the management of the 'research for the benefit of SMEs' scheme of the FP7 Capacities Programme to REA.

In executing the management of the FP7 RSME actions, REA helps DG RTD to contribute to the overarching Commission general objective 1 "A New Boost for Jobs, Growth and Investment".

The 'research for the benefit of SMEs' scheme targets the development of close to market innovations through the support of small groups of innovative SMEs, which are given the opportunity to subcontract research to RTD performers in order to acquire the necessary technological knowledge. The projects funded aim to create new knowledge and produce results with clear potential to improve or develop new products, processes or services for the SMEs taking part, as well as to render clear economic benefits for the SMEs involved.

### Examples of EU added value of projects managed by REA

Besides enhancing the economic benefits and the competitiveness of SMEs, the development of close to market innovations improving or creating new products and processes is also beneficial for the consumers. Besides, it strengthens both the economy of the EU in the long run and its competitiveness at global scale.

A good example of the close to market characteristic of this scheme is **KIDSIZE** which aims at the increase of online sale of children's wear. Bringing together SMEs, European Associations and research organisations of five different EU countries, KIDSIZE developed an application for smartphones that can, on the basis of photos, take highly precise 3D measurements. The main added value of this project lies in its huge potential to boost the competitiveness of SMEs in the European children's wear sector as it is estimated that it will save EU-based clothing companies about €130.5 million within five years, while being at the same time also beneficial for the customers.

### REA key achievements for 2016

There were 414 SME projects running at the beginning of 2016, 217 have been closed in 2016 and 197 were still running at the end of the year for an open value (amount still to be paid) of €33.48m.

In terms of execution of the budget for payment appropriations for 2016, 245 payments have been processed during the year for a total amount of €35.35m, thereby consuming 100% of the budget.

197 SME running projects

100% payment execution

## 1.10 Activity – Administrative and Logistical Support Services

### Contribution to the achievement of Commission's objectives

DG RTD has delegated the management of the administrative and logistical support services to REA. By providing support services, REA helps the Research Family achieve the H2020 programme objectives and thereby contributes to the overarching Commission general objective 1 "A New Boost for Jobs, Growth and Investment".

Under Horizon 2020, REA's role as service provider of administrative and support services is strengthened and comprises:

- Call planning and call publication,
- Logistical support for the evaluations,
- Contracting and payment of expert evaluators,
- Validation of the existence and status of legal entities, the LEAR, and of the financial viability check.

The delegation act of the Agency outlines the list of support services and beneficiaries of such services<sup>21</sup> that REA provides. In addition, the details regarding the scope and the targets for this activity are set in the 'Rules for the Administrative and logistical support services provided by REA for H2020 and other certain programmes', which were approved in June 2014 and currently under revision with the expected approval of the document by the Steering Committee in early 2017.

Some of the tasks delegated to REA extend beyond the programmes of the research family to include other programmes (such as COSME, ERASMUS+, etc.) for the call planning, participant validation, and the verification of the financial capacity. During 2016 the REA mandate was revised and the extended mandate includes the programmes of DG AGRI, HOME (AMIF, ISFP, ISFB) and JUST.

### REA key achievements for 2016

Major highlights and workload indicators related to the provision of the **administrative and logistical support services** for H2020 and certain other programmes in 2016 are detailed below:

- REA has supervised the H2020 evaluation activities, involving more than **6,730 experts on site**. The experts assisted the Commission for the evaluation of proposals;
- The **Research Enquiry Service** – RES<sup>22</sup> responded to some 10,790 requests for information from the public, 46.5% of which have been answered directly by the external service provider, EUROPE DIRECT Contact Centre; 89% of the questions were answered within 15 working days<sup>23</sup>.

6,730 supported  
experts on site

10,790 requests  
received by RES

<sup>21</sup> For details, please refer to the Annex III of the REA delegation act.

<sup>22</sup> The RES is the single entry point for questions on research, via the web or by telephone. REA coordinates the service provided by an external contractor in cooperation with DG COMM under the umbrella of the EUROPE DIRECT Contact Centre (EDCC).

<sup>23</sup> There is a deviation from the target of 95% of enquiries responded to within 15 days and many of the delayed responses arise from the EC local Helpdesk. RES are working with the helpdesks to improve the procedures and to increase the response time.

With respect to **the contracting and payment to experts**, drawing on long standing experience in the management of the evaluation platform and process, expert handling support services have been offered to REA units and to the Research family. Contracting and payment of expert evaluators (for H2020 as a whole) and monitors (for REA-managed actions only) was effective, and performance in terms of paying experts on time was very good.

- More than **7,600 legal entities files** (LEF) and **7,100 bank account files** (BAF) for experts were processed in 2016, which represents an increase by respectively 24% and 18% compared to last year (in 2015, 6,100 legal entities files and 6,000 bank account files were processed);
- The performance to validate the LEF of experts has progressed by 5 percentage points in 2016, as **96%** of experts' LEF were validated within 25 working days (after approval of the pool of experts by the evaluating service), against 91.2% last year;
- **13,100 expert contracts** and more than **1,200 amendments were signed** (evaluators and monitors) in 2016, standing for an increase of 19% in the number of contracts (11,000 contracts last year);
- **99.3%** of expert contracts were signed by REA in less than 10 calendar days;
- Some **21,000 payments** to experts were made (a 12% increase in number of payments compared to 2015) for a total amount of **€42.55 million**;
- **99.6%** of payments were made within 30 days; the average time to pay was **11 days**.

13,100 expert contracts

21,000 payments to experts,  
for more than €42.55m

These figures include expert evaluators and monitors for the programmes delegated to REA and expert evaluators for other parts of H2020 where REA is providing support to other H2020 implementing bodies.

For **validation services**, in total, more than 7,320 entities had their legal status validated by the REA Validation Services in 2016, which is similar to the previous year. In addition, LEARs of all participants involved in on-going grant preparation phases under H2020 have been validated. In total, the REA's Validation Services validated more than 7,700 LEAR extended mandates. In 2016, a team has been set up to improve the processing of the requests for changes which are introduced via the Participant Portal by the LEARs. During 2016 almost 5,300 requests were processed.

In H2020 and further to the introduction of the SME self-assessment online tool<sup>24</sup>, the ex-ante validation of the SME status continues to be available but the REA validation services only validate the status of entities that have requested to check the output of their self-assessment as SME against the necessary financial statements. In 2016, 120 requests to assess SME status<sup>25</sup> were received in the framework of H2020. Under FP7, SMEs wishing to enter a

7,320 entities validated

7,700 LEAR extended  
mandate validated

1,850 FVC requests  
completed

<sup>24</sup> Since 2014, the SME status is based on a SME self-declaration. For schemes where SME-status is an eligibility criterion, this self-declaration is requiring the completion of a web-based questionnaire. The questionnaire, developed by DG DIGIT in cooperation with and under the steer of REA, is accessible via the Beneficiary Register on the Participant Portal. At the end of the questionnaire, the entity obtains a result that either confirms or rejects its self-declared SME status.

<sup>25</sup> Independently from the ex-post checks.

grant agreement in the framework of an amendment still need to be validated as SMEs. 158 SME assessments requests were received in the framework of FP7 over the year 2016.

REA provided support for Financial Viability Checks (FVCs), which consists in centralising financial data from coordinators and selected beneficiaries, and verifying summary financial information against supporting documents. During the year, over 1,850 Financial Viability Checks were performed.

Finally, REA remains active in the **governance of the common IT tools** used for the support services, in particular PDM/ Beneficiary Register and EMPP/EMI for which it has a leading role. During 2016, the Business Process Owners and Managers for participant management, which includes control over the PDM/ Beneficiary Register applications<sup>26</sup> and for expert management, coordinating the development and maintenance of two interconnected IT tools supporting expert management, EMPP<sup>27</sup> and EMI<sup>28</sup>, were based in REA.

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<sup>26</sup> Beneficiary register: is a front-office application in the participant portal for registration of FP7 participants; PDM – Participant Database Management: is a back-office application used to register and validate legal entity data for FP7 participants. It should be noted that external stakeholders should only know about the 'Beneficiary Register', which is part of the services offered by the Participant Portal, while the URF/PDM are acronyms to be used internally.

<sup>27</sup> EMPP – Expert Management in the Participant Portal: the front office application for expert management allowing experts to register under the open call for expressions of interest and to interact with the H2020 managing services in the performance of contracts for proposal evaluations, project reviews or various other monitoring tasks.

<sup>28</sup> EMI – Expert Management Internal: back-office application for the contracting and payment of experts.

## 2. ORGANISATIONAL MANAGEMENT AND INTERNAL CONTROL

**This section answers to the question *how* the achievements described in the previous section were delivered by the Agency. This section is divided in two subsections.**

**The first subsection reports the control results and all other relevant information that support management's assurance on the achievement of the financial management and internal control objectives. It includes any additional information necessary to establish that the available evidence is reliable, complete and comprehensive; appropriately covering all activities, programmes and management modes relevant for 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 an objective examination of evidence for the purpose of providing an assessment of the effectiveness of risk management, control and governance processes.**

**This examination is carried out by management, who monitors the functioning of the internal control systems on a continuous basis, and by internal and external auditors. Its results are explicitly documented and reported to the Director. The reports produced are:**

- the bi-annual reports submitted by the Heads of Unit and endorsed by their Head of Department, in their capacity of Authorising Officer by Sub-Delegation (AOSD),
- the opinion on the state of control of REA's Internal Control Coordinator (ICC),
- the outcome of activities of the ex-post audit function and fraud prevention measures,
- the limited conclusion on the state of control and the observations and recommendations reported by the Internal Audit Service (IAS);
- the observations and recommendations reported by the European Court of Auditors (ECA),
- the observations and recommendations reported by DG BUDG (in the context of the validation of the local accounting systems by the Commission's Accounting officer),
- the observations deriving from the assessment performed on the effectiveness of internal control in REA (ICAT exercise),
- the report on REA's risk assessment exercise.

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

**This section reports the control results and other relevant elements that support management's assurance. It is structured into (a) Control results, (b) Audit observations and recommendations, (c) Effectiveness of the internal**

## **control system, and resulting in (d) Conclusions as regards assurance.**

Effective control provides reasonable assurance to the REA management with regard to the achievement of the Agency's operational and financial objectives. Control includes all the measures taken by management and staff to ensure that:

- operational activities are effective and efficient,
- the regulatory and legal requirements are met,
- assets and information are safeguarded, and
- financial and other management reporting is reliable.

The control system in place at REA, applicable to both framework programmes, is structured in line with the internal control template in Annex 5 and relates to four distinct stages of the Agency's activities, which have their own specific objectives. Key internal control indicators have been defined for each of the following stages:

- (a) Programming, evaluation and ranking of proposals (stage 1),
- (b) Selection of proposals and conclusion of grant agreements (stage 2),
- (c) Monitoring of the grant agreement execution (stage 3),
- (d) Ex-post controls and recoveries (stage 4).

Since the submission of proposals for FP7 was closed in 2013 and FP7 grants could be signed until the end of 2014, the two first stages concern H2020 proposals exclusively. The third stage concerns mainly FP7, since only a limited number of interim payments (around 200 in total) have been processed for H2020 projects.

The fourth stage, on the other hand, concerns FP7 projects only as no ex-post audit has been performed yet on H2020 interim or final payments by the Common Support Centre.

A major change occurred in the control environment between FP7 and H2020, in particular with the **creation of the Common Support Centre (CSC)**. The implementation of FP7 through different Directorates-General and other players, including REA, was characterised by the use of varying practices across different parts of the programme. Observing this, the European Court of Auditors, supported by the European Parliament and the Council, called for the consistent and uniform treatment of all beneficiaries and the coherent implementation of the FP. This is even more important as, in the implementation of Horizon 2020, the number of managing services increases.

In response to these challenges, the Commission developed a single set of simplified rules for participation and dissemination to be applied throughout Horizon 2020 by all implementing bodies.

It also created a Common Support Centre to coordinate the delivery of the programme in an efficient and harmonised manner across 20 services (Commission Directorates-General, Executive Agencies and Joint Undertakings). In order to reach these objectives, the CSC provides since 1 January 2014 common services in legal support, ex-post audit, IT systems and operations, business processes, programme information and data to all research DGs, executive agencies and Joint Undertakings implementing Horizon 2020.

Under H2020, a significant part of the implementation has been delegated to the research implementing bodies, including Executive Agencies. The CSC contributes to the uniform treatment of the beneficiaries, to the efficient and consistent implementation of the programmes, and ensures political and administrative accountability through:

- streamlined, harmonised and rationalised business processes;
- trainings and improved documentation linked to the programme and project

implementation;

- a single set of common IT tools to be used by all implementing services and all participants;
- a common interpretation of the single set of rules and a common control strategy;
- the consolidation and dissemination of results and data generated by projects managed by different actors.

Contrary to FP7, where processes, procedures and IT tools could be tailor-made to meet the specific needs of some services, the CSC sets common standards for legal documents, financial circuits, ex-post audit and anti-fraud guidance, business processes and related IT tools. While the coordination of processes remains a collaborative process in which REA participates actively, responsibility for the overall design and set-up of the control systems remains with the Commission.

Compared to FP7, the emphasis has been put on providing complete and detailed information through the Participant Portal, the single entry point for information on calls, proposal submission and evaluation, eligibility of costs, etc. As regards grant management, contractual requirements are explained in detail in the annotated grant agreement.

### 2.1.1 Control results

**This section reports and assesses the elements identified by management that support the assurance on the achievement of the internal control objectives<sup>29</sup>. The REA Director's assurance building and materiality criteria are outlined in the AAR Annex 4. Annex 5 outlines the main risks together with the control processes aimed to mitigate them and the indicators used to measure the performance of the control systems.**

Given the particular mandate of REA, this section provides information on the implementation of the Commission's operational budget delegated to REA (for programmes implemented through direct management), as well as on the implementation of REA's own operating (administrative) budget.

In 2016, REA managed financial operations related to FP7 and H2020 grants, expert management and administrative expenditures. To give an idea of the relative weight of each of these operations, table 1 presents the budget distributed per type of payments made over 2016 in comparison with 2015. The characteristics and the risk profile of the different types of expenses are analysed in the section "management's assessment of the inherent risks of the programmes/activities managed".

The administrative expenditures are mainly dedicated to staff, while the activities delegated to REA are implemented under the 'direct management' mode. This entails direct financial contributions for the co-financing of projects through grants signed with external parties such as research organisations, companies and experts.

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<sup>29</sup> Effectiveness, efficiency and economy of operations; reliability of reporting; safeguarding of assets and information; prevention, detection, correction and follow-up of fraud and irregularities; and adequate management of the risks relating to the legality and regularity of the underlying transactions, taking into account the multiannual character of programmes as well as the nature of the payments (FR Art. 32).

**Table 1: Indicator – Total budget managed by REA in 2015 and 2016 (payments made) (in € million)**

Operational and administrative expenditure (in € million)	Pre-financing	Payments against cost statements	Total payments related to grant management	Expert payments	Grand total: Operational expenditure	Administrative expenditure <sup>30</sup>	Total budget managed
2015	934.38	431.54	1,365.92	52.56	1,418.48	54.10	1,472.58
2016	1,106.51	493.88	1,600.39	42.55	1,642.94	59.23	1,702.17

The total operating expenditures amount to €1,600.39 million (without the experts' payments) and, as in the previous years, the total administrative expenditures of REA (without the support services) are below 3% of the total amount paid in 2016. This indicates that REA's control system is cost effective. Moreover, as further detailed below, there are considerable qualitative benefits.

The pre-financing payments amount to €1,106.51 million. These payments relate to H2020 and have a low risk profile as the paid amount remains EU property until clearing takes place with interim or final payments. There is no legality and regularity risk, but only a creditor risk.

The payments against cost statements still relate mostly to FP7 expenditures. The Residual Error Rate (RER) is above the materiality threshold for two of the FP7 actions managed by REA (Cooperation Specific Programme - Space and Security themes: respectively 3.18% and 3.55%) and Capacities Specific Programme - Research for the benefit of SMEs: 5.99%, hence REA will maintain a reservation for these two actions.

No indication on the error rate for H2020 is yet available.

## **Coverage of the Internal Control Objectives and their related main indicators:**

### **2.1.1.1 Control effectiveness as regards legality and regularity**

**REA has set up internal control processes aimed to ensure the adequate management of the risks relating to the legality and regularity of the underlying transactions, taking into account the multiannual character of programmes as well as the nature of the payments concerned.**

The Agency is responsible for the implementation of parts of FP7 and H2020 and manages the full scope of activities for the delegated actions from project selection to final payment and possible recoveries after audit. Controls are carried out during the entire process of the implementation of the Framework Programmes in order to guarantee that the selected projects comply with the call conditions, that EU funding goes to the very best proposals and that the costs claimed by the beneficiaries and the ensuing payments are in line with the legal framework.

<sup>30</sup> The total amount executed in payments for the administrative budget is €59.23 million (€56.54 million in 2016 payment appropriations and €2.68 million in respect of the "Reste à liquider" (RAL) of the 2015 administrative budget).

For the Research framework programmes, the main legality and regularity indicator is the error rate detected by ex-post audits. Because of its multi-annual nature, the effectiveness of the Control Strategy of the Research Directorates-General can only be fully measured and assessed in the final stages of the FP, once the Ex-post Control Strategy has been fully implemented and systematic errors have been detected and corrected.

The general control objective for the Research services, as stated in Annex 4 to this report, is to ensure for the Seventh Framework Programme (and the Research Fund for Coal and Steel in DG RTD) that the residual error rate, i.e. the level of errors which remain undetected and uncorrected, does not exceed 2% by the end of the FP's management cycle. As for Horizon 2020, the final control objective is to get a residual error rate as close as possible to 2%, without necessarily expecting it to get below 2%.

In light of these control objectives, the estimated residual error rate of the FP7 - Space and Security themes and the SME actions is above the materiality criterion of 2% and, therefore, calls for maintaining the reservations made in the AAR 2015.

The question of being on track towards this objective is to be (re)assessed annually, in view of the results of the implementation of the Ex-post Audit Strategy and taking into account both the frequency and importance of the errors found as well as a cost-benefit analysis of the effort needed to detect and correct them.

The programmes and activities delegated to REA are presented hereafter. The design and the risks attached to each activity are described. REA's overall approach in mitigating the identified risks and the specific measures which have been taken accordingly are outlined.

#### 2.1.1.1.1 Assessment of inherent risks of the programmes/activities managed

##### H2020

In 2016, REA finalised the grants for the calls launched in 2015 and managed the 2016 calls. Hence, as in 2015, most of the payments processed consist of pre-financing with a limited number of interim payments (around 200).

As a consequence, the risks to be managed at this stage are essentially linked to the evaluation and selection process and to the grant agreement signature. Through its rules and procedures and in respect of its motto "research that matters", REA must ensure that the funded projects have a real impact as regards tackling societal challenges and boosting European competitiveness. Moreover, the Agency must make sure that not only the best projects are selected, but also that they are run by consortia capable to carry them out to the end.

Under H2020 REA manages three successor actions to FP7 (Marie Skłodowska-Curie actions, Space research (LEIT) and Security research from the Societal Challenge 7), as well as new actions from the H2020 framework programme (FET-Open, Societal Challenges 2 and 6, and the specific objectives "Spreading Excellence and Widening Participation" and "Science with and for Society").

As underlined in the previous editions of the Annual Activity Report, the Marie Curie Actions had already a low risk profile under FP7 which has even been further simplified under H2020 with the extended use of unit costs for the whole **Marie Skłodowska-Curie actions**: all cost categories are based on unit costs fixed ex-ante in the H2020 Work Programmes. In view of this very specific risk profile, and as under FP7, the error rate is expected to be lower than the overall error rate at the level of the Research family. This will be tested by means of a specific sample for ex-post audits (outside the CRaS) starting in 2017.

Being collaborative research schemes the risk profile of the other actions delegated to REA, namely **FET-Open, Space research, Societal Challenges and specific objectives**, does not differ from mainstream collaborative research schemes. For H2020, major simplifications have been introduced compared to FP7 and the overall risk level expected to be lower than under FP7.

## **FP7**

The REA manages the FP7 People Specific Programme, the Space and Security themes under the Cooperation Specific Programme and the research for the benefit of SMEs under the Capacities Specific Programme. Contrary to H2020, the activities as regards FP7 management involve the processing of cost claims, the related payments as well as the ex-post controls and recovery orders.

Concerning the **FP7 People Specific Programme**, as pointed out in the previous Annual Activity Reports of REA, most recurring errors detected for other FP7 specific programmes (e.g. wrong calculation of hourly and overhead rates, absence of time recording systems) hardly have any relevance for the mobility grants because the financing modalities are much simpler. Hence, REA calculates a specific error rate for this programme which is well below the representative one calculated at the level of the Research Family.

For the grants under the **Space and Security** themes of the FP7 Cooperation Specific Programme, the standard FP7 financing modalities apply. REA considers that the intrinsic risk for these schemes is similar to other schemes under the Cooperation Specific Programme. Hence, the representative error rate calculated at the level of the Research family applies.

Under the **Research for the benefit of SMEs scheme** (RSME) from the FP7 Capacities Specific Programme, the SMEs receive EU funds to reimburse RTD performers for research and demonstration activities outsourced to them. In return, the SMEs acquire the ownership of any commercially exploitable project results. The inherent risk of the SME scheme is significantly different from the other schemes under the Cooperation Specific Programme and this mainly for two reasons:

- Such SME actions do not have many SME beneficiaries participating more than once, therefore their participation is more prone to errors.
- The complexity of the rules can be difficult to apprehend for small companies.

The combination of these two factors explains the higher risk profile of this programme compared to other programmes. Indeed, SMEs being in their vast majority one time participants do not benefit of the learning effect of multiple participations and often lack administrative resources which can deal with the complexity of the rules. The higher risk has been confirmed by ex-post audits and has resulted in an error rate higher than the representative error rate calculated at the level of the Research Family.

More specifically, a major risk identified in the SME actions was – as reported in previous AARs – the risk of SMEs not recording the RTD performers' invoices in their accounts. It appeared from desk-audit campaigns launched by REA in 2014 and 2015 that this risk had a high prevalence with a financial exposure of more than 10%. Therefore, REA decided that, as of 1 January 2015, specific additional ex-ante controls would be systematically performed to ensure the appropriate registration of RTD performers' invoices in the SMEs' accounts, before making any final payment.

In addition, the current economic climate drives many SMEs into bankruptcy. The SME actions managed by REA have been impacted during the past few years (117 bankruptcies of SME beneficiaries of the specific SME actions out of a total of 174 bankruptcies related to actions financed by REA since 2010). The number of bankruptcies

remained high in 2016 with 37 cases and in the same range as in 2015 with 40 bankruptcy cases. Although there is no direct financial loss for the EU budget as a result of interventions of the Participant Guarantee Fund, there may be an indirect impact since projects might not deliver on all expectations because of defaulting partners in the consortia.

As a consequence, even considering the significant mitigation of the risk related to the registration of RTD invoices, REA deems that the intrinsic risk of the Research for the Benefit of SMEs action remains high due to its specificities, such as the high frequency of one-off participation and therefore REA calculates an error rate specific to the Research for the benefit of SME actions.

### **Participant Validation, Support Services and Expert Contracting and Payments**

The support services represent an important share of the REA's activities. They do not bear a significant financial risk but there are some reputational risks, for instance poorly organised evaluation sessions or bad performance in terms of Time-To-Pay to experts, which would discourage them from working for H2020. The risks may be rated at a low risk level considering the following simplifications:

- The financial capacity check of H2020 participants has been limited to the coordinators of grants with an EU contribution exceeding €500,000;
- Experts contracting and payment is streamlined under H2020;
- The validation of legal entities is less complex than under FP7 due to the enhanced IT support and the simplification of funding rates (set at 100% and the overhead at 25%), regardless of the beneficiary's status or type of action. Nevertheless, the validation of the LEAR extended mandate during the grant preparation is an additional complexity and may result in delays during this phase; REA has already taken action to simplify the process (see section 2.2.4 Specific efforts to improve 'economy' and 'efficiency' of spending and non-spending activities).

As regards the risks in terms of legality and regularity, the payments made in the support services relate only to experts. An ex-post verification performed in 2016 on a randomly selected sample of 80 payments of 2015 did not identify any error. The payments to experts may thus be considered as low risk.

Regarding the simplified validation process, in the course of 2016 almost 12,000 organisations have used the online tool available on the H2020 Participant Portal to perform a self-assessment on their SME status.

To assess the impact of replacing the ex-ante validation with the web-based SME self-assessment tool, an ex-post verification of the self-assessments was carried out by REA in 2015 and in 2016.

The results of the ex-post verification performed in 2015 showed that, out of the 96 entities for which the verification on the SME conditions took place, only 86 had the SME status confirmed, which represents 90% of the sampled population. Following the analysis of the 2015 results, corrective actions were taken, notably to improve the SME self-assessment questionnaire and IT tool to help potential beneficiaries answering correctly the questions asked.

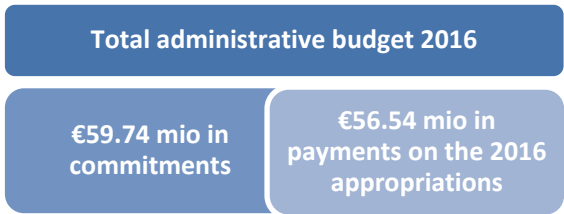
A new verification exercise has been carried out on the SME H2020 ex-post 2016 exercise and the outcome showed an improvement compared to 2015, as 98% of the self-assessed statuses were confirmed (97 SMEs out of 99 are verified, 2 are still under analysis). However the exercise showed that the main problem lies with the quality of the data encoded by beneficiaries. Further improvement of the self-assessment tool will be

performed in 2017 as a revision of the full set of questions has been performed. They will be included in the upcoming release of the online self-assessment IT tool.

### Administrative budget

On 31 December 2016, the total execution of the administrative budget 2016 amounted to **€59.74 million in commitments** (99.9% of the budget) and to **€56.54 million in payments**<sup>31</sup>.

About 95% of the Agency's 2016 administrative budget is dedicated to costs related to salaries, building charges, the evaluation platform and various service level agreements for administrative support provided by the Commission's horizontal services (e.g. DG DIGIT for the IT network and related services, DG HR/PMO for salaries and security services, DG BUDG for the use of the Commission's accounting system). The costs of staff going on missions are processed with the help of PMO and are reimbursed in line with the Commission's rules for reimbursement of mission costs.



The remaining 5% were devoted to expenditure for ex-post audits, the purchase of IT equipment and services, the organisation of training, etc. Most of this expenditure is incurred by using framework contracts made available by the Commission.

As regards legality and regularity, the Agency considers that risks for the implementation of its administrative budget are low. Besides, the European Court of Auditors (ECA) has given, for several years now, a positive opinion on the execution of the REA's administrative budget without any comment. REA was the only Executive Agency (out of the six agencies) that received no observation and one of the 3 'happy few' that received such a positive opinion out of the 45 at stake<sup>32</sup>. For these reasons, the executive director of REA, in its capacity of authoring officer, did not express any reservation on the matter.

#### 2.1.1.1.2 Control results as regards legality and regularity

### Control results H2020

#### **The Common Audit Service for the Research Family under H2020**

The Common Support Centre, which includes the Common Audit Service (CAS), was created in 2014. For H2020, the CAS is **responsible for designing, drafting and implementing the H2020 Ex-post Audit Strategy** and for undertaking all audits, including for Executive Agencies. The creation of the CAS is a major step forward in ensuring a harmonised approach and minimising the burden on beneficiaries.

#### **Implementation of H2020 audit strategies and plan**

The CAS established the common Ex-post Audit Strategy for Horizon 2020, adopted in March 2016.

Given the stage of the programme lifecycle, very few cost claims were received by the services before the second half of 2016. Consequently, the first significant sampling for

<sup>31</sup> The total amount executed in payments for the administrative budget is €59.23 million (€56.54 million in 2016 payment appropriations and €2.68 million in respect of the "Reste à liquider" (RAL) of the 2015 administrative budget).

<sup>32</sup> Decentralised agencies (32), executive agencies (6) and joint undertakings (7).

the Horizon 2020 Audit campaigns was made at the end of 2016: a Common Representative Sample (CRS), a Common Risk Sample and an Additional Sample<sup>33</sup> have been selected. Together with some minor sampling in May 2016, this represents, overall, 557 participations being audited.

Nevertheless, the Horizon 2020 audit campaign started in summer 2016 with the launch of 13 audits performed by CAS auditors and the selection of the first 'Common Representative Sample' (CRS1) based on a population snapshot taken on 1 October 2016.<sup>34</sup> In parallel, working arrangements were defined on how the CAS will collaborate with its 20 'stakeholders' (8 Research DGs, 4 Executive Agencies, 7 Joint Undertakings and 1 Regulatory Agency).

The first indications for the error rates (detected, representative and residual) are expected for the next annual activity report.

For the purpose of the current report, **the error rate** affecting the payments made under Horizon 2020 programme **can only be a preliminary estimation**.

The Financial statement accompanying the Commission's proposal to the legislative authority for the Horizon 2020 regulation states: "*The Commission considers therefore that, for research spending under Horizon 2020, a risk of error, on an annual basis, within a range between 2-5% is a realistic objective taking into account the costs of controls, the simplification measures proposed to reduce the complexity of rules and the related inherent risk associated to the reimbursement of costs of the research project. The ultimate aim for the residual level of error at the closure of the programmes after the financial impact of all audits, correction and recovery measures will have been taken into account is to achieve a level as close as possible to 2%.*"

Without other elements allowing an assessment of the level of errors, the **detected error rate will be estimated to a range of 2-5%**, in line with the Research Family. Hence, for the purpose of the calculation of the amount at risk and in view of the limited amounts of interim and final payments processed for H2020 projects, REA estimates a provisional error rate in the range of 2 to 5%. As to the **residual error rate**, it cannot be calculated yet following the formula set in Annex 4, as up till now no information is available relating to the level of systemic errors. Taking into account the FP7 experience, **it is likely** that with the usual correction mechanisms, **this residual error rate will be close to 2%**.

Under FP7 the detected error rate for the **Marie-Curie actions** has always been lower than the error calculated for the mainstream cooperative research (CRaS error rate), usually at least 2-3% below. In 2016, the detected error rate for these actions was calculated at 1.72%. As the Marie Skłodowska-Curie programme was further simplified under H2020, the detected error rate for these actions is expected to be even lower. Hence, in a conservative approach REA uses the last detected error rate in 2017 at 1.72% for the calculation of the amount at risk under the H2020 MSCA programme.

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<sup>33</sup> This last sampling accommodates special needs of certain stakeholders with regard to audit coverage and selection method. This last sampling accommodates special needs of certain stakeholders with regard to audit coverage and selection method. As far as REA is concerned and in particular for the Marie Skłodowska-Curie actions whose risk profile is very specific, a second layer of assurance ('layer 2'), can be provided by making a specific sample. The first sample of MSCA-specific audits will be selected in 2017, however results of the audits are not expected before 2018 as most of the payments of the projects selected will not be made before the end of the first semester 2017. Therefore, in 2017, the Agency will assess the legality and regularity by extrapolating on the error rate of the FP7-MCA as the financial design and risk profile has not changed significantly.

<sup>34</sup> The H2020 CRS1 includes 136 beneficiaries to be audited and represents 143 audit results. All these audits were launched in December 2016. Based on a population snapshot of 1 December 2016, another 93 beneficiaries were selected based on risk, covering 279 of the largest participations in H2020. A large part of these audits was also launched at the end of 2016.

## Control results FP7

Since 2007, the research services have adopted a Common Audit Strategy to ensure the legality and regularity of expenditure on a multi-annual basis including detecting and correcting systematic errors. The audits examine only interim and final claims by beneficiaries. Transactions related to pre-financing are not included in the population subject to audit. Because of its multi-annual nature, the effectiveness of the Control Strategy can only be fully measured and assessed in the final stages of the Framework Programme, once the Ex-post Control Strategy has been fully implemented and systematic errors have been detected and corrected.

The **Common Representative Audit Sample** (CRAS) is intended to estimate the overall level of error in FP7, across all the services involved in its management. It covers cooperative grants (given to consortia with participants from different Members States) as well as those granted under different schemes – IDEAS (ERCEA), Marie Skłodowska-Curie (REA), infrastructure, etc. These are referred to as "representative" audits. All of these grants follow the same homogeneous control system set out in this report. However, they may have differences in the details of the schemes and eligibility criteria, which may, after taking into account all the available evidence, lead to different conclusions on the overall error rate.

The CRAS is complemented by '**risk-based**' audits, i.e. audits selected according to one or more risk criteria. These audits are intended to detect and correct as many errors as possible and to identify possibly fraudulent operators. These audits are referred to as 'corrective' audits. Generally, past experience shows that SME participants are more prone to error. Different indicators are calculated to provide a comprehensive view of legality and regularity:

**Representative Error Rate:** This is the error rate derived solely from the results of audits on a representative sample of beneficiaries, extrapolated by a statistical method to the overall population. This error rate provides an estimate of the level of error in FP7 at the time of the audits, but says nothing about the follow-up and corrections/recoveries undertaken by Commission services after the audit, nor of the net final financial impact of errors. This error rate is calculated for FP7 as a whole.

**Detected Error Rate:** This is the error rate calculated for actions that have a risk profile different of the FP7 mainstream actions (MCA and SME actions). It is based on a non-biased selection of transactions without this being statistically representative.

**Residual Error Rate:** The residual error rate, on a multi-annual basis, is the extrapolated level of error remaining after corrections/recoveries undertaken by services following the audits that have been made. The calculation of the residual error rate, as shown in Annex 4, is based on the following assumptions:

- (1) all errors detected will be corrected;
- (2) the residual error rate for participations subject to extrapolation is estimated to be equal to the non-systematic error rate; and
- (3) all non-audited participations subject to extrapolation are clean from systematic material errors.

The residual error rate develops over time and results from the calculation set out above. The REA would like to underline that this indicator is reliable and acceptable for the purposes for which it was intended, i.e. as a legality and regularity indicator on the progress made, through its ex-post strategy, in dealing with errors over a multi-annual basis. However, it remains an estimate given that not all extrapolation cases have been fully implemented yet.

## Implementation of the FP7 audit strategies and plans

The common FP7 Audit Strategy agreed at the level of the Research Family was complemented by the REA ex-post audit plan for 2016. It aimed at directing the limited resources for ex-post controls towards maximum impact by considering the specificities of each action managed by REA and by exploiting the experience gained through the audit activity of the previous years. It foresaw the launch 60 ex-post audits.

60 FP7 audits launched in 2016

550 audits launched over the period 2009-2016

1,019 projects covered by audits

By the end of 2016, in line with the targets set, **60 audits were launched**, of which 17 risk-based audits were directed towards the SME actions for which a reservation was made in the 2015 Declaration of Assurance. A third - and last - CRaS of 26 audits for REA was drawn. For 20 of the 2016 audits, the final report was released, while for 16 of them it was still in a draft version. For the 24 remaining ones, the audit was still ongoing. This may be explained by the launch of these audits in the second semester 2016. For details, please refer to table 3 in Annex 10.

479 audits finalised over the period 2009-2016

1,317 cost claims audited from 908 projects

Direct coverage – 3.5%

Indirect coverage – 52.1%

From 2009 to 2016, 550 audits were launched, covering a total of 1,019 projects<sup>35</sup>. This can be further detailed by programme/theme as presented in table 2 in Annex 10.

For the Space and Security themes of the FP7 Cooperation Programme, which were also subject to a reservation in the AAR 2015, 7 risk-based audits were launched in 2016.

The audits which were finalised by the end of 2016 cover a total of 1,317 audited cost claims from 908 projects<sup>36</sup>. In terms of budget coverage<sup>37</sup>, REA estimates that 3.5% of the EU requested contribution by the beneficiaries has been directly audited. However, still according to REA's estimates, some 55.6% of the budget is covered in total by adding the indirect coverage through the extension of the audit findings<sup>38</sup> to the direct coverage of the population actually audited. As regards the SME actions, the indirect coverage is significantly lower than for the other actions due to the fact that many of the SME beneficiaries participating in the scheme are non-repeat beneficiaries in FP7 (for more details see table 3 of Annex 10).

## Results of the FP7 ex-post audits

### – Common Representative (CRAS) Error Rate

Based on 398 completed audits (82% out of the complete sample of 486 including CRAS 1, CRAS 2 and CRAS 3), this error rate is **5.03%**.<sup>39</sup> The remaining cases are still subject to contradictory procedures with the beneficiaries. Consequently, the Common Representative Error Rate may still develop. The CRAS calculated at the end of 2015 was

CRAS  
Space & Security: 5.03%

<sup>35</sup> For audits performed on different beneficiaries of one project, we count the project audited multiple times. The number of distinct projects covered by all of our audits is 813. It is ensured however that projects audited with multiple cost statements are not counted multiple times within one audit.

<sup>36</sup> The desk audits performed in 2014 and 2015 to make sure that the RTD performer invoice were properly registered in the bookkeeping and paid by the SME beneficiaries under the FP7 SME scheme are not included in the totals.

<sup>37</sup> Audited EU requested contribution per beneficiary vs non audited EU requested contribution.

<sup>38</sup> I.e. extrapolation of audit results to non-audit participations of audited beneficiaries; does not include the SME desk audits.

<sup>39</sup> The Common Representative Error Rate is calculated by the Common Audit Service on the basis of the Common Representative Sample and is communicated to the members of the Research family through the WIKI.

at 4.47%. However, the Research family, in a cautionary approach estimated that the error rate would most likely be around 5.00% in the following years because a few difficult audit cases from CRAS 2 with important corrections were being finalised. As foreseen, the closure of these audit files negatively impacted the error rate that is now calculated at 5.03% at the end of 2016. As mentioned above, it might further evolve according to the closure of the last audits of the second sample and with the audits of the third sample. However, the Common Representative Error Rate remains in a similar range to the one referred to in the Financial Statements accompanying the Horizon 2020 proposal. Since the **CRAS error rate** predominantly reflects the errors encountered in the mainstream Cooperation Specific Programme projects, it can be considered as fully representative for the **Space and Security** themes.

– Detected Error Rate<sup>40</sup>

**Detected Error Rate:**  
SME actions : 6.28%  
MCA (People) : 1.72%

The Research for the Benefit of **SMEs actions** of the Capacities Specific Programme and the **Marie Curie** actions (MCA) of the People Specific Programme have a **different risk** profile compared to mainstream FP7 projects as explained in section 2.1.1.1.1) above. As a consequence, the representative CRAS error rate cannot be the only element in estimating the risk exposure in terms of legality and regularity errors in the underlying transactions; rather the detected error rates are used to support an overall judgement.

The detected error rates take into account:

- (1) the audits that were part of the CRAS and were financed from the REA targeted managed programmes,
- (2) REA's randomly selected audits launched previously under FP7,
- (3) the audits performed on the strand of top beneficiaries.

Risk-based audits are not taken into account for the calculation of the detected error rate as they would introduce a significant bias. Risk-based audits, by definition, target high risk beneficiaries and are launched by the ex-post audit service on the basis of information received from operational units having serious doubts about a beneficiary, OLAF, the European Court of Auditors or whistle-blowers. Their findings are not representative of the population. Besides, the exclusion of risk-based audits from the calculation of detected error rates follows the approach of the entire Research family.

For further clarification, please refer to Annex 4, as well as to the explanation provided below.

Although the size and composition of the sample do not ensure statistical precision, this error rate gives an indication as to the risk exposure in the two populations and represents an important element in the assurance building. The inclusion of top beneficiaries in the calculation does not introduce any significant bias which would render this indicator less relevant and this can be justified as follows.

The **People** Specific Programme is characterised by a high level of participation from universities, both in high-value network grants and in mono-beneficiary fellowships. Funding modalities have remained largely identical compared to FP6, which implies that most beneficiaries have gained a sufficient understanding of the funding rules,

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<sup>40</sup> The detected error rate takes into account audited transactions that were part of the CRAS and were financed from the REA managed programmes, all previous randomly selected audits launched by the REA since the start of FP7 (MUS) and audits performed on the strand of top beneficiaries (TOP). The error rate is calculated as a percentage deviation between the sum of accepted costs before audit (for all transactions that are part of the perimeter) and the sum of accepted costs after audit (i.e. error rates are weighted by the size of the transaction).

independently from their participation frequency. As a result, a differentiation between error rates for incidental and repeat beneficiaries is no longer expected.

The **SME actions** have many non-repeat beneficiaries and the share of the total budget covered by beneficiaries who have been audited for at least one FP7 project is consequently low. For the SME actions, the audits targeting the top beneficiaries include mostly audits that have been selected as an add-on to a random selection<sup>41</sup>. As such, by excluding audits selected on the basis of a risk identification while including audits under the strand of 'top beneficiaries', there is no significant bias to be expected in the detected error rate.

The **detected error rate** of the **People Specific Programme** is **1.72%**<sup>42</sup>. It corroborates REA management's assessment of a low inherent risk for this scheme. Although there is an increase of the error rate in 2016 (compared to 0,93% in 2015), the difference is explained by two random audits closed in 2016 with an error rate of respectively 77% and 86%. In both audits, fraudulent behaviour was identified and one audit was an OLAF case.

The **detected error rate** obtained for **SME actions** is **6.28%** and thus higher than the expected CRAS error and in line with the detected error rate of 2015 (6.54%).

The methodology for calculating the detected error rates is in line with the conclusions of the "**Limited Review of the Calculation and the Underlying Methodology of the Residual Error Rate for the 2015 Reporting Year**" conducted by the Internal Audit Service. Following this review, the main change brought to the calculation of the detected error rates was the switch from a simple to a weighted average (on the basis of the amount of the funds considered ineligible).

The detected error rates are based on 119 and 359 cost statements for the SME actions and the People Specific Programme (regarding the Marie Curie Actions) respectively. It appears from tables 2 and 3 below that the cost statements having served for the calculation of the detected error rates are from 2007 to 2016.

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<sup>41</sup> While one cost-claim is selected, an outsourced ex-post assignment can cover up to three participations, each with up to three cost claims, as part of one assignment for which a flat rate fee is due.

<sup>42</sup> Results of the specific error detected in TOP and MUS (including CRAS) audits on costs statements for People are respectively 1.20% and 4.11%. 'MUS' audits are audits selected on a random basis to form part of the common representative sample for the Research family DGs. 'TOP' audits are audits of 'top beneficiaries' designed to maximise audit coverage by value of the total REA contribution.

**Table 2: Overview of the costs statements audited for the period 2007-2016 by 31 December 2016**

Cooperation - Space			Cooperation - Security			Capacities - Research for the benefit of SMEs			People			TOTALS		
	no. of audits	no. of cost claims		no. of audits	no. of cost claims		no. of audits	no. of cost claims		no. of audits	no. of cost claims		no. of audits	no. of cost claims
Joint-ECA audits	3	3	Joint-ECA audits	2	2	Joint-ECA audits	1	1	Joint-ECA audits	4	4	Joint-ECA audits	10	10
Risk-based	32	111	Risk-based	34	100	Risk-based	78	194	Risk-based	44	92	Risk-based	188	497
REA MUS, CRAS and TOP	49	180	REA MUS, CRAS and TOP	41	152	REA MUS, CRAS and TOP	57	119	REA MUS, CRAS and TOP	134	359	REA MUS, CRAS and TOP	281	810
<b>Total</b>	<b>84</b>	<b>294</b>	<b>Total</b>	<b>77</b>	<b>254</b>	<b>Total</b>	<b>136</b>	<b>314</b>	<b>Total</b>	<b>182</b>	<b>455</b>	<b>TOTAL</b>	<b>479</b>	<b>1,317</b>

**Table 3: Overview of the year of origin of the costs statements audited for the period 2007-2016 by 31 December 2016**

Year of origin:	People Programme	Capacities - SME actions
<b>DETECTED</b>		
2007	1	0
2008	5	0
2009	20	34
2010	193	45
2011	80	22
2012	38	8
2013	13	9
2014	6	0
2015	3	1
2016	0	0
<b>Total Detected :</b>	<b>359</b>	<b>119</b>

In this context, it should be noted that the risk profile of the schemes did not change over the years as the rules governing the People Specific Programme and the SME actions did not change over the period. As explained above the People Specific Programme bears a low inherent risk with many repeat beneficiaries and simpler financing modalities. As regards the SME actions, the risk remained high over the period, even if it has been reduced thanks to the additional ex-ante controls that have been introduced to check the proper registration of the RTD performers' invoices in the accounting of the SMEs.

– FP7 Residual Error Rate

The CRAS error rate (for **Space and Security**) and the REA's detected error rate (for the **People Specific Programme and SME actions**) are used as a basis to estimate, on a multi-annual basis, the residual error rate, namely the extrapolated level of error remaining after corrections/recoveries undertaken by the managing services following the audits which have been made.

Even if the risk profile of the Space and Security themes is similar, the subpopulations may differ and justify the calculation of different residual error rates for each theme, as the correction of the systemic errors in the audited population may differ in each subpopulation. Based on the audits completed and in progress under the first, second and third CRAS, it is considered that the residual error rate for the **Space** scheme is at **3.18%** and at **3.55%** for the **Security** scheme.

<b>Residual Error Rates:</b>
<b>Space : 3.18%</b>
<b>Security: 3.55%</b>
<b>SME: 5.99%</b>
<b>MCA (People): 1.55%</b>

For the **SME actions** and for the **People** Specific Programme (Marie Curie actions – MCA), the residual error rates are estimated at **5.99%** and **1.55%** respectively (both based on the detected error rates).

**Overview of the FP7 error rates for the period 2009-2016 by 31 December 2016**

Table 4 hereunder offers an overview of the estimated error rates for the FP7 specific programmes managed by REA. It is based on the conclusions of the final audit reports available.<sup>43</sup>

**Table 4: Indicator – Legality and regularity of financial spending by programme – Overview of the error rates for the period 2009-2016 by 31 December 2016 (based on final audit reports\*)**

Cooperation - Space		Cooperation Security		Capacities - Research for the benefit of SMEs		People - Marie Curie Actions	
Based on the Common Representative audit Sample (CRAS)		Based on the Common Representative audit Sample (CRAS)		REA MUS, CRAS and TOP		REA MUS, CRAS and TOP	
<b>Representative Error Rate</b>	5.03%	<b>Representative Error Rate</b>	5.03%	<b>Detected Error Rate</b>	6.28%	<b>Detected Error Rate</b>	1.72%
<b>Residual Error Rate</b>	3.18%	<b>Residual Error Rate</b>	3.55%	<b>Residual Error Rate</b>	5.99%	<b>Residual Error Rate</b>	1.55%

\* Only with LoC sent

<sup>43</sup> Situation as of 06/01/2017.

### 2.1.1.1.3 Comments on the control results

#### FP7

The latest available calculations (December 2016) based on the Commission FP7 ex-post audits show a multiannual representative error rate of 5.03%, which falls to a residual error rate of 3.18% after corrections for Space, and 3.55% for Security. These results have been calculated with the partial closure of audits from the third CRAS (Common Representative Audit Sample) and as such, have to be taken with caution until the audits of this sample are completed. As the residual error rate exceeds the materiality threshold of 2%, REA will continue to maintain a reserve as long as there is significant FP7 expenditure.

The maximum 2% residual error rate for FP7 will not be attained without a massive increase in the number of audits leading to significant additional administrative burden imposed on participants through widespread ex-ante controls. Therefore, although the Residual Error Rate remains above the target of 2%, the cost of achieving this target should be taken into account.

There is an acceptance among stakeholders and institutions that an approach solely focussed on the achievement of a 2% target for legality and regularity may not be appropriate. There are other objectives and interests, especially the success of the Union's research policy, international competitiveness, and scientific excellence, which should also be considered. Therefore, aiming to achieve a residual error rate of 2% at all costs is not a viable approach. However, at the same time, there is a clear need to manage the budget in an efficient and effective manner, and to prevent fraud and waste.

REA together with the services responsible for research and innovation will continue its control and audit operations, including recovery and extrapolation of errors to non-audited contracts wherever appropriate.

- **Continued control and audit:** The implementation of the ex-post control results has a cleaning effect on the paid amounts, together with the correction of systemic errors. FP7 ex-post audits will continue, notably audits based on risk considerations. Recovery and corrective action will continue. A third Representative Audit Sample for the Research family has been launched in 2016.
- **Certificates on the financial statement (CFS)** continue to be required for every cost claim over €375,000. As shown by a study, and despite the fact that they do not always identify all ineligible expenditure in cost claims, those with a CFS had an average error rate 50% lower than those without one.

Alongside the implementation of its Ex-post Audit Strategy REA, in cooperation with the Research Family continues to improve guidance which should have some effect on the error rate, particularly in lowering the residual error rate, but it is not expected to lead to any fundamental improvements.

In its 'Annual Report on the Implementation of the Budget for the 2014 financial year', the Court of Auditors noted that in 27 cases where the errors were detected sufficient information was available to allow detection of the errors before accepting the expenditure and that if this information had been used the estimated level of error would have been 2.8 percentage points lower. Following this comment, REA developed, in collaboration with the Research family, new trainings to raise staff awareness regarding the ex-ante checks that can be performed with the available information. In its report on the 2015 financial year, the Court mentioned that only 0.6% of all cases could have been avoided if controls by certifying auditors or Commission services had functioned properly. This is much lower than the previous years.

Taking these elements into consideration, and in the light of the results of the FP7 audit campaign, REA considers that its overall control strategy ensures that trust, control and other policy objectives are kept in balance.

## H2020

As for the new framework programme, Horizon 2020, the rules have been considerably simplified with:

- a single funding rate per action, identified in the call for proposals;
- a flat rate for indirect costs;
- simplified time recording and greater use of beneficiaries practices;
- more flexible rules for third parties and subcontracting;
- simpler and clearer rules for calculation of productive hours (and personnel costs);
- extended use of unit cost model (MSCA).

This should ensure a lower rate of error in cost declarations.

However, even with simplified rules, the inherent risk of overcharging of costs will always remain in a system that is based on the reimbursement of actual costs. Furthermore, the legislative process added additional risks of error (more SMEs, widening, costs of large infrastructures). The risks arising from these three new elements cannot be avoided but the Commission and REA will take actions to mitigate those risks through guidance, training and a risk-based Ex-ante Control Strategy.

At the same time, the control burden must be balanced against the need to assure wide participation and an attractive programme, all within the overriding need to obtain the objectives of excellent science and competitive industries.

For this reason, Article 23 of the Horizon 2020 Regulation explicitly states that:

*"The control system shall ensure an appropriate balance between trust and control, taking into account administrative and other costs of controls at all levels, so that the objectives of Horizon 2020 can be achieved and the most excellent researchers and the most innovative enterprises can be attracted to it".*

It also states that audits of expenditure on indirect actions shall be carried out in a coherent manner *"to minimize the audit burden for participants"*.

Substantive spending on Horizon 2020 (other than pre-financing) slowly began in 2015, increased in 2016 and is expected to reach a significant level in 2017, when the level of error and the real impact of the simplification measures can be assessed. REA will fully rely on the error rates calculated by the Common Audit Service with a second layer of assurance for the Marie-Skłodowska Curie actions, whose risk profile is lower than the one of mainstream cooperative research.

In the meantime, REA in cooperation with the Research Family will continue its efforts to prevent errors:

- **Improvements in ex-ante controls before payments:** REA actively participated in the various workshops that have led to the adoption of a common Ex-ante Control Strategy at the level of the Research Family that has been designed along 4 directing principles:

- Controls must provide reasonable assurance about legality and regularity based on the information available at the time,
- Controls must strike the right balance between less administrative burden and effective financial control for beneficiaries,
- Controls must be risk-based and cost effective,
- Beneficiaries should be treated equally (FR, art. 135.7).

**Guidance to beneficiaries and certifying auditors:** Under H2020 the Participant Portal is a major improvement in terms of communicating towards the beneficiaries and other stakeholders, with comprehensive guidance and clear templates.

#### 2.1.1.1.4 Conclusion on the control effectiveness as regards legality and regularity

The control objective as detailed in Annex 4 is to ensure that the residual error rate does not exceed or cumulatively stays as close as possible to 2%. However the FP7 audit results are concordant with the general expectation that the Common Representative Error Rate resulting from audits of FP7 will be around 5% at the end of the programme. The residual error rate for DG Research and Innovation is expected at around 3%. These amounts do not necessarily mean that there is a loss to the Community budget. Many of the projects spend more than the capped budget, and so the real loss to the Community budget will be lower than when estimating the financial impact by using the error rates above.

In the Financial Statement accompanying the proposal for Horizon 2020, the Commission set out its analysis of the likely future trend of error rates and considers that for research spending under Horizon 2020, the risk of error will range between 2-5% with the objective of achieving a level of residual error rate as close as possible to 2%."

The inherent risk of each category of expenditures has been analysed under point a) of this section and a relevant control system (whose cost efficiency and cost effectiveness will be analysed hereafter) has been put in place to address these risk characteristics. In light of these control objectives, the estimated residual error rate of the FP7 - Space and Security themes and the SME actions is above the materiality criterion of 2% and, therefore, calls for maintaining the reservations made in the AAR 2015.

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

**For REA, the estimated overall amount at risk at payment<sup>44</sup> for the 2016 payments made is between €37.89 and €41.04 million. This is the AOD's best, conservative estimation of the amount of *relevant expenditure*<sup>45</sup> during the year (€1,432.95 million) not in conformity with the applicable contractual and regulatory provisions at the time the payment is made.**

**This expenditure will be subsequently subject to ex-post controls and a sizeable proportion of the underlying error will be detected and corrected in successive years. The conservatively estimated future corrections for those 2016 payments made are €15.97 million. This is the amount of errors that the REA**

<sup>44</sup> In order to calculate the weighted average error rate (AER) for the total *relevant expenditure* in the reporting year, the *detected*, estimated or other equivalent error rates have been used. For H2020, REA estimates a provisional error rate in the range of 2 to 5%.

<sup>45</sup> "*relevant expenditure*" during the year = payments made, minus new pre-financing paid out, plus previous pre-financing cleared.

**conservatively estimates to identify and correct from controls that it will implement in successive years.**

**The difference between those two amounts leads to the estimated overall amount at risk at closure between €21.92 million and €25.06 million.**

**Table 5: Estimated overall amount at risk at closure in 2016**

	Payments made (in 2016; m€)	minus new <sup>1</sup> prefinancing (in 2016; m€)	plus cleared <sup>2</sup> prefinancing (in 2016; m€)	relevant expenditure <sup>3</sup> (for 2016; m€)	Average Error Rate ( <i>weighted</i> AER; %) (H2020 estimates range from 2% to 5%)		Estimated overall amount at risk <i>at payment</i> (2016; €) (H2020 estimates range from 2% to 5%)		Average Recoveries and Corrections <sup>9</sup> ( <i>adjusted</i> ARC; %)	Estimated future corrections [and deductions] (for FY; €)	Estimated overall amount at risk at closure <sup>4</sup> (€) (H2020 estimates range from 2% to 5%)	
					2%	5%	2%	5%			2%	5%
<b>H2020</b>					<b>2%</b>	<b>5%</b>	<b>2%</b>	<b>5%</b>			<b>2%</b>	<b>5%</b>
Excellent Science - Marie Skłodowska Curie actions	586.65	585.69	3.11	4.07	1.7% <sup>7</sup>	1.7% <sup>7</sup>	70,004	70,004				
Excellent Science - FET Open	105.81	92.58	0.00	13.23	2.0%	5.0%	264,600	661,500				
LEIT - Space	102.31	79.71	7.07	29.67	2.0%	5.0%	593,339	1,483,347				
Societal Challenge 2	106.87	98.75	0.76	8.88	2.0%	5.0%	177,577	443,942				
Societal Challenge 6	115.44	94.83	0.00	20.61	2.0%	5.0%	412,200	1,030,500				
Societal Challenge 7	116.58	98.99	0.08	17.67	2.0%	5.0%	353,462	883,656				
Spreading Excellence and Widening Participation	23.13	21.09	11.27	13.31	2.0%	5.0%	266,200	665,500				
Science with and for Society	36.07	34.73	0.00	1.34	2.0%	5.0%	26,800	67,000				
<b>Total H2020:</b>	<b>1,192.86</b>	<b>1,106.37</b>	<b>22.29</b>	<b>108.78</b>	<b>2.0%</b>	<b>4.9%</b>	<b>2,164,182</b>	<b>5,305,449</b>				
<b>FP7 legacy</b>												
People	293.23	0.14	550.11	843.20	1.72%	1.72%	14,503,040	14,503,040				
Cooperation - Space theme	18.22	0.00	43.67	61.89	5.03%	5.03%	3,113,103	3,113,103				
Cooperation - Security theme	60.73	0.00	84.24	144.97	5.03%	5.03%	7,291,991	7,291,991				
Capacities - SME actions	35.35	0.00	136.98	172.33	6.28%	6.28%	10,822,324	10,822,324				
<b>Total FP7:</b>	<b>407.53</b>	<b>0.14</b>	<b>815.00</b>	<b>1,222.39</b>	<b>2.9%</b>	<b>2.9%</b>	<b>35,730,458</b>	<b>35,730,458</b>				
<b>Total Grant Management</b>	<b>1,600.39</b>	<b>1,106.51<sup>5</sup></b>	<b>837.29</b>	<b>1,331.17</b>	<b>2.8%</b>	<b>3.1%</b>	<b>37,894,640</b>	<b>41,035,907</b>	<b>1.2%<sup>6</sup></b>	<b>15,973,989</b>	<b>21,920,651</b>	<b>25,061,918</b>
<b>Expert management<sup>8</sup></b>	<b>42.55</b>	<b>0.00</b>	<b>0.00</b>	<b>42.55</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>0</b>	<b>0</b>

<b>Total implied for 2016 operational budget</b>	<b>1,642.94</b>	<b>1,106.51<sup>5</sup></b>	<b>837.29</b>	<b>1,373.72</b>	<b>2.8%</b>	<b>3.0%</b>	<b>37,894,640</b>	<b>41,035,907</b>	<b>1.2%<sup>6</sup></b>	<b>15,973,989</b>	<b>21,920,651</b>	<b>25,061,918</b>
<b>Administrative budget<sup>8</sup></b>	<b>59.23</b>	<b>0.00</b>	<b>0.00</b>	<b>59.23</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Grand total</b>	<b>1,702.17</b>	<b>1,106.51</b>	<b>837.29</b>	<b>1,432.95</b>	<b>2.6%</b>	<b>2.9%</b>	<b>37,894,640</b>	<b>41,035,907</b>	<b>1.1%</b>	<b>15,973,989</b>	<b>21,920,651</b>	<b>25,061,918</b>
<b>Amount at risk at closure in percentage of the relevant expenditure</b>											<b>1.5%</b>	<b>1.7%</b>

<sup>1</sup> New PF actually paid out by REA during the FY (i.e. excluding any PF received as transfer from another DG).

<sup>2</sup> PF actually having been cleared during the FY (i.e. their 'delta' in FY actuals, not their 'cut-off' based estimated 'consumption').

<sup>3</sup> For the purpose of equivalence with the ECA's scope of the EC funds with potential exposure to L&R errors (see the ECA's AR methodological Annex 1.1 point 7), also our concept of "relevant exposure" includes the payments made, subtracts the new pre-financing paid out, and adds the previous pre-financing actually cleared during the FY. This is a separate and 'hybrid' concept, intentionally combining elements from the budgetary accounting and from the general ledger accounting.

<sup>4</sup> For some programmes with no set closure point (e.g. EAGF) and for some multiannual programmes for which corrections are still possible afterwards (e.g. EAFRD and ESIF), all corrections that remain possible are considered for this estimate.

<sup>5</sup> Differentiated at a level lower than the REA total.

<sup>6</sup> The correction percentage is based on the 7 years historic average of recoveries and financial corrections (ARC), which is the best available indication of the corrective capacity of the ex-post control systems implemented by REA over the past years. This historic average was not adjusted by the AOD and is the best but conservative estimate of the expected corrective capacity average to be applied to the reporting year's relevant expenditure for the current programmes in order to get the related estimated future corrections.

<sup>7</sup> The Marie Curie Actions had a low risk profile under FP7 with a detected error rate in 2016 of 1.72%. Under H2020 the error rate is expected to stay even lower than under FP7 as the programme has been further simplified. Therefore in line with REA's conservative approach an estimated detected error rate of 1.72% is used.

<sup>8</sup> Payments of experts and payments on the administrative budget are considered to be error free. See point 2.1.1.1.1 Assessment of inherent risks of the programmes/activities managed.

<sup>9</sup> The corrective capacity is calculated by DG BUDG and is based on past performance namely on the average recoveries and financial corrections implemented since 2009 expressed as a percentage of total expenditure over the same period).

The estimated amount at risk for 2016 payments is much higher than in 2015 (€13.07 million). This can be explained by the change in the methodology applied to calculate the overall amount at risk and the amount of the relevant expenditures. Indeed as from this annual activity report, the pre-financing paid to beneficiaries in 2016 is deducted from the relevant expenditures while the clearing of the pre-financing previously paid is added to the relevant expenditures.

In line with the guidance received from DG BUDG for the AAR 2016, this methodology will be commonly applied among Commission services and gives a much more accurate picture of the estimated overall amount at risk at payment. Contrary to last year, where the average weighted error rate was somehow artificially lowered by the inclusion in the calculation of the pre-financing payments that are estimated being 'zero risk' payments, in 2016 only the payments and/or the clearing of pre-financing payments against cost claims are included in the calculation. Besides, the H2020 interim and final payments are affected by a provisional error rate of 2-5% based on an estimate without real measurement in order to give the best, conservative estimate of the amounts.

The Internal Control Strategy provides for the implementation of further controls during subsequent years aimed at detecting and correcting errors in the budget. It is not possible to identify the specific errors and amounts which will be effectively corrected in the coming years, yet the implementation of the corrective controls performed since 2009 have resulted on average in recoveries and financial corrections representing 1.2% of the average payments over the same period, which would imply an amount of €15.97 million for 2016. These elements provide the best indication of the corrective capacity of the ex-post control systems implemented by the Agency.

### 2.1.1.2 Cost-effectiveness and efficiency

**Based on an assessment of the most relevant key indicators and control results, REA has assessed the cost-effectiveness and the efficiency of the control system and reached a positive conclusion.**

The cost-effectiveness and the efficiency of the controls implemented at each stage are assessed in the sections below.

#### 2.1.1.2.1 Stage one: Programming, evaluation and ranking of proposals

##### Efficiency

This first stage (for H2020 only) relates to the preparation of the calls and the evaluation of the submitted proposals. The overall control objective at this stage is to ensure a high quality evaluation which results in the selection of the best projects to achieve the operational objectives set out in the specific work programmes adopted by the Parliament and the Council.

The first controls performed at this stage relate to the eligibility and admissibility of the proposals. They are carried out by REA staff upon reception of the proposals to make sure that they are submitted according to the rules and in compliance with the eligibility criteria set out in the work programme.

The admissible and eligible proposals are then evaluated by panels of external evaluators, who are experts in the relevant scientific field. Each proposal is evaluated by a minimum of three evaluators, who – after performing an individual assessment – exchange opinions and agree on a consensus evaluation report. The experts evaluate the proposals against the criteria set out in the call for proposals. During the succeeding panel review meeting, the evaluated proposals are ranked by benchmarking scores across the various teams of evaluators involved in the evaluation of proposals for that

panel<sup>46</sup>. During the evaluation, the experts also evaluate the operational capacity of the beneficiaries while REA assesses, at a later stage, the financial capacity of the coordinators of projects requesting EU funding of more than €500,000.

Under H2020, in consideration of the 'no negotiation'<sup>47</sup> approach, additional emphasis has been put on the evaluation stage and some processes and controls have been reinforced in order to ensure that:

- the experts evaluating the proposals are the very best in their field;
- the experts do not have any conflict of interest for the proposals they evaluate;
- there is a regular turnover among experts by introducing rules on rotation;
- the composition of the pools of experts is balanced in terms of skills, experience and knowledge, geographical diversity, sectorial affiliation and gender.

### **Number of evaluation review cases upheld (H2020)**

The H2020 evaluation review procedure<sup>48</sup> provides applicants with the possibility of filing a complaint if they think that there were shortcomings in the handling of their proposal during the evaluation. A committee analyses all complaints and, where appropriate, may recommend the re-evaluation of the proposal. The final decision on follow-up actions is taken by the Authorising Officer.

The indicator on the evaluation review procedure helps monitoring the quality and effectiveness of the proposal evaluation process. A more detailed overview of the review cases can be found in tables 5 and 6 of Annex 12.

All the review procedures on the H2020 calls launched in 2015 were closed in 2016 and only 2 of the 37 proposals re-evaluated received funding.

The low share of review requests and cases upheld for the calls of the WP 2015 – 1.57% and 0.46% respectively – provides a good indication on the robustness of the proposal evaluation process and offers assurance with respect to the effectiveness of the internal control system. The indicators are even better compared to the good results already achieved for the 2013 calls when the review requests amounted to 2.56% and the cases upheld to 0.6%. The ratio is, however, higher than the record level of 0.27% achieved for the 2014 calls.

For the 2016 calls, 60 complaints have been introduced so far through the evaluation review procedure. Up to now, the review committees concluded that 13 cases should be upheld. Out of these 13, it was decided that three would go through a re-evaluation. Out of these three, none has been funded after re-evaluation. Out of 35 evaluation review procedures<sup>49</sup> launched on the calls 2016, 19 were finished and 16 on-going by the end of the reporting period.

In 2016, six Article 22 requests<sup>50</sup> to review the legality of acts of REA have been introduced and treated by the Commission services. The complaints received were about

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<sup>46</sup> Under FET Open the consensus score is based on the median value of the scores given by the expert evaluators.

<sup>47</sup> Contrary to the practice under FP7, where a 'negotiation' between the Commission and the beneficiaries was held, aiming at improving proposals in line with recommendations from the experts, there is no negotiation under H2020 and the selected proposals are funded as they were submitted.

<sup>48</sup> Formerly called 'redress procedure' under FP7.

<sup>49</sup> This number is higher than the total number of 2016 calls (22), because for the 2-stage calls there are two evaluation review procedures per stage and for certain calls evaluation review procedures are split by topics.

<sup>50</sup> Cf. Council Regulation (EC) No 58/2003 of 19 December 2002.

the outcome of the evaluations from applicants not being selected for funding under MSCA-IF 2016 (2 cases), Widespread-2016-2017 (2 cases) and FET-Open (2 cases). They have all been rejected, except for one that eventually led to the funding of two proposals (MSCA-IF).

## Cost effectiveness

### **Average evaluation cost by proposal (H2020)**

2016 was the first year of implementation of the 'single budget line' for expert' (one budget line to cover all evaluation costs of H2020 excluding ERC), that proved to be an efficient way to manage the evaluations' budget in a global way, thus avoiding a high frequency of budget transfers and multiple forecast calculations.

The expenses for the experts in 2016, €44.66 million in commitment and €42.55 million in payment are far below the amount spent in 2015 (respectively €51.72 million and €52.55 million) and below the previsions (€54.66 million).

This may be explained mainly by the fact that experts for a number of calls with high evaluation costs (SME instrument, MSCA-ITN and FET-Open) are usually contracted in the end of the year preceding the evaluations which takes place in the beginning of the year after. This was not the case in 2016 as the H2020 Expert Model Contract was revised in 2016 with an initial scheduled entry into force date of 1 January 2017. Since the revised Model Contract significantly changes the way in which payment for remote evaluation work is calculated, contracting for these calls was postponed to January 2017. The forecast total costs affected by this were €9.6 million.

In addition and more specifically as regards REA in 2016, there has a decrease by close to 10% of the submitted proposals and remote evaluations have been used more frequently than in previous years.

As a consequence of the introduction of the single budget line, the cost of the evaluation for the calls managed by REA is now calculated on the basis of the share of REA managed calls in the total budget of calls for which REA is providing administrative and logistical support services.

Accordingly for 2016, the cost of expert evaluators involved in the 2016 calls implemented by REA is estimated at €14.78 million.

**Table 6: Indicator –Cost of expert evaluators for calls implemented by REA in 2016**

	2015 <sup>51</sup>	2016
<b>Total costs of experts evaluators (from the single budget line) (in €)</b>		44,663,000
<b>Share of REA calls managed by the Agency out of the total of calls managed in 2016</b>		33%
<b>Estimated costs of experts for REA managed calls (in €)</b>	24,250,287	14,784,541

<sup>51</sup> As explained above, with the introduction of the single budget line, the methodology applied in 2016 for the calculation of the costs of the experts evaluators has changed and in consequence 2015 figures are not fully comparable.

**Table 7: Indicator – Average evaluation cost by proposal (cost of expert evaluators only) for calls implemented by the REA in 2016**

	2015	2016
No. of eligible proposals	14,639	12,839
Total cost of expert evaluators (in €)	24,250,287	14,784,541
Estimated total staff costs(in €)	5,216,553	6,319,471
Estimated costs charged to the administrative budget (Title III - IT, comm., audits, missions, evaluation platform) (in €)	394,401	340,513
Total estimated costs	29,861,241	21,444,525
Estimated average cost by proposal (evaluated) - (in €)	1,657	1,152

The total cost of the evaluation stage for 2016 is therefore estimated at €21.44 million.

In 2016, REA managed calls for proposals for an amount of more than €1,617 million and the total costs of the evaluation stage represent only 1.6% of this amount (compared to 1.9% in 2015). Therefore, the evaluations performed by REA can be considered as cost effective.

However, the most valuable benefits of these controls are not quantifiable; they relate to the qualitative assurance that the most excellent projects are selected out of the many projects proposed, which is a pre-requisite for their successful implementation in accordance with a legal and regular evaluation and selection process. The effectiveness of this control can also be demonstrated by referring to the fact that 95.8% of all REA FP7 projects reached all or most of their objectives as well as to the low share of upheld evaluation review requests, below 0.5% (as reported under KPI 3).

The effectiveness of these controls is also confirmed by the reports of the independent observers' reports, appointed to assess the objectivity, impartiality and transparency of the evaluation for each call, in which they underline REA's success in ensuring smooth, fair, transparent, effective, efficient and high quality evaluation processes, giving only minor suggestions for improvement and indicating examples of very good practices which should be continued. They recognise the complexity of the process and highlight, among other things, the careful selection of experts with relevant knowledge, the well prepared briefings, the excellent organisation by REA staff, the motivation of all actors involved and the constant efforts to respect impartiality and confidentiality principles. They also point out that the evaluation procedures described in the published Horizon 2020 Manual are strictly followed. Finally, they conclude that they share the opinion expressed by many experts that the quality of the evaluation is very high, also compared to national and international schemes.

### 2.1.1.2.2 Stage two: selection of proposals and conclusion of grant agreements

#### Efficiency

The proposals at the top of the ranking list are then put forward for funding and the selected ones enter the grant finalisation process. REA has eight months between the call deadline and grant signature (Article 20(2) of the H2020 Rules for Participation). This consists of two periods and two primary time limits to comply with:

- **Period 1:** maximum of 5 months (153 days) to inform applicants, ends when the applicants are informed of the outcome of the scientific evaluation (TTI: Time-to-Inform);
- **Period 2:** for grant preparation and signature within the overall maximum period of 8 months (245 days) from the call deadline to grant signature (TTG: Time-to-Grant).

TTI: 100%  
(132 days on average)

TTG: 99% grants signed in  
less than 245 days  
(193 days on average)

The H2020 'no negotiation' approach does not mean that no controls are performed before grant signature. On the contrary, controls are carried out, e.g. in relation to the duration and starting date of the project, the maximum amount requested the reimbursement rate, the types of costs, subcontracting, the third parties, the reporting periods, the bank accounts for payments, the consortium agreement, pre-financing payments, compliance with ethical standards, etc.

The financial capacity of the project coordinator is checked for actions where the requested EU contribution equals or exceeds €500,000. An ethics review is performed and, if needed, the project goes through a security scrutiny. Moreover, it is checked, among other things, whether the beneficiaries are involved in serious administrative errors or fraud, or whether they are subject to pending legal proceedings for administrative errors or fraud or to a recovery order for an outstanding amount issued by the Commission or REA for which the payment is significantly overdue.

Full details on the performance for the H2020 calls of 2015 are now available, including the second wave of calls for which the evaluation or the grant preparation phase was still ongoing at the end of 2015. The following section reports on the final results of all the 2015 calls, as well as on the first results of the calls 2016.

**In 2016**, REA was very successful in reaching these targets on **TTI** and **TTG** with **100%** of the participants to the **calls 2016 and 2015 informed within 153 days** and **99% of all the grants agreements signed in less than 245 days**. The average performance stands at **132 days for the TTI** and **193 days for the TTG**, 52 days before the target<sup>52</sup>.

This represents an improvement in comparison to the performance for all **grants signed in 2015 (calls 2014 and 2015)**, where results were already very successful with an overall TTG for REA of 97% and an average TTG of 203 days<sup>53</sup>.

As to the **2015 calls (grants signed in 2015 and 2016)**, REA reached the excellent result of around **100%** grants signed on time.

For the **2016 calls (grants signed by 31/12/2016)**, the TTG performance for only one activity, LEIT – Space, was available at the time of reporting (97%)<sup>54</sup>. For the other activities, final TTG results could not yet be provided due to the fact that the 8-months TTG period was still running for the majority of the calls (15 out of 22 calls). However, for those calls for which the 245 days-period had already elapsed (7 calls), the performance is excellent. Out of the 321 grants signed so far, 317 (**99%**) were signed on time<sup>55</sup>.

Further details are provided in the call implementation overview tables of Annex 12 (tables 1 and 2).

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<sup>52</sup> Source: CORDA.

<sup>53</sup> Source: CORDA.

<sup>54</sup> Only one grant signature was delayed due to the need for a security scrutiny of the proposal.

<sup>55</sup> At 31/12/2016 grant signature was delayed for four proposals: (a) one COMPET-2016 proposal due to a security scrutiny, (b) one SFS-2016 proposal due to a request for extension from the consortium as well as from the parent DG (DG RTD), (c) one CO-CREATION-2016 proposal being submitted to a security scrutiny, (d) one REV-INEQUAL-2016 proposal having been granted an extension in order to sort out some complex issues on procurement (for further details see section 1, key achievements).

## Cost effectiveness

### Cost of control stage 2 – conclusion of grant agreements

In 2016, REA concluded 1,392 grants on the H2020 calls 2015 and 321 grants on the calls 2016 for more than €1,637 million.

As shown in table 9, the total cost of control at stage 2 amounts to €6.20 million up by €0.8 million compared to 2015. The variation may be justified by the increasing average grant size resulting in fewer but more complex projects to process. The costs of the controls performed at this stage remain very low in comparison with the total value of the grant agreements signed, at some 0.38%.

**Table 8: Indicator– cost of control of stage 2 – conclusion of grant agreements**

	2015	2016
Total cost of control (in € million)	5.40	6.20
Number of grant agreements finalised in 2016	1,918	1,713 <sup>56</sup>
Average cost of control for one finalised grant agreement (in €)	2,815	3,622
Cost of control as a percentage of the value of signed grant agreements	0.33%	0.38%

While there are some financial benefits from the controls implemented at the grant agreement preparation and signature stage, cost-saving is not the main objective of this stage in the process. The main benefits gained are not quantifiable, being mainly related to assuring that legality and regularity is ensured before signing grant agreements.

#### 2.1.1.2.3 Stage Three: Monitoring of the grant agreement execution

### Efficiency

#### Ex-ante controls

This stage entails the monitoring of the execution of the project activities planned and involves scientific expert reviewers as well as ex-ante checks on the participants' cost claims. As underlined above the research family has designed a common Ex-ante Control Strategy for H2020.

The ex-ante controls focus on:

- an **assessment**, mostly with the support of external reviewers, **of the progress** achieved in the implementation of the project to ensure that the project is on track and that the initial objectives remain achievable;
- a **plausibility check on the declared costs**, referring in particular to justifications on the use of resources presented as part of the regular reporting requirements and assessed against the initial description of the work and the scientific progress made;
- the **compliance with the legality and regularity requirements** such as requesting duly completed and authorised financial statements, checking the availability and analysis of certificates on financial statements, the complete and timely submission of project deliverables, etc.

<sup>56</sup> Source: ABAC (RAL different from 0).

As regards the FP7 SME actions, an additional ex-ante control has been put in place to make sure the RTD performers' invoices have been duly registered in the SME's accounts and paid before proceeding to the final payment.

The ex-ante checks also include the review of audit certificates on cost statements (certificates on financial statements) delivered by external auditors. Experience has shown that such certificates, provided by independent auditors appointed by the beneficiary and submitted with the cost claim do not provide a 100% guarantee on the legality and regularity of the declared costs. Nevertheless, they have a significant impact in reducing the risk of errors.

Under FP7, certificates on financial statements (CFS) are required for claims by beneficiaries of more than €375,000 while, under H2020, these certificates are required only for final payments when the total EU contribution claimed exceeds €325,000.

So far, such certificates have been provided mainly for FP7 projects. In total, 24.63% of the interim and final payments processed under FP7 were covered by a CFS. For H2020, a limited number of interim and final payments (202) have been processed by the end of the year and the CFS released covered only 2.9% of the total payments. For details on the share of payments made with additional assurance from CFS, please refer to Annex 10, tables 1 and 2.

### Execution of operational payment appropriations

Like in the previous years, the appropriations delegated to REA under the General Budget of the European Union (i.e. the credits of the REA Operational Budget) have been fully implemented by the Agency by 31 December 2016, having reached **100.00%** in both, commitment and in payment appropriations, for an amount of respectively €1,666.36 million<sup>57</sup> and €1,642.94 million.

### Time-To-Pay (TTP)

An important indicator is 'Time-To-Pay' (TTP), which is defined as the percentage of payments made within deadlines set by the Financial Regulation. The table 6 in Annex 10 gives an overview of the performance of the Agency in funding grants, per programme and per type of payment. The results indicate a high compliance with the payment deadlines with **98.9%** of all payments processed in time.

For **FP7 grants**, the performance in 2016 remained at a very good level and in line with previous years, reaching **93.7%** of the interim/final payments processed in time.

For **H2020 grants**, during the reporting period and in comparison with last year, a higher number of pre-financing payments have been made (1,768 compared to 1,574) and the performance remained excellent, with 98.8% of them processed within 30 days. There were also a much higher number of interim and final payments (202 compared to 52 last year) and the performance was good, with 181 out of them made on time (89.6%) despite some IT problems encountered for the first interim payments processed. In general the performance in terms of average gross Time-To-Pay improved with H2020 thanks to the automation of the process and the paperless workflow.

In total, REA reached 95.4% of the payments processed in time for all grant-related payments, regardless of their type or framework programme.

For the **2016 administrative budget**, out of the 1,416 payments made, almost all of them (**99.7%**) were made within 30 days from receipt of payment request), which represents an additional improvement by 1 percentage point compared to previous year.

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<sup>57</sup> CA - H2020: €1,664.60 million; CA - FP7: €1.76 million.

The best performance has been achieved in relation to the payments of experts, with **99.6%** of them processed in time. This represents an improvement by 3.5 percentage points compared to 2015, reflecting not only the high level of performance of the Agency but also the increased level of collaboration with operational units. Some 21,000 payments files were executed with an average TTP of 11 days.

### Time-To-Amend grant agreements (H2020 and FP7)

As regards the performance with regard to **H2020 'Time-To-Amend' (TTA)**, it continues being very favourable with an **average net TTA of 13 days** in 2016 for **645 amendments implemented**, which is significantly below the contractual target of 45 days and indicates an improved performance compared to last year (for more details see Annex 12, table 9). The already good performance under FP7 (net TTA of 32 days in 2016) continued to improve significantly with H2020 thanks to the automated workflow. As of this year, this figure may be considered as fully representative as – with the increased number of H2020 projects that REA manages – the number of H2020 amendments processed was similar to the FP7 ones<sup>58</sup> (for more details see Annex 12, table 8).

As regards **FP7**, the time-to-amend grant agreements has continued decreasing in 2016, with an **average time-to-amend of 32 days for 666 amendments** implemented (instead of 36 days in 2015), significantly below the target of 45 days (for more detail see Annex 12, tables 8 and 10).

### Cost effectiveness

Compared to 2015, the financial impact of the systematic ex-ante controls performed on the cost claims before proceeding to the payment remains stable, at more than €18 million, which represents a significant increase compared to the years before 2015. This could be explained i.a. by the additional ex-ante controls that have been put in place, especially in relation to the SME actions.

However, the financial impact of ex-ante controls is likely to be significantly understated, especially for FP7, as many cost claims and associated information are corrected by beneficiaries after comments from REA staff without formal registration. By submitting and registering the corrected cost claims, REA is no longer able to monitor the full impact of its ex-ante controls although this bias is gradually reducing with the progressive introduction of the automatic registration of cost claims submitted through the grant management IT tool.

**Table 9: Indicator – Cost of control of stage 3 – Monitoring of the execution of the grant agreement**

	2015	2016
<b>Benefits of control - stage 3 (in € million)</b>	16.4	18.6
<b>Total cost of control - stage 3* (in € million)</b>	21.4	24.3
<b>Number of grant agreements running on 31 December</b>	7,020	6,658
<b>Average cost of control for one running grant agreement</b>	€3,054	€3,654

\* Including staff costs, mission and costs of reviewers. For further details on the breakdown of costs of controls per stage and activity, please refer to table 21.

The total cost of controls performed at this stage is estimated at €24.3 million or **€3,654** per grant agreement which shows a slight increase compared to last year done to a shift

<sup>58</sup> To compare with the previous year: in 2015, only 146 amendment requests had been received and 129 processed.

in the portfolio to fewer but higher value projects bringing more challenge for project monitoring.

This cost of €24.3 million must be considered in light of the amount of €1,600.39 million paid in 2016 for grant agreements, as a result the costs of the controls performed at this stage 3 represent only 1.5% of the total amount paid.

In addition, a significant part of the controls relate to the analysis of scientific deliverables to ensure excellent science, provide assurance that the projects are running as intended and allow the Agency to provide appropriate feedback to policy development. Such benefits are qualitative and cannot be quantified in financial terms. Furthermore, this process enables the projects that are not running well to improve their performance.

The project review process has certainly contributed to the high share of projects (95.8%) that have met all or most of their objectives in 2016 (as reported under KPI 3.1).

The project review process allows REA, assisted by expert monitors, to analyse the quality of the work provided. It may lead in case of underperformance to the termination or to the reduction of the grant and to the recovery of the funds paid in excess. The financial benefit from ex-ante controls remains somewhat limited due to the design of the programmes (in particular the limited reporting requirements on declared costs) with high reliance on ex-post controls as part of the overall control framework. The ex-ante controls also act as a deterrent to potential non-compliance of beneficiaries with FP7/H2020 rules and the preventive impact of the stringent controls applied by REA when processing payments and approving deliverables cannot be quantified.

### Average number of projects managed by a REA staff member

In 2016, the average number of projects managed by a REA staff member in operational programme management units remains in the same range as in 2015.

**Table 10: Indicator – Average number of projects managed by a REA staff member in operational programme management units**

	2015	2016
Total number of running projects on 31 December 2016 (H2020 and FP7)	7,020	6,658
Number of staff in operational programme management units	366	373
Average number of projects by <u>staff member</u> in operational units (project officers and support staff)	19	18

On the contrary, the average number of projects managed by a REA Project Officer has decreased from 46 in 2015 to 36 on 2016, which can be explained by two main factors:

- the increasing share of complex projects managed under the actions delegated to REA, due to the change of the portfolio of programme (more H2020 projects) ;
- the fact that REA hired proportionally more project officers. This is in line with the increasing complexity of the projects and the impact of improved IT tools allowing cutting down on routine manual tasks.

**Table 11: Indicator – Average number of projects managed by a REA Project Officer (GFIV, GFIII and TA of grade AD)**

	2015	2016
Total number of running projects on 31 December 2016 (H2020 and FP7)	7,020	6,658
Number of project officers	152	183
Average number of projects by <u>project officer</u>	46	36

## 2.1.1.2.4 Stage four: Ex-post controls and recoveries

### Efficiency

The fourth stage includes the ex-post controls as well as the recovery of any amount paid in excess of the amount due. Since only a very limited number of cost reimbursements have taken place so far under H2020, no ex-post controls have been carried-out, therefore this section relates mainly to the ex-post controls of FP7 payments.

### **Implementation of FP7 audit results – including extrapolations**

There is always a time lag between the payment and the recovery of unduly paid funds. When an overpayment is identified it is usually recovered by offsetting against another future payment, especially when projects are still ongoing. In 2016, 114 adjustments in total were reported as implemented following audits (69 cases) and extrapolation (45 cases) against 164 in 2015. 53% of the adjustments were implemented by recovery orders. This may be explained by the fact that the end of the FP7 programme is drawing near and that more and more recoveries relate to projects for which the final payment was already made.

By the end of 2016, and in a cumulative term, adjustments were proposed for 470 audited REA projects. Of the total amount to be implemented (€18,723,610), €11,891,248 has been effectively implemented (by a recovery order or by offsetting).

**Table 12: Indicator – Implementation of the REA ex-post audit results during 2016 – adjustments in favour of the EU budget**

Cumulatively	Results from external audits		Adjustments implemented		Adjustments pending implementation	
	Number of projects	Funding adjustments (in €)	Number	value	Number	value
FP7	470	18,723,610	375	11,891,248	95	6,832,362

The table below shows the cumulative implementation of the extension of the audit findings (extrapolations focusing on findings in favour of the EU budget only). The systematic errors found in an audit of a beneficiary are extended to non-audited participations of this beneficiary. To date 253 cases have been closed for a total amount of more than €2 million. The remaining 214 cases will be implemented in the next years.

**Table 13: Implementation of FP7 extrapolation in REA (cumulatively)**

Cumulatively	Number of projects analysed for extrapolation			Number of extrapolation cases implemented			Number of cases to be analysed/implemented by the REA
	Deriving from REA audits	Deriving from non-REA audits	Total	Where no extrapolation correction is required	In favour of the EU budget		
					Number of projects	Funding adjustments	
FP7	460	1,285	1,745	1,278	253	2,056,664	214

REA is well aware of ECA's Recommendation 4 from ECA's annual report 2015 and therefore closely monitors the implementation of extrapolated corrections based on its ex-post audits of reimbursed costs under the Seventh Research Framework Programme. At the end of 2016, the cumulative implementation rates for audit adjustments and extrapolations were respectively 80% and 88% (including the projects for which no extrapolation correction was required).

41% of the audits findings were implemented within 6 months after issuing the final report and 40% of the extrapolations within 6 months following the distribution note<sup>59</sup>.

### Liquidated damages

The implementation of liquidated damages imposed when overpayment was detected through ex-post audits is done independently by means of recovery orders addressed directly to the audited beneficiary. 123 cases of liquidated damages have been implemented to date for a total amount of €658,601. Liquidated damages have a relatively low financial impact on the total amounts to recover. Under H2020, beneficiaries, whose costs have been declared ineligible following an audit, will no longer be requested to pay liquidated damages. Financial penalties might be imposed but on a case by case basis.

### Cost effectiveness

The total cost of ex-post controls, including the management, support staff and staff implementing the audit adjustments (e.g. implementing offsetting in payments and recovery orders), amount to €2.47 million. This amount is comparable to the cost of the previous years. The total costs of the ex-post controls and recoveries represent 6% of the total amount audited in 2016 (€40.6m)<sup>60</sup>.

**Table 14: Indicator – Resources used by the REA for ex-post controls/audits**

	2015	2016
Internal resources for ex-post audits and supervision of outsourced ex-post audits	5.7 FTE / € 506,778	5.7 FTE / € 439,733 <sup>61</sup>
Cost of externalised auditing	€ 758,010	€ 914,794
Cost of collaboration by operational units in preparing ex-post audits and implementing corrections/recoveries	€ 1,072,662	€ 1,112,651
<b>Total cost of ex-post control</b>	<b>€ 2,337,450</b>	<b>€ 2,467,178</b>

#### 2.1.1.2.5 Indicators related to the administrative and logistical supports services

As far as the administrative and logistical support indicators are concerned, in line with the ones set by the rules for H2020 and certain other programmes, the performance of the Agency remains favourable in 2016. This is indicated by the very high degree of satisfaction of the client services in the DGs.

For details on the performance of REA, please refer to section 1.10.

The support services assist almost all services managing H2020 in achieving their objectives. This activity has however no direct impact on the REA's overall assurance with respect to its programme implementation tasks and budgetary spending.

<sup>59</sup> Cf. Relevant objectives and indicators for financial management: See objective 2, indicator 5 of the Annual Work Programme 2016: "timeliness of the implementation of audit results"; and indicator 6: "percentage of extrapolations completed".

<sup>60</sup> The amount of €40,647,798.68 audited equals the sum of the accepted EU contribution for which an audit has been closed in 2016.

<sup>61</sup> The decrease in the staff costs is due to the departure of the head of the ex-post audit sector. The internal resources for ex-post audits and supervision of the outsourced ex-post audits are expected to continue decreasing in the coming years, as the REA audit team is in charge of the audits on the FP7 projects only, the ex-post audits for H2020 being in the remit of the Common Support Centre.

## 2.1.1.2.6 Assessment of REA's relative level of cost-effectiveness

The analysis of the costs (full cost approach) and benefits of controls is detailed below. However, the benefits of the grant management control system are to be considered here as a whole, as they cannot only be expressed in monetary terms. The benefits are quantitative and qualitative and a purely quantitative cost-benefit evaluation would not reflect this reality.

**Table 15: Indicator – REA's total cost of controls – broken down by stage of the grant management life cycle and other activities/tasks**

		Total staff cost in FTE *		Total staff costs (in € million)	Other expenditures (in € million)		Total cost of control (in € million)
		temporary staff (in € million)	contract staff (in € million)		of which charged to the administrative budget (Title III - IT, comm., audits, missions, eval. platform)	of which charged to the operational budget (expert evaluator and reviewers)	
ex-ante	Stage 1 – Programming, evaluation and selection	2.49	3.83	6.32	0.34	14.78	51.98
	Stage 2 – Conclusion of grant agreements	2.47	3.74	6.20	0.00	0.00	
	Stage 3 – Monitoring the GA execution	8.73	13.87	22.60	0.43	1.30	
ex-post	Stage 4 – Ex-post controls and recoveries	0.73	0.82	1.55	0.91	0.00	2.47
<b>Total cost of control for the grant management life cycle</b>		<b>14.41</b>	<b>22.26</b>	<b>36.67</b>	<b>1.68</b>	<b>16.09</b>	<b>54.44</b>
Support services		1.92	6.70	8.63	6.09		
Other tasks (coordination and administrative support)		2.81	3.63	6.44	0.23		
<b>REA total operating cost</b>		<b>19.14</b>	<b>32.60</b>	<b>59.74</b>			

\* Title I and II of the administrative budget: staff expenditures, infrastructure and operating expenditures

The overall cost of controls compares the total cost of controls with the total payments made in 2016. The total cost of controls may be considered to be equivalent in the case of REA to the administrative budget of the Agency. However, it is important to underline that REA is in charge of providing support to the Research family and beyond. The support tasks will even be extended with the introduction of SEDIA as from 1 January 2018 when REA will be in charge of the validation of all entities entering into business with the Commission.

The value of the operational payments processed for the support services (payments to experts) represent only 2.5% of the total value of the payments processed by the REA in 2016. The total costs of the support services, however, represent 29% of the operating costs of the REA.<sup>62</sup> The different stages of control detailed in the AAR are linked to grant

<sup>62</sup> See REA AWP 2016, p.42. In the estimate of the costs of the support services, besides the staff costs, the costs of the infrastructure and of the share of the overhead dedicated to the support services are included.

management which accounts for 97.5% of value of the payments processed by the REA.

In the table below, the operating costs are compared with the 2016 operational budget in **payments made**. In a first approach, the total operating costs without the support services and their share in the overhead are compared to the amount of the payments made from the operational budget 2016 (payments made to the experts not included). In a second approach, the total cost of controls made of the operating costs without the support services and of the costs of expert evaluators and monitors (charged to the operational budget) are compared to the total amount of payments made from the operational budget (excluding the payments to the experts).

The percentages are in line with the previous years and remain well below the maximum ceiling of 6.0% provided in the legal basis for FP7 and H2020.

**Table 16: Indicator – REA's operating cost in percentage of the operational budget in 2016**

REA's overall cost of control	Costs (€ million)	Operational budget in payments made (€ million)	% of the Operational budget
Operating budget without support services <sup>63*</sup>	42.42	1,600.39	2.65%
<b>REA total costs of control for operating expenditures*</b> (including staff, operating costs and operational expenditures -experts) without support services and overhead (coordination and administrative support)	54.44	1,600.39	3.40%

\* The estimated share of the costs of the support services is deducted at a rate of 29% and the payments for the experts are deducted from the operational budget.

Besides, many controls have a number of non-quantifiable but undeniable benefits that cannot be measured in financial terms, in particular:

- With respect to **stage one** (programming, evaluation and ranking of proposals), the qualitative benefits relate to ensuring that only the very best project proposals are selected for funding;
- With regard to the **second stage** (selection of proposals, grant management preparation and signature), REA ensures that grant agreements signed comply with legality and regularity requirements;
- With regard to the **third stage** (monitoring of the grant agreement execution), REA ensures that the projects remain on track in terms of performance and that the budget is fully executed. The controls performed by REA at this stage ensure the legality and regularity of the transactions;
- With regard to the **fourth stage** (ex-post controls and recoveries), they have, among other, a strong dissuasive impact leading to a higher compliance with the overall legal framework / policy objectives, for which the financial impact cannot be measured. Beneficiaries will indeed take extra care over the preparation of their costs claims knowing that on the spot audits may follow. The controls performed at this stage contribute significantly to the overall level of assurance regarding the legality and regularity of payments.

Additional proof of the effectiveness of the controls is provided by the overall excellent performance of the REA which is either equivalent to the REA's performance in 2015 or

<sup>63</sup> Based on the total amount of the operating budget including support services (€59.74 million), the cost of control for operational expenditures is estimated at 3.64%.

has even been improved in some fields:

- **TTG**: the performance of the REA is significantly below the target of 245 days with an average of 193 days;
- the share of **evaluation review cases** upheld in comparison with the number of proposals evaluated (0.46%) remains very low and the share of **closed projects that achieved all or most of their objectives** reaches 95.8% significantly above the objective of 90%. These two indicators show the effectiveness of the controls at the first stage of the process for a cost that remains below the 2% of the amount committed at the end of 2016;
- the **error rate** increased slightly compared to previous years but remains in the same range of statistical precision. Increasing the controls in order to reach the 2% materiality criteria would not prove to be cost effective;
- the overall **TTP** performance remains excellent, with 95.4% of the grant-related payments (respectively 98.8% of the pre-financing payments and 93.4% of the interim and final payments) performed in time. The performance on time-to-amend grant agreements also remained excellent, with an average time to amend of 13 days for H2020 grants and 32 days for FP7 grants, both significantly below the target of 45 days.

**Considering that:**

- **the total operating costs (costs of support services being excluded from the calculation) amount to 2.65% of the amount paid in operational expenditures in 2016;**
- **the costs of evaluating and selecting the best proposals is below 2% of the amount committed for H2020 calls in 2016;**
- **the costs of monitoring the execution of the grant agreements and the ex-post controls amount to 1.7% of the amount paid for operating grants in 2016;**
- **the overall control cost effectiveness indicator (total cost of control for grant management / total value of operational payments) amounts to 3.40%;**

**REA concludes that the control system is cost-effective and that there are, in addition, considerable qualitative benefits.**

### 2.1.1.3 Fraud prevention and detection

**REA has developed and implemented its own Anti-Fraud Strategy (AFS) since 2013, on the basis of the methodology provided by OLAF. It has been updated in April 2016.**

#### Strategies and Action plans

As required by the Commission's overall Anti-Fraud Strategy, REA developed **its FP7 Anti-Fraud Approach** in 2013 on the basis of both the first Commission Anti-Fraud Strategy (CAFS) adopted in 2011 and the first Research Anti-Fraud Strategy (RAFS) adopted in December 2012.

The REA is regularly updating its FP7 Anti-Fraud Approach and its related action plan as laid down in the Annual Work Programme 2016<sup>64</sup>. The first revision occurred in April 2016, with the insertion of objectives and indicators in the document following an IAS recommendation. The FP7 Anti-Fraud Approach will continue to be revised when necessary.

Last update of REA's  
AFS in April 2016

As regards H2020, an updated **Common Anti-Fraud Strategy in the Research Family** was agreed by the CSC Steering Committee on 18 March 2015. This is the first time that an action plan is associated to the sectorial strategy, to be implemented by the members of the Research Family. It will continue to improve fraud risk awareness through communication activities and training for operational staff, by linking databases and information with other Research DGs and Services for intelligence analysis, and through risk-based audit preparation and selection.

The Research Family members meet several times a year, at the Fraud and Irregularity in Research Committee (FAIR), to discuss common fraud matters and follow the implementation of the Action plan. REA is involved in three of the working groups set up to implement some of the actions of the action plan, namely:

- to develop clear guidance for simple checks that grant management officers are encouraged to perform at the various stages of the grant management cycle (leading service: REA). A first draft version of the guidance was released. Following the FAIR meeting of December 2016, the relation between the output of the action and the document entitled: "H2020 ex-ante controls for interim and final payments draft document and the ex-ante check" drafted by DG RTD.J3 is under assessment;
- to develop a common approach for reinforced monitoring (leading service: DG CNECT). A first draft document was released and following the FAIR meeting of December 2016, the draft is under revision; and
- to build up a number of case studies (leading service: EASME). A first draft was released and following the FAIR meeting of December 2016, the draft is under revision.

The "Complementary actions of REA to the Common Anti-Fraud Strategy of the Research Family" was adopted in August 2016. In a nutshell, REA develops an additional **guidance** to address the specificities of a programme it manages (Marie Skłodowska-Curie guidance) for H2020, which can also be used for the monitoring of the last FP7 projects.

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<sup>64</sup> Cf. Relevant objectives and indicators for financial management: See objective 3, indicator 1 of the Annual Work Programme 2016: "Updated anti-fraud strategy (AFS) of the REA, elaborated on the basis of the methodology of OLAF".

The REA has an anti-fraud cell and anti-fraud correspondents in each unit. The anti-fraud correspondents and the anti-fraud cell collaborate at every stage of the anti-fraud cycle. Besides and as laid down in the Annual Work programme REA continued its actions to increase fraud awareness among its staff. At the end of 2016 more than **48% of REA** staff had followed an anti-fraud training<sup>65</sup>.

**48% of REA staff followed an anti-fraud training**

Coordination with the rest of the Research Family is ensured by the REA's active participation in the networks of OLAF correspondents of the Research Family (FAIR), in the Fraud Prevention and Detection Network (FPDNet) and at the level of the anti-fraud correspondents' network.

The IAS audited the REA FP7 Anti-Fraud Strategy in 2015 and launched a follow-up audit in fall 2016. The IAS concluded that all the recommendations had been adequately and effectively implemented and that they would therefore be closed.

### **Control results**

As regards OLAF cases involving both the REA and the Commission and requiring measures to be taken in a coordinated manner at horizontal level (Commission and the REA), the Common Support Centre (CSC) is responsible for the coordination and for the drafting of the relevant legal documents regarding both FP7 and H2020 cases.

REA provides quarterly updates on cases involving OLAF to the parent DGs and the Steering Committee. There is an organised follow-up of fraud cases and fraud suspicions including coordination with OLAF. In 2016, 11 new cases were transmitted by the REA to OLAF. The table below lists the number of OLAF cases relating to participations managed by the Agency over the year.

**Table 17: Indicator – Number of pending OLAF cases relating to participations managed by the REA**

<b>Number of pending OLAF cases on 1 January 2016</b>	50
<b>New OLAF cases handled by REA in 2016</b>	19
<b>Cases that stopped to be followed-up and reported in 2016</b>	14
<b>Number of pending OLAF cases on 31 December 2016</b>	55
<b>New OLAF cases reported by the REA in 2016</b>	<b>11</b>
<b>New OLAF cases reported by the REA in 2016 and retained by OLAF for further investigation</b>	4
<b>New OLAF cases reported by the REA in 2016 and dismissed by OLAF</b>	4
<b>New OLAF cases reported by the REA in 2016 for which OLAF's decision is still pending</b>	<b>3</b>
<b>Cases for which OLAF concluded its investigations and issued its conclusions</b>	5

Internal "Introduction to Fraud Prevention" trainings are organised at REA since 2011. Three training sessions on fraud detection and prevention were organised for POs and Financial Officers, in cooperation with OLAF, to support them in the detection of anomalies at an early stage. These sessions were attended in 2016 by 56 REA staff. Since the beginning of the course in 2011, a total of 307 staff currently working at REA have been trained.

Additionally, as part of the Internal Control Effectiveness Assessment (ICAT) Action Plan 2016 resulting from the assessment of the ICS-15 in 2015, two workshops were organised during 2016 to raise awareness of the existence of the REA's anti-fraud guidance documents and related IT tools. Some 50 staff attended the workshops.

<sup>65</sup> Cf. Relevant objectives and indicators for financial management: See objective 3, indicator 2 of the Annual Work Programme 2016: "Fraud awareness is increased for target population, as identified in the REA's AFS".

#### **2.1.1.4 Safeguarding of assets and information, reliability of reporting**

The table 4 of the Annex 3 reports REA's overall financial assets. Those financial assets of €1,329,884,550 are predominantly pre-financings paid to the research grant beneficiaries and to the different entrusted entities implementing parts of Horizon 2020. They are therefore managed and controlled in the context of direct grant management.

These amounts are cleared from the pre-financing accounts after the validation of the cost claims or the relevant periodic management reports.

## 2.1.2 Audit observations and recommendations

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

### 2.1.2.1 Audits by the European Court of Auditors (ECA)

In its Report on the implementation of the budget for the financial year 2015, the European Court of Auditors (ECA) concluded that the most likely error rate for Chapter 5 'Competitiveness for growth and jobs' was 4.4%, which is an improvement compared to the previous year (5.6%).

The Court also stated that there is information available to the Commission, national authorities or independent auditors to prevent, or detect and correct the errors before accepting the expenditure. If all this information had been used to prevent, or detect and correct errors, the estimated level of error for this chapter would have been 0.6 percentage points lower, which also represents a significant improvement compared to last year (2.8%).

#### DAS 2016

In the framework of the DAS 2016, the Court has launched 8 audits on payments (interim, final or expert payment) for REA. For 5 audits, missions on the spot have been carried out. 5 preliminary findings have been received, including 3 for which the ECA has comments:

- 1) For the first transaction the Court of Auditors highlighted two aspects: the first one related to the fact that the beneficiary did not declare the depreciated value of project related purchases of equipment as laid down in its internal accounting rules. The error rate reached 7.58% (€11,109). REA agreed on the error, mentioning that without an audit this kind of error cannot be detected.

In addition, the Court of Auditors spotted a delay in the transfer of funds from the Coordinator; however REA in line with the Commission considers that it is the responsibility of the Coordinator to ensure timely distribution of funds to the beneficiaries, as agreed among them through the consortium agreement. Nevertheless the Court considers that the Commission has a responsibility to monitor that the coordinators respect the deadlines to forward payments to the other beneficiaries without undue delay.

- 2) The Court of Auditors identified a difference between the amount claimed and the amount paid as allowances for a Marie-Curie Actions - Individual Fellowship project. As the contribution is calculated based on flat rates, REA constantly reminds beneficiaries that they are under the obligation to use the full amount of the allowances to the exclusive benefit of the researcher. As a result, beneficiaries are requested to ensure that costs incurred for the payment of these allowances are equal or higher than the sum due in accordance with the flat rates provided in the Grant Agreement. When processing the final payment, REA does not request a copy of the accounting records of the beneficiary, only an audit can reveal that the fellow is underpaid. This underpayment is a breach of the grant agreement and must be corrected by the beneficiary by transferring to the researcher the difference and by sending a copy of the bank statement evidencing the payment.
- 3) The Court of Auditors noticed that the beneficiary did not mention the methodology used for calculating the personnel costs. The REA agreed with the

finding and advised the beneficiary to mention the methodology used in the financial statements. In addition, the Court of Auditors noted that some costs had been reported with VAT or at a wrong exchange rate and manufactured products not used for the project (total amount €1,352 instead of €1,649 mentioned by the Court, 1.8% as error rate).

REA agreed with the findings and will correct the accepted costs in the next payment and remind the beneficiary about the eligibility rules and the appropriate exchange rates to be used. Such errors are not detectable without an audit.

In conclusion, the Court of Auditors did not find any errors different from the ones REA had already detected in its own ex-post audits and, therefore, did not require a reassessment of the assurance provided by REA's control systems. However, the Court considers that REA has a general responsibility to monitor that the coordinators respect the deadlines to forward payments to the other beneficiaries. In line with a common policy agreed among all FP7 managing services, REA is reminding coordinators on this obligation but will not monitor systematically as the matter results from the consortium agreement to which it is not a party.

### 2.1.2.2 Follow-up of actions resulting from ECA audits of previous years

In January 2016 there was no outstanding recommendation deriving from ECA audits other than corrections to be implemented as a result of ex-post controls performed in the context of the DAS, for which progress in implementation is reported under Section 2.1.2.1.

### 2.1.2.3 Commission's Internal Audit Service (IAS)

As decided by the Commission, the REA's Internal Audit Capability was discontinued in 2015. The internal audit services are provided by the Commission's Internal Audit Service. This change does not have consequences for the declaration of assurance of the REA's Director since the IAS has taken over fully the IACs responsibility for providing the Audit Opinion which contributes to the Director's declaration of assurance for 2016.

Based on all work undertaken by the IAS and the former IAC in the period 2014-2016 and taking into account that: (i) for the accepted recommendations made by the IAS, REA management has adopted implementation plans, which the IAS considers adequate to address the residual risks identified by the auditors, (ii) the implementation of these plans is monitored through reports to management and through follow-up audits by the IAS, (iii) management has assessed a number of action plans not yet followed up by the IAS as implemented, and (iv) management has not rejected any critical and/or very important recommendations.

**The IAS concluded in its contribution to the 2016 AAR process that the internal control systems audited are overall working satisfactorily<sup>66</sup>, although a number of very important findings remain to be addressed, in line with agreed action plans.**

In 2016 the IAS performed the following audits:

(1) The Internal Audit Service finalised in April 2016 a "**Limited Review of the Calculation and the Underlying Methodology of the Residual Error Rate (RER) for the 2015 Reporting Year**"<sup>67</sup>. The methodology for calculating the detected error rates has been reviewed. The IAS did not identify any critical or very important findings

<sup>66</sup> See IAS Audit Opinion for the REA - Ares(2017755081) - 10/02/2017.

<sup>67</sup> See Ares(2016)1613653 - 05/04/2016.

in this review, but **three important recommendations** were made. Two of them were implemented during the AAR 2015 preparation and finalisation. However, the important findings related to guidance were left to be implemented during 2016. It dealt with a review of the current guidelines and excel sheet in use for the calculation of the RER. The roles and responsibilities of all actors involved, including supervision and back-up arrangements, planning and timeline framework and the systematic review of the audit data was improved by providing guidance and explanations developed by the responsible unit. Regarding the excel sheet used for the calculation of the RER, the content and the structure of the guide were reviewed and simplified. The revised guidance was approved by REA senior management in February 2017.

The IAS has finalised a follow-up audit engagement before the end of the first quarter 2017 and concluded that all three important recommendations were implemented.

(2) In the **audit on grant management**<sup>68</sup> the IAS issued four recommendations of which one recommendation (with 4 actions) dealing with managing conflicts of interest (CoI) by external experts was considered as **very important** and three recommendations were considered as important. In the very important recommendation, the IAS requested the Agency to ensure that sufficient and coherent instructions regarding CoI checks are provided and their application is systematic and consistent. The Agency should also issue specific guidance for staff on managing CoI discovered during the evaluation process. In addition, it should establish the procedure to be followed in case of misuse of personal data in the context of the evaluation process.

In order to address the very important recommendation, REA has undertaken the following actions:

2.1) The Network of Call Coordinators (NCC) has developed guidance for the Conflict of Interest checks to be performed and on the consequences of a detected CoI, which was approved by REA senior management. It is posted on REA's intranet page ICS 8.0 to ensure systematic application.

2.2) A guidance paper was issued by DG DIGIT on what can be on offer in the short term as regards support tools for CoI checks (keyword matching). A first version of the tool has been made available on 1 February 2017 and the final tool (with all functionalities needed) integrated in SEP is planned for end of March 2017.

2.3) The NCC has developed guidance for the application of the confidentiality rules and processing of personal data by revising the PowerPoint presentation provided to the experts. The emphasis is on the issues of personal data usage, protection and respect of confidentiality rules. The updated PPP was approved by REA senior management and presented to the PSPEG, who has agreed to adapt the corporate presentation for experts.

2.4) REA is also developing clear internal guidelines regarding the procedure and consequences to be applied in case of misuse of personal data or confidentiality breaches by experts in the context of the evaluation process. The deadline to prepare the guidance is set for 2017 and the finalisation is still ongoing.

(3) In the **audit on human resources management in the REA**<sup>69</sup>, the IAS has issued one **very important recommendation** and three important recommendations. The very important recommendation was related to the management of the selection process for contractual agents (CA) where the IAS recommended the Agency to update and revise its selection procedures by clearly defining tasks and responsibilities regarding the checks to

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<sup>68</sup> See Ares(2016)2258127 - 13/05/2016.

<sup>69</sup> See Ares(2016)6819408 - 06/12/2016.

be performed as well as rules on the documentation of the selection process. It should also provide training sessions for panel members, secretaries and chairs and ensure that controls over the selection process are systematically implemented.

The deadlines to implement the four recommendations are set for 2017. First reflections on the revision of the CA selection procedure have started. The details will be discussed once the new general implementing provisions (GIPs) are adopted. REA's rules for the filing and archiving of the documentation of the selection process have already been improved by the introduction of a checklist and a new procedure for electronic filing will be created. Training material is prepared for all panel members and the checklist for signature confirming the follow-up of the procedure will be implemented in 2017.

#### **2.1.2.4 Actions resulting from IAS audits of previous years**

(1) In 2016 IAS has performed a follow up<sup>70</sup> on the **IAC audit on the Implementation of Ex-post audit Findings**. As a result of the audit work, the recommendation No 1.1 monitoring of implementation of adjustments and liquidated damages (very important), recommendation no 5.2 procedure of implementation of positive adjustment (important), and recommendation no 9.1 forecast of revenue (important) were assessed.

The IAS concluded that that all recommendations are effectively implemented.

(2) The follow up<sup>71</sup> on the **IAS audit on the Implementation of the Antifraud Strategy** was carried on 2016. The IAS assessed the implementation of open recommendations: recommendation no 1 potential overlaps for the researchers participating in the COFUND actions (very important), recommendation no 2 objectives and indicators in REA's Anti-Fraud Approach and Action Plan (important), recommendation no 3 procedure for handling potential fraud cases including those transmitted to OLAF (important), and recommendation no 4 - handling of sensitive information (important).

As a result the IAS concluded that all the recommendations are adequately and effectively implemented.

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<sup>70</sup> Ref. ARES (2016)1418159-22/03/2016, ref. ARES (2016)6047815-21/10/2016

<sup>71</sup> Ref. ARES (2016)1418159-22/03/2016, ref. ARES (2016)6979728-15/12/2016.

## 2.1.3 Assessment of the effectiveness of the internal control systems

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

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

### 2.1.3.1 Management's assessment of the effectiveness of the internal control systems

REA has performed in 2016 an assessment on the effectiveness of the ICS according to ICS 15 with the support of the IT tool provided by DG BUDG. The aim was to obtain a diagnostic of strengths and weaknesses in REA's internal control framework and to identify further actions for improvement.

The exercise captured the overall perception of the 'effectiveness' of the 16 ICS through an anonymous survey targeting selected staff and managers across REA. Management and staff evaluated and gave their individual opinion on the effectiveness of the internal controls in place in the day-to-day operations and specific questions were asked to assess the awareness of antifraud issues. All 70 participants (31 managers and 39 staff) invited to take part in the survey completed it. The overall effectiveness rate, measured by the weighted percentage of scores is **87.1%** (91.0 % for managers and 82.8% for staff).

The overall assessments on effectiveness (87.1%) can be considered as indicative of a fairly mature internal control structure and as a very good result. The higher score for managers may partly indicate a better awareness amongst managers on the various control structures in place. In 2015 the overall assessments on effectiveness was 84.0%. Compared to 2015, the effectiveness assessed by staff has risen by almost 5%. This suggests that staff awareness of controls in place has considerably improved and that initiated actions targeted to staff can be considered as helpful and successful. This demonstrates that the internal control structure is robust and functions well at the level of the Agency and internal control over operations is effective.

Some control issues raised have already been addressed and only a limited number of new actions are defined for 2017. The actions are listed in a dedicated action plan and implementation will be monitored regularly. These issues are considered as having no impact on the assurance.

REA will continue to assess the internal control system regularly. The assurance building in the AAR 2016 is based on the effectiveness of the internal control system ("exceptions reporting") and on substantiated conclusions and management actions aimed to reinforce the internal control system.

### 2.1.3.2 REA control system and operating procedures

The operations managed by REA are similar to research management by other Commission services. Therefore, REA's internal control system and operating procedures are streamlined with that of the parent DGs. REA's internal control template for FP7 grant management and H2020 grant management (Annex 5) is closely aligned to the one used within the research family of DGs.

REA's Internal Control Coordinator (ICC) supervises and coordinates the development of the ICS structure and systems. REA has an adequate internal control system commensurate with its size and the portfolio of tasks it manages. Some key features of this internal control system, contributing to the effectiveness and efficiency of REA's internal controls can be highlighted.

### **2.1.3.3 Six-monthly reporting of the Authorising Officers by Sub-Delegation (AOSDs)**

REA has implemented structured reporting from the Heads of Unit, in their capacity as AOSD, endorsed by the Heads of Departments to the Director on:

- assigned activities from REA's AWP 2016;
- implementation of the internal controls within their unit (in accordance with the overall design for REA as a whole), non-compliance events, exceptions and/or internal control weaknesses reported during the reporting period;
- new risks related to the activities under their control;
- possible issues which may impact on the Annual Declaration of Assurance.

No significant issues which could affect the Director's Declaration of Assurance other than those already noted in this report were signalled through the 2016 AOSD reports.

### **2.1.3.4 Register of exceptions, analysis of internal control weakness or control failures recorded during the year**

REA units have to report on all exceptions, internal control weaknesses and non-compliance events, potentially leading to weaknesses through a dedicated procedure and using pre-defined templates. A central register is reviewed regularly by the ICC, the Internal Audit Service (IAS) and, in the course of the Declaration of Assurance (DAS) procedure, by the European Court of Auditors (ECA).

In 2016, REA had 6 exceptions, 11 non-compliance reports (of which 2 are related to bankruptcy cases and 9 reports are covering the expert business). No internal control weakness was recorded in the central register for 2016. The reported cases concern events relating to the experts, project management, participants validation and the HR process.

The first exception asked to foresee budget needed to cover monitoring of project implementation; the second exception was dealing with the non-application of the 110% capping rule on the final payment for an SME project; the third exception was signed by the Director to grant financial support to the REA victims of the terrorist attacks. In the fourth exception the actors involved did not notice during the preparation of a project amendment that an entity was ineligible to participate; the fifth exception was approved to deviate from the rule to all participating countries by accepting by default certain roles in ministries and finally the sixth exception request was coordinated with the rest of the Research Family and allowed REA to continue to issue expert contracts using the 2013 Model contract as the implementation of the revised Expert Model contract had been delayed.

The submitted non-compliance events cases are mainly related to the expert process. As the entity responsible for implementation of the experts' budget, REA reports on all non-compliance events related to experts whether or not the non-compliance originated in REA. Nine out of the 11 submitted non-compliance events reports were submitted by C4. The unit centrally reports all cases regarding the business process related to experts. The reports covered either cases where the expert started working without a signed contract or extended the number of working days. The number of cases and the financial impact

are very limited moreover in comparison of the number of contracts signed. Two non-compliance reports were received concerning bankruptcy cases leading to the intervention of the Guarantee Fund and recovery.

### **2.1.3.5 REA risk assessment exercise**

A risk assessment exercise according to ICS 6.1 is performed at REA level on a yearly basis in preparation of the AWP of the following year. In 2016 two critical risks were identified for the AWP 2017 and reported to the Central Services and REA's Steering Committee. The risks (1) the average grant size is lower than initially estimated and (2) SEDIA project: inability by REA to provide services on time and incorrect estimation of resources needed are encoded in the central REA risk register. The mitigating measures will be monitored and followed-up regularly.

### **2.1.3.6 Assessment of the functioning of the internal control system**

REA has implemented the 16 Internal Control Standards and has a control environment fully in line with the Commission. Throughout 2016, REA was in full compliance with all ICS.

The overall effectiveness rate in the 2016 Internal Control Assessment Exercise (using the ICAT tool) amounts to 87.1%, which can be considered as indicative of a fairly mature internal control structure and as a very good result.

Internal Control topics are regularly discussed in the Agency's management meetings, between the Director and Head of Departments, between the Head of Departments and their Heads of Units, and in dedicated REA networks and in key user groups. REA's internal control system has been further strengthened in 2016 by implementing recommendations issued by the IAS. Improving effectiveness for all procedures and Internal Control Standards is a constant process, which will remain high on the agenda of the REA's management.

The effectiveness of the internal controls within the Agency results, among others, from the strong supervisory arrangements by senior management and the parent DGs.

Considering the results of the assessment of effectiveness, internal and external audit recommendations, the Internal Control Assessment Exercise, the AOSD reports from management and the annual risk assessment, the REA concludes that the controls in place are working as intended and its internal control system is providing an effective framework for managing the risks to the achievement of REA's objectives. Therefore, the assurance is not negatively impacted.

### **2.1.3.7 The opinion of the Internal Control Coordinator (ICC) on the REA's state of control**

Throughout 2016 REA's ICC supervised the implementation of the internal controls across the Agency. The ICC has provided REA's Director with a formal opinion on the state of control within REA for 2016 with the conclusion that there are no critical weaknesses in REA's system of internal control, which would jeopardise the achievement of its business objectives.

In conclusion, the internal control standards are effectively implemented and functioning.

**REA has assessed the internal control system during the reporting year and has concluded that the internal control standards are implemented and functioning as intended.**

## 2.1.4 Conclusions as regards assurance

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

The information reported in Section 2 stems from the results of management and auditor monitoring contained in the reports listed. These reports result from a systematic analysis of the evidence available. They fully support the Declaration of Assurance with respect to the use of resources for the intended purpose and are in line with the principles of sound financial management, legality and regularity. This approach provides a true and fair view, and sufficient guarantees regarding the completeness and reliability of the information reported and results in a complete coverage of the budget delegated to the REA Director.

Taking into account the partial effectiveness of the ex-ante controls as a result of the design of the overall control strategy for the research family as a whole and considering the results of the ex-post controls in terms of estimating the residual error rates, REA concludes that it can provide reasonable assurance regarding the legality and regularity of underlying transactions, sound financial management, reliability of financial and management information and safeguarding of assets.

The assessment by the management, the analysis of the results of the controls in place (along the indicators outlined throughout this report) and the examination of the evidence available suggest that REA's management is in a position to provide unqualified reasonable assurance on the following areas:

- The processes relating to the selection of beneficiaries or experts involved in H2020 calls and the underlying financial operations (legal and financial commitments);
- H2020 pre-financings (only few interim payments for H2020 were made and no significant clearing of pre-financing);
- Payments relating to administrative expenditure and procurement.

However, REA maintains the reservations made in its AAR 2015 as regards the **material impact of residual errors in the SME actions** financed under the FP7 Capacities Specific Programme and the **Space and Security themes** financed under the FP7 Cooperation Specific Programme, both exceeding the materiality level of 2% respectively.

In its AAR 2015, REA raised reservations with respect to the Space and Security themes and to the Research for the benefit of SMEs actions. Both reservations relate to a high incidence of errors with impact exceeding the materiality levels set.

The reservation related to the Space and Security themes is in line with the general reservation made by DG RTD for the research family based on the rate of residual errors with regard to the accuracy of cost claims in FP7 grants.

Besides, the European Court of Auditors (ECA) in its Annual Report on the implementation of the budget for the financial year 2015 concluded that the most likely error rate for the whole expenditure in the area of the EU activity 'Competitiveness for growth and jobs' was between 2% (Lower Error Limit) and 6.7% (Upper Error Limit). Therefore, the rates of residual error related to REA are consistent with the estimates from the ECA within the 2.0% - 6.7% range.

On top of the actions mentioned by DG RTD in its follow-up of the 2015 FP7 reservations, which are relevant for the whole Research Family, it is important to note that the REA has developed its actions in line with the global strategy of the Research Family:

- REA fully contributes to the constant improvement of the ex-ante controls, especially in the light of findings from the European Court of Auditors, and further develops dedicated trainings for the staff dealing with FP7 payments to better instruct them on the controls that must be performed.
- In addition to the improved guidance to FP7 beneficiaries and certifying auditors, also mentioned by DG RTD, REA has participated in the guidance events and coordinators days organised by DG RTD, in order to inform them on the new framework programme H2020. Part of the presentation highlights "how to avoid errors", which is expected to have an impact on the ongoing FP7 costs claims too, as some errors are common for the two framework programmes.
- In 2016, REA launched 60 audits, including 7 risk-based audits for Space and Security projects, for which the recoveries and extrapolations continue (where appropriate).

As regards the reservation related to the SME actions, REA developed the following actions:

- In 2016: 17 risk-based audits have been performed by REA on SMEs. REA continues its on-going efforts to give guidance and feedback to the participants and certifying auditors to prevent errors occurring. It also continues efforts to further reduce the residual error rate through ex-ante and ex-post controls (audits).

In consideration of these actions and their expected results REA maintains for 2016 the following reservations:

- Reservation concerning the rate of the residual errors with regard to the accuracy of cost claims impacting on granted EU funding for Space and Security themes of the Cooperation Specific Programme financed under the Seventh Framework Programme for Research and Technological Development.
- Reservation concerning the rate of the residual errors with regard to the accuracy of cost claims impacting on granted EU funding for Research for the benefit of SMEs actions of the Capacities Specific Programme financed under the Seventh Framework Programme for Research and Technological Development.

**REA's assessment on legality and regularity for (i) the Space and Security schemes of the FP7 - Cooperation Specific Programme and for (ii) the Research for the benefit of SMEs theme of the FP7 Capacities Specific programme concludes on a level of detected error which appears to be "persistently high"<sup>72</sup> over the years in terms of potential financial impact (exposure).**

**Given the inherent risk related to a key modality of the programme (notably the grants system's reimbursement mechanism based on eligible actual costs and the related risk of errors in the costs reimbursement claims submitted by the beneficiaries), also the residual error is expected to remain above 2%.**

**REA has implemented all possible suitable ex-ante and ex-post controls, to the extent that they remain cost-effective and do not affect the other policy/programme objectives nor abandon the financial scheme.**

**Furthermore, the Commission has proposed simplifications to the programme's design for the next generation (Horizon 2020).**

<sup>72</sup> 'Persistently high' is to be considered a detected (or equivalent) error rate for which the potential financial impact (exposure) exceeds the control objective for a number (three or more) of consecutive years.

Therefore, under the prevailing risk environment and from a managerial point of view, REA's AOD can sign the Declaration – even with a reservation for the FP7 Space and Security schemes and for the FP7 SME actions.

## Overall conclusion

In conclusion, management has reasonable assurance that, overall, suitable controls are in place and working as intended; risks are being appropriately monitored and mitigated; and necessary improvements and reinforcements are being implemented. The Director, in his capacity as Authorising Officer by Delegation has signed the Declaration of Assurance albeit qualified by a reservation concerning the Space and Security themes under FP7 and the research for the benefit of SMEs actions also under FP7.

**Table 18: Reservations and overall conclusion on assurance**

Budgetary expenditure (million €)	Scope of reservation	CRaS/ Detected Error Rate (DER-%)	Control approach	Amount at risk		
				million €	Residual Error Rate (RER-%)	
<b>(1) Legacy of the FP7 Cooperation Specific Programme – Space and Security themes</b>						
<i>High rate of residual errors with regard to the accuracy of cost claims impacting on granted EU funding</i>						
Space	18.22	61.89	5.03%	Multi-annual	1.97	3.18%
Security	60.73	144.97	5.03%	Multi-annual	5.15	3.55%
Total	78.95	<b>206.86</b>		Multi-annual	<b>7.11</b>	
<b>(2) Legacy of the FP7 Capacities Specific Programme– Research for the benefit of SMEs</b>						
<i>High rate of residual errors with regard to the accuracy of cost claims impacting on granted EU funding</i>						
	35.35	<b>172.33</b>	6.28%	Multi-annual	<b>10.32</b>	<b>5.99%</b>

## 2.1.5 Declaration of Assurance and reservations

# DECLARATION OF ASSURANCE

*I, the undersigned,*

*Executive Director of the Research Executive Agency*

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

*Declare that the information contained in this report gives a true and fair view<sup>73</sup>.*

*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 limited conclusion of the Internal Auditor on the state of control and the lessons learnt from the reports of the Court of Auditors for years prior to the year of this declaration.*

*Confirm that I am not aware of anything not reported here which could harm the interests of the Research Executive Agency or those of the Commission.*

*However the following reservations should be noted:*

- *For the FP7 Cooperation Specific Programme – Space and Security themes*
- *For FP7 Capacities Specific Programme – Research for the benefit of SMEs*

*Brussels, 30 March 2017*

**Signed**

**Gilbert GASCARD**

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<sup>73</sup> True and fair in this context means a reliable, complete and correct view on the state of affairs in the DG/Executive Agency.

## Reservation 1

Agency	Research Executive Agency
<b>Title of the reservation, including its scope</b>	Reservation concerning the rate of the residual errors with regard to the accuracy of cost claims impacting on granted EU funding for <b>Space and Security themes of the Cooperation Specific Programme</b> financed under the Seventh Framework Programme for Research and Technological Development.
<b>Domain</b>	Direct management of grants in the Seventh Research Framework Programme.
<b>Programme and amount affected ('scope')</b>	<p><b>FP7 Cooperation Specific Programme – Space and Security themes</b></p> <p>Payments made in 2016 (excluding expert payments): €78.95 million including €18.22 million for Space and €60.73 million for Security.</p> <p>The amount at risk is calculated on the basis of the amount paid increased with the amounts of the pre-financings cleared or €61.89 million for Space and €144.97 million for Security or €206.86 million in total.</p>
<b>Reason for the reservation</b>	At the end of 2016, the residual error rate is not below the materiality threshold laid down for the multi-annual period.
<b>Materiality criterion/criteria</b>	<p>The materiality criterion is the residual error rate (as defined in Annex 4), i.e. the level of errors that remain undetected and uncorrected, by the end of the management cycle.</p> <p>The control objective is to ensure that the residual error rate on the overall population is below 2% at the end of the management cycle. As long as the residual error rate is not (yet) below 2% at the end of a reporting year within the FP's management lifecycle, a reservation would (still) be made.</p> <p>The risk profile of the Space and Security themes are similar and do not differ from the mainstream Cooperative Research. This is the reason why the CRaS error rate is used to calculate the residual error rate that affects the payments processed. However the subpopulations may differ and justify the calculation of different residual error rates for each theme as the correction of the systemic errors in the audited population may differ.</p> <p>The calculated residual error rates are as follows:</p> <ul style="list-style-type: none"> <li>- 3.18% for Space</li> <li>- 3.55% for Security</li> </ul>
<b>Quantification of the impact ('exposure')</b>	<p>The maximum impact is calculated by multiplying the residual error rate calculated on the basis of the CRAS by the 'relevant' amount of FP7 payments (based on cost statements authorised in 2016 plus the estimated amount of the related pre-financing expenditure cleared in 2016).</p> <p>For 2016, €206.86 million relate to intermediate and final payments and EU funding accepted and cleared against previously paid pre-financing in total for both themes Space and Security. For the Space theme the Residual Error Rate has been estimated at 3.18% and the estimated impact is around €1.97 million. For the security theme the residual error rate has been estimated at 3.55% and the estimated impact in 2016 is around €5.15 million.</p>
<b>Impact on the assurance</b>	Legality and regularity of the affected transactions, i.e. only payments made against cost claims (interim payments and payments of balance).

<p><b>Responsibility for the weakness</b></p>	<p>The main reason for errors are:</p> <ul style="list-style-type: none"> <li>- the complexity of the eligibility rules as laid down in the basic acts decided by the Legislative Authorities, based on the reimbursement of actual eligible costs declared by the beneficiaries;</li> <li>- the fact that there are many thousands of beneficiaries making claims, and not all can be fully controlled.</li> </ul> <p>The different control provisions set out by REA/Commission services, along with the audit certificates on financial statements and ex-post audits, can mitigate these risks to a certain extent, but can never be carried out on 100% of the cost claims received.</p>
<p><b>Responsibility for the corrective action</b></p>	<p>The possibilities to simplify the FP7 rules have been exhausted, although there is some evidence that the simplification measures introduced in 2011 have had a positive impact on the error rate. The remaining scope to reduce errors will be addressed in particular through the following actions:</p> <ul style="list-style-type: none"> <li>- continuing its ongoing efforts to give guidance and feedback to the participants and certifying auditors to prevent errors occurring;</li> <li>- continuing with its control and audit work in order to further reduce the FP7 residual error rate.</li> </ul> <p>REA will maintain a reservation as long as there is significant FP7 expenditure. It is REA's opinion, based on its own experience, that the residual error rate will remain above 2% and that it would not be effective in terms of costs and image to firmly step up the audit campaigns to bring it below the 2%.</p>

## Reservation 2

<b>Agency</b>	<b>Research Executive Agency</b>
<b>Title of the reservation, including its scope</b>	Reservation concerning the rate of the residual errors with regard to the accuracy of cost claims impacting on granted EU funding for <b>Research for the benefit of SMEs actions of the Capacities Specific Programme</b> financed under the Seventh Framework Programme for Research and Technological Development.
<b>Domain</b>	Direct management of grants in the Seventh Research Framework Programme.
<b>Programme and amount affected ('scope')</b>	<b>FP7 Capacities – Research for the benefit of SMEs</b> Payments made in 2016 (excluding expert payments): €35.35 million The amount at risk is calculated on the basis of the amount paid increased with the amounts of the pre-financings cleared or in total €172.33 million.
<b>Reason for the reservation</b>	The rationale for the reservation is that results obtained in the context of ex-post control targeting the SME actions specifically indicate an error rate which is above the materiality criterion. Considering the estimated residual error rate of 5.99% the risk exposure resulting from participations of SMEs is significantly higher than the FP7 average. Taking into account the need to balance legality/regularity with other objectives, such as attractiveness and success of the EU research policy, the wish to encourage participation of SMEs and the cost of controls, the ex-post controls cannot be increased significantly. Therefore, it is not expected that by the end of the programme period the residual error rate will be below the materiality threshold defined in Annex 4.
<b>Materiality criterion/criteria</b>	The overall materiality criterion is the residual error rate, i.e. the level of errors that remain undetected and uncorrected, by the end of the management cycle. The control objective is to ensure that the residual error rate on the overall population is below 2% at the end of the management cycle. As long as the residual error rate is not (yet) below 2% at the end of a reporting year within the FP's management lifecycle, a reservation would (still) be made.
<b>Quantification of the impact ('exposure')</b>	The maximum impact is calculated by multiplying the residual error rate by the 'relevant' amount of FP7 payments (based on cost statements authorised and the estimated amount of the pre-financing expenditure cleared in 2016). For 2016, €172.33 million relate to intermediate and final payments and EU funding accepted and cleared against previously paid pre-financing. This residual error rate takes as a starting point the detected errors in favour of REA and resulting from randomly selected audits and audits of beneficiaries with high-value participations while excluding audits selected on the basis of risk identification. The Detected Error Rate for 2016 is 6.28%, while the Residual Error Rate is 5.99%. On the basis of the 5.99% estimated residual error rate the impact is estimated at €10.32 million.
<b>Impact on the assurance</b>	Legality and regularity of the affected payments made against cost claims (intermediate and final payments and EU funding accepted and cleared against previously paid pre-financing).

<p><b>Responsibility for the weakness</b></p>	<p>The main reason for errors are:</p> <ul style="list-style-type: none"> <li>- the complexity of the eligibility rules as laid down in the basic acts decided by the Legislative Authorities, based on the reimbursement of actual eligible costs declared by the beneficiaries;</li> <li>- the fact that most participants are non-recurrent beneficiaries.</li> <li>- SMEs are prone to errors as experience gained through the ex-post controls demonstrates (frequency and magnitude of errors in costs declared by SMEs is higher than average across FP7)</li> <li>- the fact that there are many thousands of beneficiaries making claims, and not all can be fully controlled.</li> </ul> <p>The different control provisions set out by REA/Commission services, along with the audit certificates on financial statements and ex-post audits, can mitigate these risks to a certain extent, but can never be carried out on 100% of the cost claims received.</p>
<p><b>Responsibility for the corrective action</b></p>	<p>The possibilities to simplify the FP7 rules have been exhausted, although there is some evidence that the simplification measures introduced in 2011 have had a positive impact on error rate. The remaining scope to reduce errors will be addressed in particular through the following actions:</p> <ul style="list-style-type: none"> <li>- continuing its on-going efforts to give guidance and feedback to the participants and certifying auditors to prevent errors occurring;</li> <li>- continuing with its control and audit work in order to further reduce the FP7 residual error rate.</li> </ul> <p>REA will maintain a reservation as long as there is significant FP7 expenditure. It is REA's opinion, based on its own experience, that the residual error rate will remain above 2% and that it would not be effective in terms of costs and image to firmly step up the audit campaigns to bring it below the 2%.</p>

## 2.2 Other organisational management dimensions

### **REA reports in this subsection on key achievements in the fields of Human Resources, information management and external communication.**

A complete reporting on all outputs identified and on all objectives and indicators set up in the AWP 2016 can be found in Annex 2.

#### 2.2.1 Human resource management

The overall objective of the human resources management in REA is to recruit, train, assess, motivate and retain highly qualified staff with a view to ensure an effective and efficient operation as well as the promotion of equal opportunities within the Agency.

The 2016 administrative budget of the REA provides for an establishment plan of 163 temporary staff (TAs), of which 40 are seconded Commission officials, and a budget for 514 contract staff (CAs) including 23 contractual staff financed with RO credits (third country contributions). As in previous years, there are no seconded national experts (SNEs) working in REA in 2016. On 31 December 2016 REA had 628<sup>74</sup> staff in place on a total establishment plan of 677<sup>75</sup>, which represents a vacancy rate of 7.2%. However, taking into consideration the job offers with a starting date in 2017 which have already been accepted and known resignations in early 2017, the vacancy rate drops to 4.5% (648 staff).

70 new staff members were recruited in 2016, but in the same time, 38 staff members left the Agency<sup>76</sup> and 12 more members decided to take a leave on personal grounds (CCP). The performance in terms of recruitment was good and REA achieved the targets initially set for 2016, with an average time to recruit a new staff member of 4 months and 82% of the new posts available according to the 2016 establishment plan filled by the end of the first semester 2016. However the vacancy remained high due to the number of staff who left the agency and the number of new leaves for personal reasons. In consequence, the recruitment remains a priority for the Agency and as from 2017 a simpler procedure will be put in place, with smaller selection panels for contract agents and at higher frequency. Besides, a Call for expression of interest for Contract Agents (CAST) has been relaunched by EPSO and the inter agency job market for temporary Agents will be extended to Contractual Agents.

As regards gender balance in the middle management team, the indicator<sup>77</sup> remained at 29.41%, which is stable compared to 2015. It should be underlined that these middle management positions<sup>78</sup> in the Agency are seconded officials posts, which means that a career in the Agency must be promoted by the parent DGs towards the female officials of the institutions.

REA participated to the Commission wide staff satisfaction survey in 2016. The performance in terms of the indicators "Percentage of staff who feel that the Commission/Agency cares about their well-being" and the "Staff engagement index" are fair with 49% (against a target of 45%) for the first one and 67% (against a target of 70%) for the second one. Still REA will continue its efforts to improve its achievements in terms of staff well-being and engagement in particular by focusing on the areas that have been identified as areas of concerns in the last staff survey. Three focus groups have been launched with focus on mobility and career opportunities; equal opportunities

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<sup>74</sup> The 22 staff members in leave on personal grounds are not counted in the REA total staff figures.

<sup>75</sup> Including 23 staff financed on third countries contributions (RO staff).

<sup>76</sup> For the time being, no staff member left for another agency via the inter-agency mobility.

<sup>77</sup> Cf. relevant objective and indicators for Human resources management (Indicator 1).

<sup>78</sup> Head of Unit and Head of Department posts.

and work recognition; and internal communication. In 2016 the Agency's Learning and Development Framework has been fully reviewed to better align the training offer to the the job descriptions of the Agency and to consolidate the training needs arising from the new actions delegated to REA.

## 2.2.2 Information management aspects

A new 'Data, Information and Knowledge Management Strategy'<sup>79</sup> has been adopted by the College on 18/10/2016. It recognises that data, information and knowledge are strategic assets for the Commission and should be developed and managed accordingly. It seeks to help break the silos between DGs and services by promoting collaborative working and the sharing of data, information and knowledge as widely as possible within the Commission.

The actions in the communication have already been or will soon be launched. A staff working document with a rolling plan describes them in more detail. There are four main areas of actions:

- Improving information retrieval and delivery;
- Working together and sharing information and knowledge;
- Maximising use of data for better policy-making;
- Creating a culture of knowledge sharing and learning.

In the first phase of the initiative the implementation efforts involve to a larger extent central Commission services/corporate level. While more detailed measures to be implemented at the level of the services are awaited, REA is in the process of constituting a taskforce which will coordinate and monitor the implementation of recommendations in Agency.

As regards the performance against the three indicators of the 2016 Annual Work Programme, the percentage of registered documents that are not filed dropped to 0.03% below the baseline of 2015 and approaching the target of 0%. On the contrary, the performance on the other indicators relating to the sharing of documents in the Agency and with other DGs for which the performance in the past years was excellent, decreased. This drop is due to a change in the methodology used by DIGIT, resulting in a massive increase of files considered readable: as from 2016, thousands of files related to the validation of participants are included in the calculation of the performance while they are limited to other units of the Agency or to other DGs of the Research Family for obvious reasons of personal data protection. In light of this new calculation and results, the Agency will reflect on the most appropriate way to encode validation files in the system and adjust the targets set for these indicators accordingly.

## 2.2.3 External communication activities

DGs and Agencies share the goal of good and efficient communication on Horizon 2020 and work together to fully exploit the communication potential while keeping in mind their different roles. The Research and Innovation DGs, coordinated by the Communication Unit of DG RTD, are jointly responsible for the common Horizon 2020 policy on communication to press and the general public.

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<sup>79</sup> Commission decision C(2016) 6626 final.

In 2016, a total of 115 projects were proposed to DG RTD as success stories and promising projects to be covered in articles published in the Info-centre and promoted via DG RTD social media, which is far beyond the target of 40 projects that was set in the Annual Work programme 2016. Additionally, 60 REA-managed projects have been featured in 43 articles in the Horizon magazine. As far as press coverage is concerned, from mid-September until 31 December 2016 there were 386 articles<sup>80</sup> in European press on REA-managed projects.

As far as social media are concerned, REA provided input to 37 social media activities in 2016, mainly to DG RTD and DG CNECT. Besides each project published in the info-centre (30 during the period mid-September until end of December 2016) on Research in Europa is automatically fed into DG RTD Facebook and Twitter accounts. The same applies to articles featured in the Horizon Magazine.

Additionally, the Commission's Digital Transformation process, which aims at improving the web presence by making it user-friendly, has been finalised for REA in November 2016. At the same period the FET-Open Research and Innovation Gatekeepers video promoting the FET-Open programme has been finalised and shared on EU YouTube, in the DG CNECT-FET Newsletter, as well as via social media through DG CNECT and DG RTD's channels.

Regarding communication to applicants and beneficiaries, REA organised itself or participated in information days and coordinators' days. The Agency took also part in the MSCA Forum "Where Business and Research Talent Meet" on 29 June 2016 and the 20th anniversary of MSCA, provided speakers and examples of projects for the conference held on 29 November 2016 and produced infographics on the programme, which has have been shared via DG EAC and DG RTD social media. Similar input has been provided for the DG EAC event "Science is Wonderful", a side-event to the "European Researchers' Night" held on 28 September 2016. MSCA actions were also promoted at the "Research & Project Funding Sources Market" on 8 November 2016 at an event organised by Erasmus hogeschool Brussel.

## **2.2.4 Specific efforts to improve 'economy' and 'efficiency' of spending and non-spending activities**

According to the Financial Regulation (Article 30) the principle of economy requires that the resources used by the Agency in the pursuit of its activities shall be made available in due time, in appropriate quantity and quality and at the best price. The principle of efficiency refers to the best relationship between resources employed and results achieved.

The respect of these principles is continuously pursued through the implementation of internal procedures and predefined practices. These procedures ensure that activities are executed in an efficient manner (e.g. the different workflows contribute to the efficient cooperation between staff/units) and according to the principle of economy (e.g. the procurement rules ensure procurement in optimal conditions). REA is continuously fine-tuning its internal arrangements in order to improve the efficiency and economy of its operation. Therefore, in its AWP 2016 REA set the goal to introduce major simplifications concerning the evaluation process and support services for the 2016 calls.

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<sup>80</sup> Provided by an external contractor since September 2016.

## Evaluation of proposals

Considering the steadily rising numbers of proposals submitted, REA decided to introduce fully remote evaluation procedures for some calls with high numbers of proposals and use the central evaluations taking place in Brussels only for the most difficult and complex cases and for panel meetings. Whereas in the past only the individual evaluation of proposals was done remotely, the simplification measures aimed at moving towards a fully remote evaluation process (including the consensus phase) for FET-Open, MSCA ITN and IF calls. Only the central panel meetings would still be held in Brussels with a limited number of experts. Likewise, REA wanted to increase the share of remote work for some calls under the Societal Challenges in 2016.

Regarding MSCA, REA achieved its goal in 2016 as IF and ITN calls are now evaluated fully remotely. The assessment of this new way of evaluation is still ongoing. However, first improvements concerning efficiency and economy can already be pointed out. For instance, the cost per proposal has already been reduced by nearly 50% from the 2015 to the 2016 IF-call. In addition, as the experts are not travelling to Brussels any more for the consensus stage, more experts could be employed, which resulted in the reduction of the average number of proposals per expert from 18.6 for the 2015 call to 12.2 for the 2016 call. Finally, experts with very specific research area can be used, even for evaluating a limited number of proposals, which was not possible with the usual central evaluation held in Brussels, as the economic dimension prevailed.

Concerning FET-Open, all calls are evaluated remotely. Only panel meetings are held centrally since 2014.

REA also reached the aim of significantly increasing the share of remote evaluation for some societal challenges (Societal Challenge 6 in particular) and specific objectives, notably by shifting to remote consensus meetings. Only the central panel meetings were still held in Brussels. In order to achieve this, the guidelines for experts were significantly reinforced. In selected cases, the use of video conferences was used to replicate the conditions of a central consensus meeting, which increased the efficiency of the remote consensus work. Approximately 25% of proposals for the SwafS-2016 call were subject to a remote consensus meeting, which marks a significant evolution compared to the 2015 calls.

As a result travel and accommodation costs as well as daily allowances for experts could be reduced and the office space used for evaluations could remain stable independently from the number of proposals evaluated. REA can now use a wider pool of experts including those with very specific expertise and profiles (e.g. from the industry sector, SMEs, Third Countries) who had difficulties coming to Brussels during the central consensus meetings. Consequently, not only the cost efficiency and economy of the process but also the quality of the evaluation process was improved. Additionally, the increase of the remote evaluation procedure has a positive side-effect on the environment.

REA also improved the procedure for allocating proposals to the most suitable experts. The system in use since 2015 offers a set of call specific keywords to applicants through the proposal submission and evaluation tool (SEP) at the opening of the call so that they can select several keywords that match the scientific field of their proposal. The expert evaluators are asked to select from the same set several keywords in order of importance, which match their scientific profile best. Since 2016, the SEP tool allows an automated pre-allocation of proposals to experts, based on the best match of their keywords and displaying the level of match as a percentage. The pre-allocation can be checked and updated manually.

The advantages in comparison to the previous allocation method are:

- The previous allocations were done mostly in Excel format which is more prone to error. Moreover, by offering a tailor made set of keywords (rather than the standard set of keywords defined for H2020 as a whole), the automatic matching algorithm performs better in terms of speed and quality.
- The SEP system is updated immediately during the allocation process and any modification in the allocation is visible in real time to all other actors involved. Once the expert reached the maximum number of proposals (that can be pre-defined per call/panel), the system alerts the users.
- The conflict of interest is also flagged automatically.
- This new allocation system will allow REA (MSCA calls in particular) to ensure high quality allocation of proposals to experts while making it highly efficient, especially for the calls with a high number of submitted proposals and in the bottom-up programmes.

## Support services – Revision of the rules for legal and financial viability checks

The REA support services serve the European Commission services beyond the Research family. Programmes such as Erasmus, COSME, Asylum and the Migration and Integration Fund call upon the REA support services to validate legal entities and assess their financial viability for participation in their programmes. However, the validation procedures for these programmes may vary among the Commission services.

It becomes increasingly necessary to harmonise the rules for validation between the Commission services. To this end a working group was set up to harmonise the ratios and scoring methodology between the research services of the Commission and to find a common methodology for the **Financial Viability Checks (FVC)**, which may be used for all grant programmes under direct management. This working group, chaired by REA, includes representatives of different DGs, Executive Agencies and Joint Undertakings. It was tasked to identify best practices, taking into account the lessons learned after several years of implementation of FVC so that the financial viability check could be done in the same way for all EU programmes.

The members of the working group have identified an optimum set of financial indicators and common standards for interpretation of results, which may be used to assess the financial viability of an entity, covering the assessment of liquidity, solvency, and profitability of the entity. These ratios take into account the different types of entities that are supported by the different programmes. The set of ratios was presented to the RUF (Commission's financial network) and UAF (Commission's Administration and Finance network for the Research family). This revised FVC methodology would also result in a clear efficiency gain across the Commission services. The simplification of these ratios would eliminate different results depending on the programme and replace this with a single uniform result for use across all programmes. A harmonised FVC system would also remove the need for the participant to repetitively submit the financial and legal data to different services, and using a single methodology would communicate a clear and consistent FVC result to the participant.

These ratios as identified by the FVC working group are now being tested for consistency against the current H2020 ratios. A comparison of these two approaches has been recorded during 2016. When a critical statistical analysis may be carried out then these will be again considered by the working group before being approved for use. These rules will be sent to DG RTD, as the Business Process Owner (BPO) for SEDIA, for consideration as a single harmonised FVC methodology and may be applied uniformly across the Commission services in 2017.

The LEAR extended mandate under H2020 is a particularly important step to allow operational services to exploit fully the functionalities of the IT project management tools at the level of the Grant Agreement Process, the amendments and the reporting phase. Therefore, its appointment and the verification of its mandate are processed on the base of original signed documents sent by the participants.

Since the beginning of H2020, the REA validation service has reached in 2016 the threshold of 20.000 LEAR extended mandates validated. This allowed the various Research and Innovation managing services to respect the core performance indicator on Time-to-Grant.

During 2016 REA continued to work to increase the efficiency of the **business process for Legal entity appointed representative (LEAR) validations**. An assessment was initiated and ideas for further simplification have been forwarded to the CSC and the Legal Service of the Commission, including a proposal for the simplification of the LEAR appointment procedure.

Following the recent agreement of the Legal Service for the proposed simplification measure which would accept scanned copies of the LEAR documents instead of originals signed in blue-ink, the Validation services hope to improve the efficiency with this next step towards simplification for 2017. This action is included in the second wave of simplification of Commissioner Moedas and is expected to bring major efficiency gains, with the reduction of the administrative burden for both the participant and also for the validation services. This may also speed up the procedure, as the required documents will be uploaded directly in the IT system.

During 2016, new simplification measures for validation and an updated set of 'Rules for the administrative and logistical support services' were drafted, on the basis of previous experiences. This document will be discussed with all clients and submitted to the Steering Committee for approval in February 2017.

During 2016 the REA Participant Validation and Support and the Expert management units have worked to revise the 'Rules for administrative and support sectors', which marks a significant evolution compared to the 2015 previous version. As a result, the process and procedures have been explained, and the time deadlines for each step are clear, and the role that each actor must play in the systems is described.

The advantages in comparison to the previous methods are:

- further clarity and transparency towards our clients,
- greater efficiency during the validation processes, and
- a more efficient business process for the validation of the Legal Entity Appointed Representative (LEAR).

A cost-benefit analysis for the impact of the SEDIA project using the (expanded) services of the REA validation services commenced in 2016. This document has been finalised in cooperation with DG DIGIT, REA and DG BUDG and other parties in February 2017 and through assessing the requirements which should be in place to facilitate the deployment of SEDIA in 2018.