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European Commission

# 2018

# Annual Activity Report

## Research Executive Agency

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# REA IN BRIEF

The Research Executive Agency (REA) is an autonomous body with its own legal personality, which was set up by a Commission Decision in 2007 with the aim of implementing parts of the 7th Framework Programme for Research and Technological Development (FP7) and, since 2014, parts of the Horizon 2020 Framework Programme for Research and Innovation (2014-2020). REA now manages nearly 20 % of the Horizon 2020 budget and is the largest of the six European Union (EU) executive agencies.

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

Mandated by the European Commission to support the EU Research and Innovation policy, REA funds high-quality research and innovation projects that generate knowledge for the benefit of society.

To pursue this mission, undertakes the following **activities:**

- Preparing and publishing calls for proposals, evaluating proposals, prepare grant agreements for retained proposals and managing the stages in the lifetime of projects in the frame of the Horizon 2020 Specific Programme (2014-2020). It is responsible for monitoring the projects, making the necessary checks and recovery procedures, and for performing budget implementation tasks covering revenue and expenditure;
- Managing the stages in the lifetime of projects in the frame of the Seventh Framework Programme (2007-2013). It is responsible for monitoring the projects, making the necessary checks and recovery procedures, and for performing budget implementation tasks covering revenue and expenditure;
- Providing administrative and logistical support services
  - to EU bodies implementing Horizon 2020 and selected other programmes. These services include:
    - Planning for calls for proposals and contests;
    - Support for publication of calls and contests for prizes;
    - General logistical support for the evaluations including the management of the evaluation facility;
    - Contracting and payment of independent expert evaluators;
    - Supervising the Research Enquiry Service which answers questions from participants and the broader public on EU research and innovation funding, and on participants' legal and financial validation;
  - within the SEDIA framework, to participants to grants and procurement activities for all Union programmes and for the benefit of EU bodies implementing these programmes. These services include:
    - Validation of legal entities;
    - Preparation of legal entities' financial capacity assessment.

The Juncker Commission, which took office in 2014, set ten priorities, identifying specific areas for action. By managing the parts of the R&I programmes that have been delegated to it and by promoting projects in Excellent Science, Industrial Leadership and Societal Challenges, REA is contributing to the achievement of 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', 'An Area of Justice and Fundamental Rights based on Mutual Trust' and 'Towards a New Policy on Migration'. In addition, by coupling R&I, it helps to promote a world-class science in Europe, removing barriers to innovation and facilitating collaboration between the public and private sectors.

The management of the following Horizon 2020 actions (and some predecessor actions under FP7) has been delegated to REA:

- Horizon 2020 – Excellent Science – Marie Skłodowska-Curie actions (MSCA) and the FP7-People Programme (MCA) from DG EAC;
- Horizon 2020 – Excellent Science – Future and Emerging Technologies (FET Open) from DG CNECT;
- Horizon 2020 – Industrial Leadership – Space research actions and the actions of the Space theme in the FP7 Cooperation Programme from DG GROW;
- Horizon 2020 Societal Challenge 2 – Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy from DG RTD and DG AGRI;
- Horizon 2020 Societal Challenge 6 – Europe in a changing world – inclusive, innovative and reflective societies from DG RTD and DG CNECT;
- Horizon 2020 Societal Challenge 7 – Secure societies – Protecting freedom and security of Europe and its citizens and the actions of the Security theme of the FP7 Cooperation Programme from DG CNECT and DG HOME – includin, since 2018, projects generating EU classified information (EUCI);
- Horizon 2020 Specific Objectives 'Spreading Excellence and Widening Participation' and 'Science with and for Society' from DG RTD;
- FP7 Capacities – Research for the benefit of SMEs from DG RTD.

By maintaining close contacts with beneficiaries and giving the EU high visibility, REA acts as a promoter of the European Research Area (ERA) and EU R&I 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).

In addition, REA assists its six parent DGs in the Commission in managing programmes and achieving its policy objectives by collecting information on project implementation and results; 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 focused policy feedback whereby key project results are signalled to the Commission services to support their policy development activities; by making recommendations on the programme's future development, in particular with respect to call implementation and grant management issues; and by playing an important role in the communications related to funding opportunities, project results and success stories.

# EXECUTIVE SUMMARY

**This 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 constitutes the basis on which the College takes political responsibility for the decisions it takes as well as for the coordinating, executive and management functions it exercises, as laid down in the Treaties[1].**

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

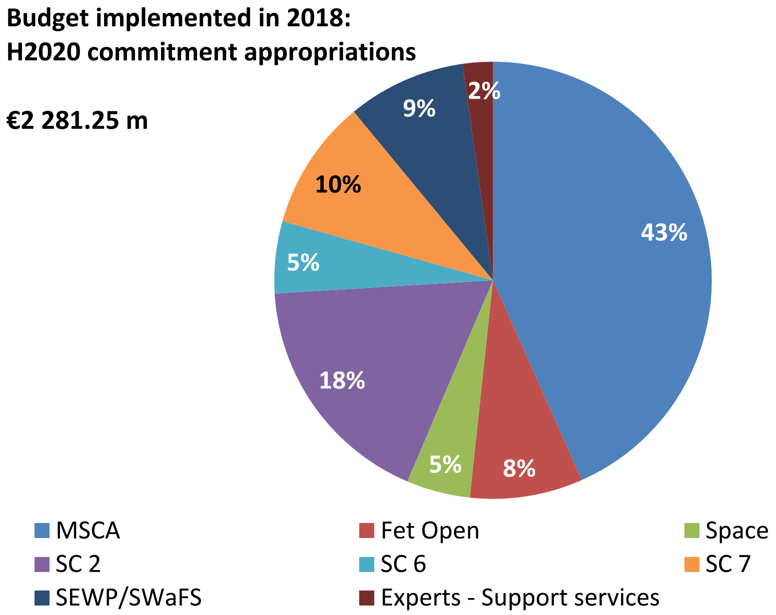
Following the **Annual Work Programme for 2018**, REA concentrated during the year on **consolidating high quality services** for the FP7 and H2020 grant management, on implementing the **new extended mandate,** and on **contributing to** the design process of the **Horizon Europe programme**.

To provide an effective and efficient support to its operations, REA **revised its internal control system** and invested important efforts in the **recruitment** of the necessary staff as well as in the continuous **improvement of the working environment**.

### Implementation of the Research and Innovation framework programmes

REA's key performance indicators show a **stable and excellent performance** in terms of the implementation of the **calls** stemming from the H2020 work programme 2018-2020, and similar stable trends in the management of the **grants**.

In 2018, REA launched 20 calls (Work Programme 2018 calls) and managed the whole evaluation and granting process for a total value of EUR 2 281.25 million[2].




Evaluations and Grant Agreement Preparations (GAPs) progressed according to plan. REA evaluated about 14 400[3] proposals out of which more than 1 900 were retained for

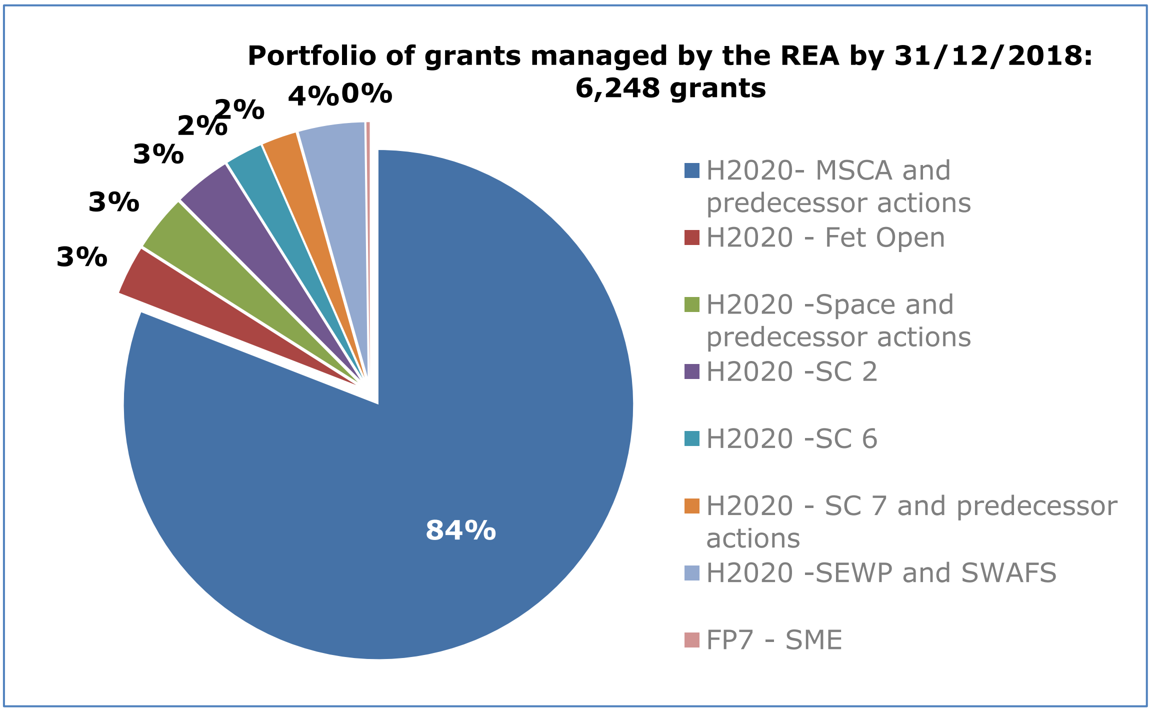
[1] Article 17(1) of the Treaty on European Union.

[2] This amount includes the amount granted for the calls and the reimbursement to experts.

funding (main listed proposals). The **overall success rate** for the 2018 calls stood at 14.2%[4], at about the same level as for the 2017 calls (13.6%).

Overall, REA signed more than 2 000 grants, about 300 more than in 2017. Like in 2017, **100% of the grant** agreements have been **signed in time**. The **average Time-to-Grant** was at **198 days**, 47 days below the target[5].

By the end of 2018, REA managed a total of **6 248 grants,** H2020 and FP7 combined. The share of H2020 projects in the portfolio increased from 78% to 93% since last year.




The number of **FP7** projects fell considerably in 2018 (from 1 436 in 2017 to 445 in 2018). However, the closing of the remaining **FP7 legacy** will still require an important attention, with a particular focus on the SME scheme.

The running projects represented about EUR 2.35 billion still to be disbursed at 31 December 2018, of which 46% were for Marie Sklodowska-Curie Actions and 20% for Societal Challenge 2[6].

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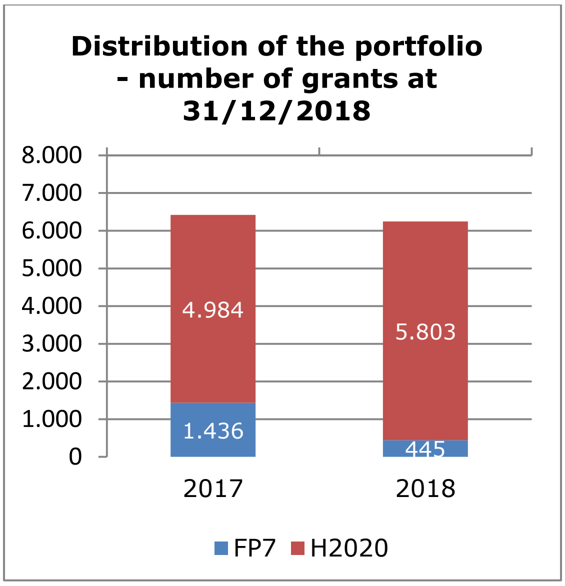
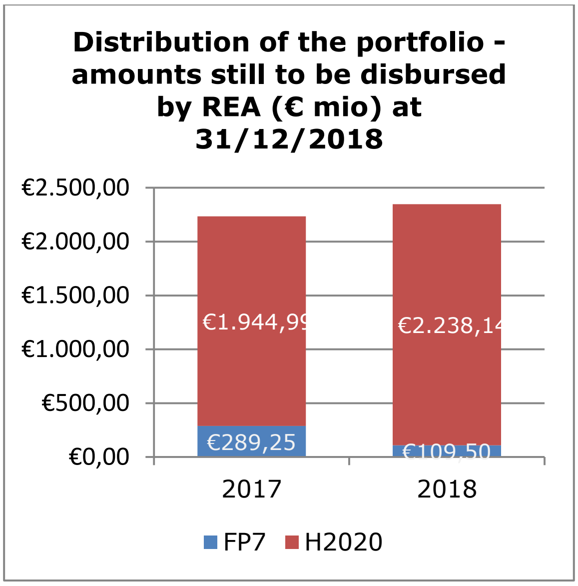
3 For 2-stage calls, this figure includes the number of proposals evaluated at the first stage.

4 As evaluations for five 2018 calls were still on-going at the end of the year, the success rate will continue to evolve. For 2-stage calls, the calculation of the success rate is based on the number of evaluated proposals at the second stage.

5 Source: CORDA.

6 The distribution of the RAL ('reste à liquider') for the other activities managed by REA corresponds roughly to the ratio of budgets executed in 2018 – see the chart above.




By the end of 2018, 95.7% of the closed FP7 projects and **91.1% of H2020 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.

Two particular points are to be highlighted with regard to the development of the grant management processes in 2018.

Firstly, as of January 2018, according to the last extension of its mandate, REA started managing **projects generating classified information** and over the course of the year the Agency invested in further building its capacity up to the classification level 'EU Secret'. This enables REA to manage projects at three classification levels in any H2020 activity under the Agency's responsibility.

Secondly, REA invested, among others, in the implementation of the **Horizon 2020 ex-ante control strategy**, which is one of the foundations of effective programme implementation. The R&I family's control strategy is enhanced with more detailed guidelines and examples of good practices. In this process, REA's Networks of Project Officers, Financial Officers and Legal Officers have offered their expertise in fine-tuning and operationalising the strategy. This intensive collaborative effort has been praised by the IAS that recognised the role of REA's ex-ante controls as a key safeguard for 'the legality, regularity and sound financial management of the Horizon 2020 grant expenditure'.

Two key indicators summarise the performance in **financial management**. Firstly, for H2020, **REA implemented 100% of its budget** in commitment and payment appropriations (the latter for the total amount of EUR 1 818.10 million). Secondly, REA maintained **high standards for the Time-to-Pay** (TTP), with 99.8% of the pre-financing payments made in less than 30 days, 97.1% of the interim and final payments (FP7 and H2020) made on time and 99.7% of the reimbursement to experts made in a timely manner. In terms of the administrative budget, TTP reached an outstanding compliance rate of 99.5%.

In its collaboration with the parent DGs, REA provides policy relevant information at various points of the project management cycle. In 2018, REA has been proactive in shaping an effective and pragmatic **policy feedback** mechanism. After a large-scale internal stock-taking, REA developed a comprehensive policy feedback framework, building on the experience of its ten operational units. Subsequently, all units prepared their individual Policy Feedback Plans, and shared them with the respective counterpart units in the Commission for consultation. These plans, which are now under final agreement, will facilitate customised, quantifiable and structured policy feedback activities, which best fit the Commission’s needs. This aims to develop a more systematic and clearer contribution to the Commission's policy developments, by capitalising on the programmes' and projects’ outputs and results.

**Promoting and disseminating EC funded projects' results** are other ways of contributing to the success of the EC research policy. The H2020 projects managed by REA have until now resulted in 64 intellectual property rights applications (patents, trademarks, utility models and others); 42 patents have already been awarded. There are also already around 23 000 publications on Horizon 2020 projects, more than half of them in peer-reviewed journals and of those about half are published in highly-ranked journals (top 10%) according to the SCOPUS Journal Ranking. In addition, REA project officers or external expert monitors have evaluated the scientific results accrued so far by H2020 projects and highlight that 82% of the (evaluated) projects have already delivered exceptional results with significant impacts or will likely do so during their next reporting period[7].

With more than 280 ‘success stories’ and ‘promising projects’ identified in 2018, REA accounted for about 44 % of all success stories provided to the R&I common pool.

REA has largely increased its participation in the **Innovation Radar**, an initiative aiming to identify the most promising innovations from different projects across H2020. The beneficiaries of four REA projects were finalists in the Innovation Radar Prize 2018, and two of them won the Prize in the categories Excellent Science and Best Young SME.[8]

Three other REA projects received the French award "**Etoiles de l'Europe**" for their innovation potential in the field of hybrid propulsion and contribution to the European competitiveness in Space, their outstanding number of scientific publications on antibiotic resistance, etc. Moreover, the main website for the dissemination of Future and Emerging Technologies (FET) projects managed by REA received the **.eu Web Award**. The scientific quality and innovative dimension of projects managed by REA is further illustrated by the 55 articles published in the Horizon Magazine in 2018 and by the 8 REA projects featured in Futuris videos by EuroNews.

## Administrative and logistical support services

REA provides administrative and logistical support to Commission DGs and other services. The validation services were extended to an EC corporate level, following the latest revision of the Agency's mandate. The management of the evaluation platform and the contracting of and payments to experts carried out by REA serves mainly the H2020 implementing bodies.

### Participant validation services

As of January 2018, REA took over additional activities of strategic significance, delegated by the Commission. In the context of SEDIA, **REA is in charge of all legal and financial validations of participants in grant and procurement actions**, not only for the R&I family but also **for the Commission as a whole**. In this new activity, REA works hand in hand with the CSC in the context of the eGrants and eProcurement Steering Board (GPSB) and provides its established expertise to a diverse range of clients.

7 Source: CORDA. These figures on (scientific) results are not yet available for the whole stock of projects, but for about 20% of projects. Nevertheless, they provide a promising insight on the totality of projects.

8 https://ec.europa.eu/digital-single-market/en/news/winners-2018-innovation-radar-prize
https://ec.europa.eu/futurium/en/excellent-science-2018/technical-university-denmark
https://ec.europa.eu/futurium/en/best-young-sme-2018/multiwave-technologies

REA, together with the involved Commission services, has been working hard to offer a reliable and consistent business environment to the internal and external stakeholders. In order to make SEDIA happen, important challenges regarding organisational, technical or legal aspects were faced. Nevertheless, **REA's preparedness, also acknowledged by IAS**, allowed for a **progressive rolling out of the activity** throughout the year, according to the clients' needs and their choice to join the project. In 2018, 7 360 entities had their legal status validated and almost 9 800 Legal Entity Appointed Representatives (LEARs) extended mandates were validated.

### Evaluation and Experts' management

In 2018, REA coordinated the global planning exercise of the 2020 call deadlines for the main H2020 calls and selected non-H2020 calls, as well as establishing evaluation dates for **286 calls for proposals**. The Agency supported **110 calls on-site**, with more than 6 400 experts welcomed in the building, in the newly remodelled evaluation facilities. **16 781 contracts** with experts were signed and more than **25 650 payments** to experts were made for a total amount of EUR 51.39 million, within an average **TTP of 8.6 days**.

## Human resources management

The transition from FP7 to Horizon 2020 resulted in a shift of focus in programme implementation tasks performed by REA staff. Simplification and IT solutions reduced the routine-related tasks, which previously occupied a large portion of REA’s human resources. Over 2018, REA’s HR management has put in place a coordinated adjustment process, which helped to refocus the work of certain staff profiles, facilitated the development of new content-oriented skills and enabled the rebalancing of resources.

Important efforts were also put in various actions aiming at the staff's well-being. As a result, REA achieved a very significant improvement of the relating indicator in the 2018 Staff survey: 63% of the staff feel that REA cares about their well-being, against 49% in 2016.

## 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 2018, 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.**

| Result indicator | Target | Latest known results at 31/12/2018 |
|---|---|---|
| **KPI 1** ☺ | **Full implementation of the operational budget** | |
| **Target** | **100% execution of commitment and payment appropriations** | |

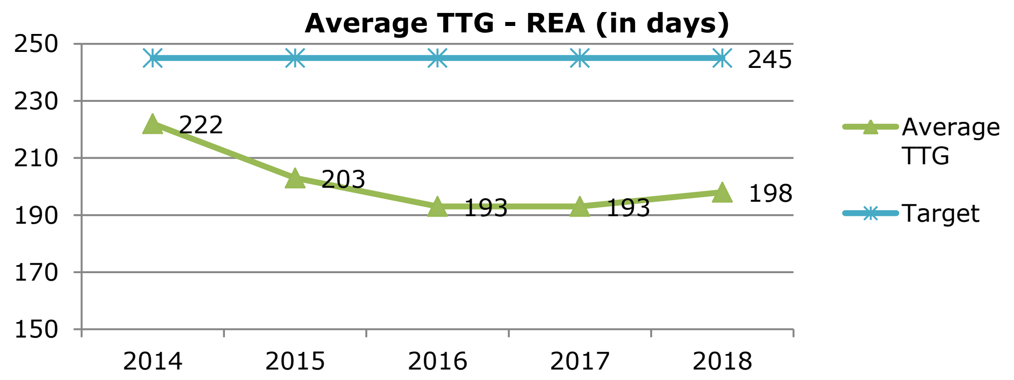
| 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|
| 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

As in previous years, the **operational commitment and payment appropriations** from the EU general budget (excluding earmarked revenue) were fully executed in 2018.

Latest known results at 31/12/2018: **100%** execution of commitment and payment appropriations

| | | |
|---|---|---|
| **KPI 2** ☺ | **Rapid conclusion of grant agreements (TTG - 'Time-To-Grant')** | |
| **Target** | **100% within 8 months (245 days)** | |

REA has maintained its TTG performance. With **100%** of all grants agreements **signed in 2018 (calls 2017 and 2018)** in less than 245 days, the results were again excellent. The average TTG performance stands at **198 days** (only slightly higher than in 2017), 47 days before the target[9].

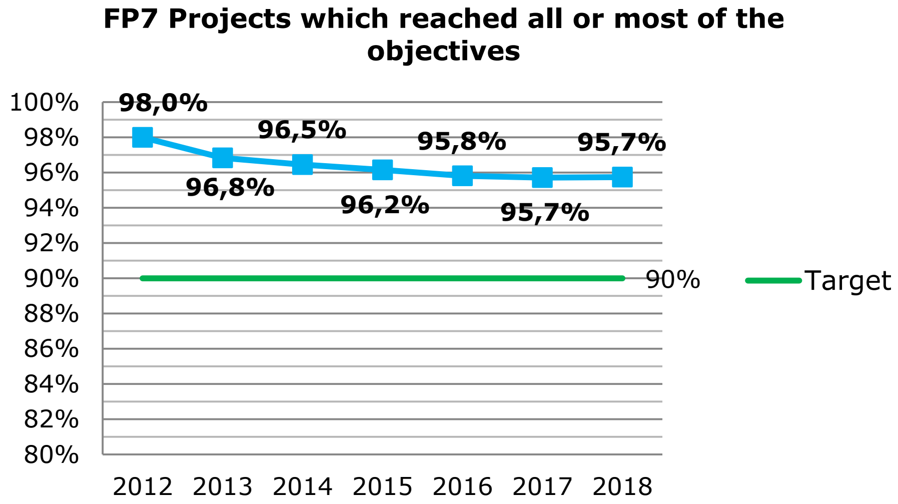



Share of grants signed in 2018 within 245 days: **100%**

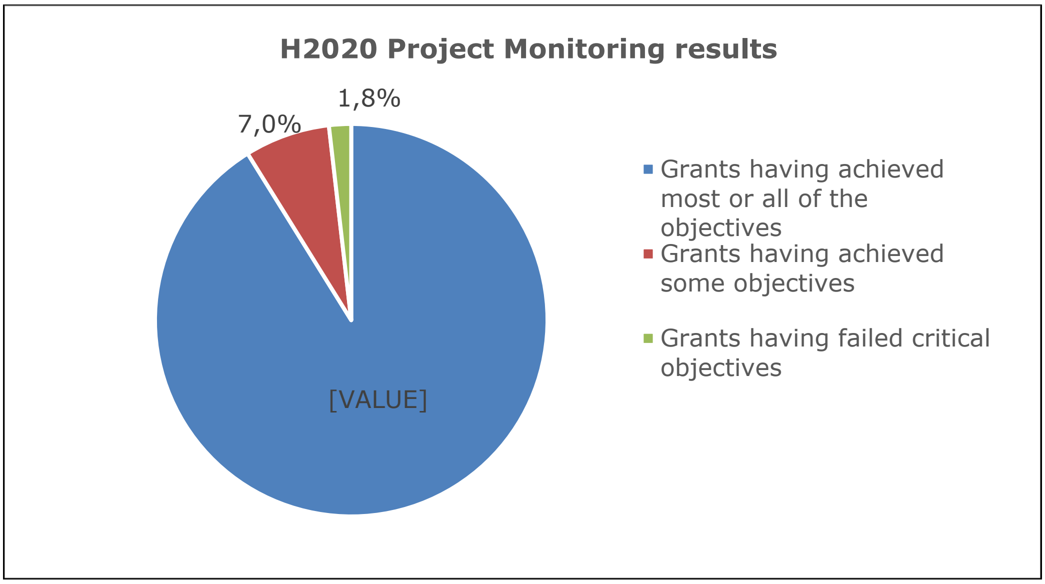
Average TTG (in days): **198**

[9] Data extracted from CORDA.

| KPI 3 ☺ | **High quality of the grant management**<br>3.1. Share of projects that achieved their objectives |
|---|---|
| **Target** | **90% of FP7 closed projects achieved most of their objectives** |




With **95.7%**[10] the share of **FP7 projects** that achieved all or most of their objectives remained stable above the target of 90% and comparable to the performance of the previous years (equally 95.7% in 2017). It appears that the trend of the last years of the share of FP7 projects that reached all or most of the objectives has stabilised at a high level, still above 95% and well above the target of 90%.




First results of the **H2020 project** monitoring show that of those on-going and closed H2020 projects managed by REA which have already been assessed, **91.1%** have achieved most or all of the objectives.[11]

**FP7: 95.7%**

**H2020: 91.1%**

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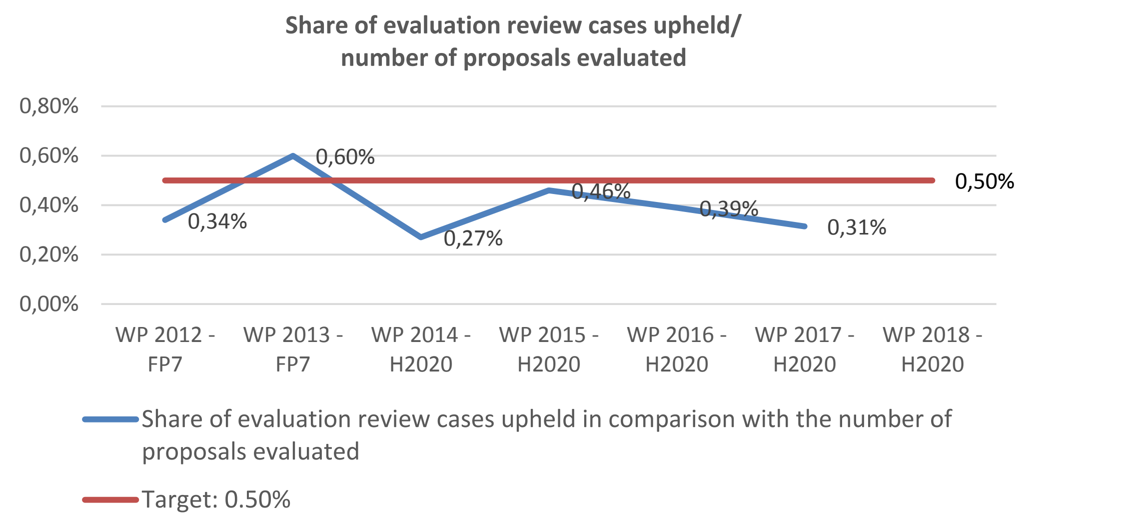
[10] Source: CORDA. The statistics are based on the Project assessment reports (FP7 projects).

[11] Source: CORDA. The statistics include all projects signed until the end of 2018 and are based on the assessment of H2020 project reports. These results need to be treated with caution as these are early results and do not have the same significance as for the stock of FP7 projects that are mostly closed or much more advanced on average. At this moment, data is available only for about 20% of closed or on-going projects managed by REA.

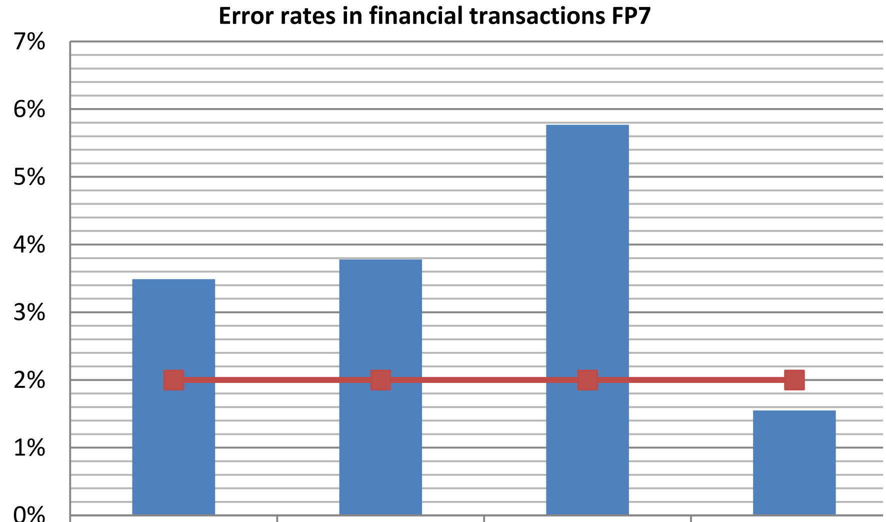
| KPI 3 ☺ | **High quality of the grant management**<br>3.2. Share of redress (FP7)/ evaluation review cases (H2020) upheld in comparison with the number of proposals evaluated |
|---|---|
| **Target** | **Max. 0.5% of proposals evaluated** |




**0.31% for 2017 calls**

The low share of evaluation review cases upheld against the number of proposals evaluated for the calls of the WP 2017 (**0.31%**, below the maximum target of 0.50%) 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 for this process. For most 2018 calls, the handling of evaluation review requests was still ongoing at 31 December 2018.

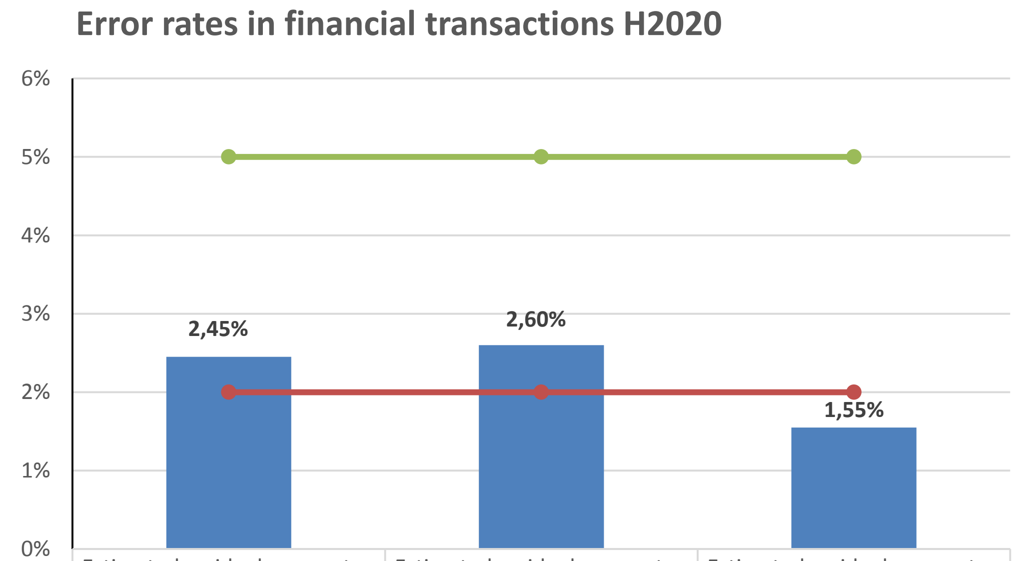
| KPI 4 ☹ / ☺ | **Error rate in financial transactions** |
|---|---|
| **Target** | **FP7: less than 2% of total budget (materiality threshold)**<br>**H2020 Overall : between 2 and 5%**<br>**H2020 MSCA: less than 2%** |




| | Residual error rate - Space (CRaS) | Residual error rate - Security (CRaS) | Residual error rate - SME actions | Residual error rate - People |
|---|---|---|---|---|
| Error rate | 3,49% | 3,78% | 5,77% | 1,55% |
| Materiality criteria | 2,00% | 2,00% | 2,00% | 2,00% |

**Error rates in financial transactions FP7**

Based on the Common Representative audit Sample (CRaS) and complemented by an additional audit sample, the residual error rate for three FP7 programmes – Space, Security and SME actions – are above the target, while the error rate for the FP7 People Programme is below the materiality level of 2%. These results confirm a stable trend for the error rates in FP7 financial transactions since 2016. For further reference, please see section 2.1.1. on control results



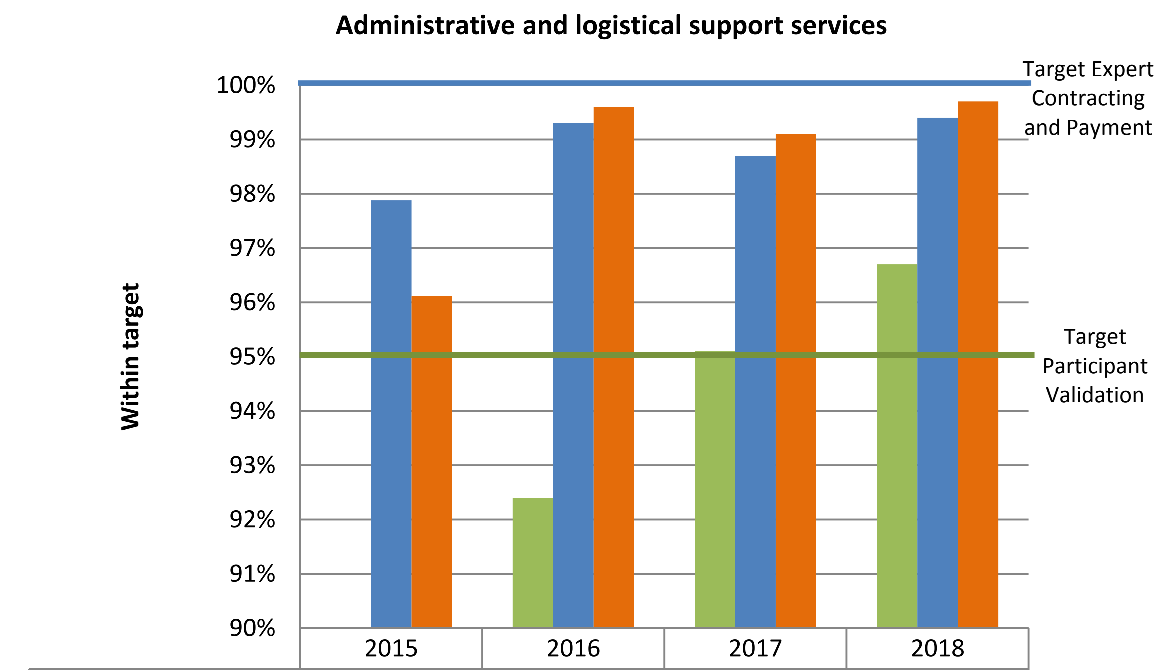

| | Estimated residual error rate - H2020 - R&I Family | Estimated residual error rate - H2020 - REA only | Estimated residual error rate - H2020 MSCA |
|---|---|---|---|
| Error rate | 2,45% | 2,60% | 1,55% |
| expected range min | 2,00% | 2,00% | 2,00% |
| expected range max | 5,00% | 5,00% | 5,00% |

Error rate   expected range min   expected range max

The H2020 audit campaign was launched by the CAS (Common Audit Service) in 2017. Until the end of 2018, 165 CRS audits have been closed with a residual error rate for the R&I Family of 2.22% (expected to rise to around 2.45% including draft audit findings) and of 2.60% for REA alone (including draft audit findings) .

As regards the specific representative sample for MSCA (layer 2), the audits closed at the end of 2018 concern 92 participations only. The programme and its control strategy is multi-annual and the residual error rate must be considered over time. Therefore, following a conservative approach, REA will also refer to the last residual error rate for FP7 in 2017, i.e. at 1.55 %, for the calculation of the amount at risk under the H2020 MSCA programme.

| KPI 5 ☺ | Providing efficient support services to the Research DGs and other client services | |
|---|---|---|
| Target | Participant validation: 95% of validations performed within the 90 days from the "raise priority" date[12] | ☺ |
| Target | Time-to-contract for experts: 100% of expert contracts signed in less than 10 calendar days[13] | ☺ |
| Target | Time-to-pay for experts: 100% of expert payments carried out within 30 days | ☺ |




| | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|
| Participant Validation | | 92,4% | 95,1% | 96,7% |
| Expert Contracting | 97,9% | 99,3% | 98,7% | 99,4% |
| Expert Payment | 96,1% | 99,6% | 99,1% | 99,7% |

REA provides administrative and logistical **support services** to the whole of H2020 and to certain other programmes. As of 1 January 2018, REA is also performing the legal validation and the preparation of the financial capacity assessments for all participants in grants and procurements under the European Commission's direct management as part of the SEDIA project. Despite additional validation services related to SEDIA and the changes in business processes related to it, REA improved its performance in every aspect compared to the previous year, with performances close to or above the targets. For each service, the trend is clearly positive and shows continuous improvements in operational efficiency.

[12] The priority setting for validations is automatically set by the Participant Database Management (PDM) system.

[13] The indicator is measured from the moment the contract signature process is launched in COMPASS until the signature of the contract by both parties.

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

In accordance with the governance arrangements of the European Commission, which are 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 principles, based on international good practice, aimed to ensure the achievement of policy and operational objectives. The financial regulation requires that the organisational structure and the internal control systems used for the implementation of the budget are set up in accordance with these principles. REA has assessed the internal control systems during the reporting year and has concluded that the internal control principles 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 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 one concerning FP7 SME actions.

## d. Provision of information to the Commissioner(s)

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 reservation(s) 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, Commissioner Mariya Gabriel, responsible for Digital Economy and Society, Commissioner Elżbieta Bieńkowska, responsible for Internal Market, Industry, Entrepreneurship and SMEs, Commissioner Phil Hogan, responsible for Agriculture and Rural Development, 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

**This section provides result indicators on the implementation of the Agency's Work Programme 2018, by programme implementation tasks.**

Overall, REA supported the Commission in reaching its objectives by managing the activities it has been entrusted with. To this end, REA's key actions have been identified in the REA Annual Work Programme (AWP) 2018. As regards **programme implementation and project monitoring** tasks supporting the funding for R&I actions, REA is responsible for the grant management life cycle:

- On the basis of the Horizon 2020 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 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 playing an important role in informing on funding opportunities and project results;
- by making recommendations on the future development of the programme, in particular with respect to call implementation and grant management issues;
- by collecting information and data about the implementation and the results of the projects;
- by providing a focused policy feedback whereby key project results are signalled to the Commission services to support their policy development activities; and
- 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.

In addition to its programme implementation tasks, REA also provides various **administrative and logistical support services** to participants and Commission services/agencies/joint undertakings[14] which include:

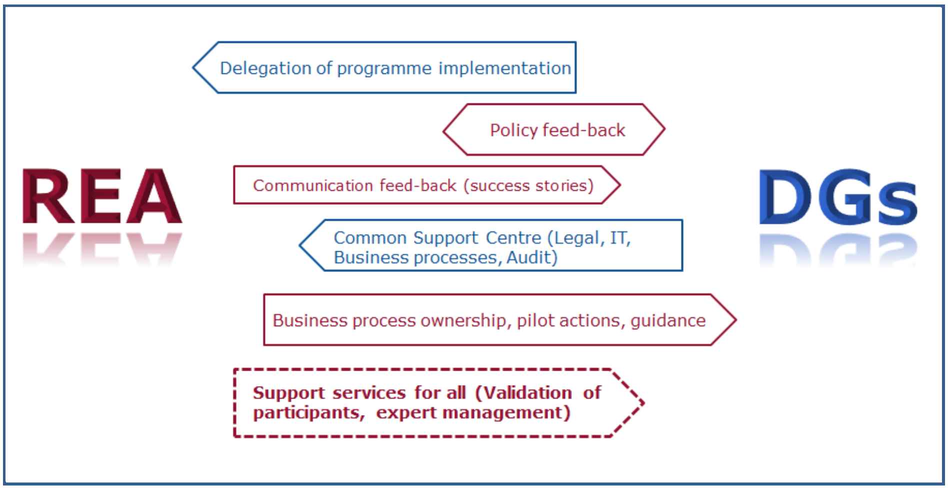
- Call planning (and publication),
- Contracting and payment of expert evaluators and related activities,
- Logistical support for evaluations,
- Validation of the existence and the status of legal entities, LEAR appointment, and preparation of the financial capacity assessment (FCA).

Further revision of the REA mandate expanded the legal and financial validations to cover all grant and procurement procedures under direct management in the context of the Single Electronic Data Interchange Area (SEDIA). SEDIA provides applicants, candidates and tenderers with a single entry point to communicate and exchange information with the Commission services (including executive agencies and joint undertakings). As from January 2018 REA started the gradual on boarding of clients willing to use the corporate validation solution.

[14] The Agency's delegation act outlines the list of support services and beneficiaries of the services provided by REA

### Cooperation with the parent DGs

The **cooperation between REA and its parent DGs** is set-up at senior management and operational level and adheres to the requirements laid down in the Memorandum of Understanding between the R&I DGs and REA. The cooperation is excellent and REA and its parent DGs are working hand in hand.




Various feedback mechanisms are in place, including a wide range of measures that facilitate the interaction between the REA operational units and their Commission counterparts:

- **Programme Implementation Feedback** enabling the parent DGs to exercise their supervisory function and to build on experiences from programme implementation when preparing future Work Programmes;
- **Policy Feedback and support** (PF) implying contributions from the operational level in support of policy implementation (feedback to the parent DG for the EC programming activities) and policy development (including new policies or revision of current policies). Where the research projects come close to policy implementation, REA is working in joint teams with the Commission services to ensure maximum synergies.

In 2018, the Policy Feedback activities were given a particular attention by the REA Steering Committee, the 3rd External Evaluation study and the various stakeholders.

REA organised an extensive exercise to identify, record, assess and share PF practices across the Agency's ten operational units and their Commission counterparts. The REA internal **Policy Feedback Approach** was shared with members of the R&I family through the Dissemination and Exploitation Network among the R&I family (D&E-NET; former DiEPP - Dissemination and Exploitation Practitioners Platform) in the first half of 2018.

As a result, **specific Policy Feedback Plans** for all REA H2020 activities are being discussed between the REA units and their Commission counterparts. By the end of the year, the PF plans for MSCA, FET-Open and Societal challenge 2 were finalised, allowing for targeting the PF actions on the Commission's needs and better monitoring them. REA’s Annual Work Programme for 2019 includes the objective to reach agreement on Policy Feedback Plans with each parent DG, including targets about the commonly defined deliverables.

REA’s approach to improve policy feedback mechanisms is currently considered as one of the most advanced systems for PF exchange in the Research and Innovation Family. The Common Support Centre (CSC) has integrated REA's approach as a tool to coordinate Policy feedback.

### Collaboration on Dissemination & Exploitation (D&E) activities

The Dissemination & Exploitation (D&E) activities of H2020 projects have progressed extensively since the last reporting period:

- A big number of interim reports of ongoing H2020 projects are ready and allow monitoring performances, including on D&E activities.
- Moreover, REA is already closing a high number of H2020 projects with final reports providing relevant information on the final results, including projects that are relevant for exploitation purposes.

REA contributed actively to the revision of the **D&E Strategy for 2018-2020** by the R&I family, first in the initial brainstorming and then in a more structured group (the Ad-hoc R&I Group) created by the CSC to support the drafting of the Strategy. The revised strategy was endorsed by the CSC Executive Committee on 7 June 2018.[15]

REA also monitored closely its implementation of initiatives within the frame of the first D&E Strategy. For further details, please refer to Annex 13.

### Process improvements

The new IT system (ARIS) provides automatic detection of a **Conflict of Interest** (CoI), applying text-mining to the list of participants submitting proposals and to the pool of experts linked to a certain call. This support tool incorporated in the proposal submission and evaluation system (SEP) is streamlining the working methods during the evaluation process for all REA operational units. The system was tested during 2018 and is performing optimally.

After having identified the need for more guidance on the **evaluation procedure**, the improvement of the REA evaluation process should be highlighted, with the following key actions initiated during 2018:

- REA has set up internal guidance, outlining the steps to be followed, which are not covered in GoFund.
- Experts' briefings for all calls were optimised through the design of common slides to make the briefings more attractive and concise. Manuals, briefing slides and videos were produced, which includes confidentiality and CoI issues for experts.
- The use of vice-chairs was improved by analysing their tasks allocation during evaluation, and dedicated training material was developed.
- A REA task force was set up to deal with "maintaining and improving the quality of experts". In addition, a feasibility study to monitor experts' performance has been prepared and discussed.

The **Grant Agreement Preparation** (GAP) guidelines were updated taking into account various changes on ethics, as well as the migration of the Participant Portal into the new Funding and Tenders (F&I) Opportunities Portal. Updated documents were prepared and will be made available to units.

Trainings were given to Project Officers (POs) by the Ethics Correspondents prior to the start of the GAPs to reassure and support them to be more proficient when dealing with the Ethics requirements' implementation. The GAP stage is the most critical time in the projects lifetime as far as ethics is concerned. Unit Fact Sheets on the management of ethics requirements, how they are followed during project implementation and the approach towards the ethics checks were set up.

[15] Strategy for a common dissemination and exploitation of R&I data and results 2018-2010 and its Action Plan, 7 June 2018.

The **ex-ante control strategy** was updated and topical workshops on important issues related to ex-ante controls were organised. One workshop focussed on reinforced monitoring and another focused at types of organisations participating in H2020 grants (third parties, subcontractors, in-kind contributions). The existing guidance on reinforced monitoring was promoted and a coherent application was reminded, using the finance unit as central reference partner.

The **guidance on waivers and cancellations** has been updated and published on the intranet. The revisions include a shortening of the workflows for the simpler cases. For bankruptcies the key messages are the importance of quickly establishing the final debt and the swift request for an intervention of the PGF; the files for waivers have to be prepared without delay following the request of DG BUDG and negative recovery orders are to be issued without delay after the waiver decision.

Finally, a **risk assessment in view of a possible update of the design of REA's financial circuits** was conducted with the conclusion that the current partially decentralised circuit with counterweight for financial verification is the most appropriate.

### Challenges

In order to tackle challenges of the two-stage submission and evaluation process, such as a more lengthy and cumbersome application and evaluation process less suitable for Innovation Actions that need quick financing decisions, a working group was set up involving REA Call coordinators, EASME, INEA and several DG RTD Call coordinators. They are **sharing best practices** and prepare recommendations in view of **Horizon Europe**.

The constant challenge of **attracting the best external experts** has led REA to explore the use of social media. Social Media and a REA Corporate Page could help in attracting experts with particular expertise and campaigns could be launched to identify them.

Work is in progress to operationalise grant reductions, in line with the **guidance on grant reductions** for the Research and Innovation Family. Considering that grant reduction are a new feature of H2020, the Director has tasked REA's networks to prepare and document practical advice for the implementation of grant reductions in REA.

In order to improve and eventually achieve full compliance with the Horizon 2020 open access mandate, trainings were organised about **project monitoring and reporting** to follow up (non-) compliance with the Grant Agreement obligation on '**Open Access to scientific publications**'. The discussion focused on the means to assess the fulfilment of obligations in practice, via Compass and/or check lists. Based on the outcome of the discussions, the consequences of non-compliance with the contractual obligations will be further elaborated.

Another challenge where REA focussed its efforts on related to more effective corrective actions and recoveries in case of financial irregularities and fraud. In order to do so, REA undertook actions for **further improving the implementation of the audit results**, with a particular attention to the complex legal and financial follow-up operations ranging from a simple offsetting with a subsequent payment to enforced recoveries needing a Commission decision or legal proceedings in bankruptcy cases.

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

### Contribution to achieving the Commission's objectives

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

In managing the MSCA and their predecessor actions under FP7, REA is helping DG EAC to contribute to the Commission's overarching general objective 1 'A New Boost for Jobs, Growth and Investment'. Through the MSCA, DG EAC aims to ensure the optimum development and dynamic use of Europe's intellectual capital of researchers in order to generate new skills and innovation and 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 in the projects managed by REA

Like all EU-funded research projects, MSCA focus on projects that cannot be efficiently achieved by Member States acting alone, in particular when addressing issues with a cross-border dimension. The added value of these EU programmes also resides in the guarantee that all Member States, Associated Countries and third countries can participate in and benefit from highly skilled mobile researchers, exchanges of experience, transfer of good practices and 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 by fostering excellence in research in Europe. As illustrated by the following examples, many MSCA projects have great potential in terms of discovering new solutions to various challenges within the EU.

The **Innovative Training Networks (ITN)** calls aim to enhance the creative and innovative potential of early-stage researchers by creating opportunities for cross-border and cross-sector mobility and 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 project **ANSWER**, a highly innovative training network that addresses the risks associated with the contaminants such as antibiotics and mobile antibiotics resistance elements in the framework of wastewater reuse. The project is researching the relevant environmental and public health risks related to the reuse of wastewater in order to improve the level of safety and sustainability reuse practices and it is developing an innovation-friendly environment in which to turn scientific results into products and services for economic and social benefit. All of the empirical data will be integrated into a web-based database that will allow for future policy development at EU and national level. The project's objectives are related to the Water Joint Programming Initiative that is now revising their Vision for 2030 and the Strategic Research & Innovation Agenda. Lastly, the coordinator has contributed to the writing of a children's book "The secret hand book of the blue circle" (currently in Greek) and it is already available in the market. They intend to publish it in other languages as well.

The objective of the **Individual Fellowships (IF)** calls is to enhance the creative and innovative potential of experienced researchers wanting to diversify their individual competence in terms of skill acquisition at multi- or interdisciplinary level through advanced training, international and cross-sectoral mobility. One of the successful examples is project **PyroProf**. This project tackles the chemical profiling of explosives. Using forensic chemistry techniques we can determine links between explosives and suspects, which leads to practical advances in law-enforcement and counter terrorism. The collaboration between the researcher and the company has already produced some immediately applicable methods to protect against firework damage and the identification of dangerous or illegal fireworks.

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 in and outside Europe. This is well demonstrated by the project **FourCModelling**: a consortium of six European and five North American organisations are developing game-theoretical models, both general and focused on specific real population scenarios, applied to epidemic modelling and cancer disease evolution and treatment. The project has produced a large number of scientific publications and hosted a series of lively workshops, helping several young researchers to take the next step in their careers. The results of the project work have been communicated widely, in particular recently published work developing evolutionary treatment strategy models for cancer.

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. An example is the project **FIRE** - an integrated Doctoral Training programme, bringing together two diverse national Centres for Doctoral Training: the Centre for Sustainable Chemical Technologies and the Centre for Digital Entertainment. The programme offers MSCA fellows the benefits of both these established Training Centres, and expands international company placement activities. The enhanced interdisciplinarity offers added-value training practices to all fellows. These synergies are used to inspire the fellows to become autonomous, creative, highly-skilled and primed for careers in international industries.

**5 calls (budget: €988.42m)**

**11 975 proposals submitted**

**1 630 proposals main listed**

**13.8% success rate**

### REA key achievements in 2018

**By the end of the year, the grant agreement preparation (GAP)**[16] had been finalised for three of the five 2018 calls under MSCA (ITN, RISE and NIGHT). All grants (except one)[17] for these three calls were signed on time. For the other two calls (IF and COFUND), evaluations were finalised in January 2019. **The number of proposals submitted to the 2018 calls increased significantly compared to the 2017 (11 975 in 2018 against 11 214 in 2017). This was due to a much higher subscription to the IF call (over 750 proposals more submitted in 2018).** It was the biggest IF evaluation ever, highly successful, comprising some 9 676 proposals evaluated by circa 3 500 selected evaluators and overseen by some 450 Chairs/Vice Chairs. The GAP for this call was launched in late January 2019. 1 630 proposals were included in the main list (including the IF and COFUND calls for which evaluation procedure was completed in January 2019). The overall success rate for all MSCA 2018 calls was at 13.8 %[18], nearly the same as in 2017 (14.2 %). Oversubscription remains an issue. In 2018, this concerned mostly the IF and the ITN calls. Maintaining the high quality of evaluations despite the constantly increasing number of proposals is a challenge for the MSCA calls that was managed successfully in 2018.

As shown by the success rate, there were still a lot of proposals which met the H2020 criterion of excellence that could not be funded. Therefore, as of early 2017, the MSCA started awarding the 'Seal of Excellence' to all proposals for the IF call achieving a score of 85 % and above. This enables the applicants to encourage other funders, at national or regional level, to finance their projects. It also contributes to further strengthening

16 GAP for the proposals on the main list.

17 One RISE-2018-project was signed 29 days after the 245-days TTG-deadline because it was blocked by security scrutiny for more than four months.

18 It should be noted that this is an average rate for MSCA and there is a high variance between the calls, ranging from 7.4 % for ITN, 15 % for IF, 16.9 % for COFUND and up to 24.9 % for the RISE call.

the MSCA as a benchmark for how nations and regions can keep, attract and develop the best research talent.

In total, REA delivered 2 046 'Seals of Excellence' to non-funded proposals from 34 different countries in 2018. The estimated number of researchers funded following the award of the Seal is around 170. There are already 8 Member States that have established a scheme to support researchers with the Seal. The number is promising and it is expected to grow in the future.

REA staff has also been closely involved in discussions regarding the implementation modalities of the MSCA Special Needs Allowance grants that beneficiaries will be able to apply to from year 2019.

**1 664 grants signed**

**5 055 running projects**

Overall, REA signed 1 664 MSCA grants in 2018 (for 2017 and 2018 calls). The grants for the IF and COFUND calls are expected to be signed by end-May 2019 at the latest.

At the end of 2018, the portfolio of MSCA projects managed by REA totalled 5 055 projects, of which 4 722 were H2020 and 333 were FP7. REA managed to close a considerable number of MCA FP7 projects in 2018: from over 1 200 at the beginning of the year to 333 at the end of the year.

In terms of execution of the budget planned for payments for 2018, 3 701 payments were processed during the year and REA implemented 100 % of its budget for H2020 (EUR 822.49 million) and for FP7 (EUR 89.53 million).

### Policy feedback and D&E

The common MSCA Policy Feedback (PF) plan was sent to DG EAC mid-September 2018. The plan was accepted late November 2018.

The data collected from the beneficiaries on dissemination and exploitation activities shows that until the end of 2018, 6 558 MSCA grants have led to a total of 15 763 publications. Of those, 9 752 have been published in peer-reviewed journals with 49% being high-impact journals.

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

### Contribution to achieving the Commission's objectives

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

In managing the FET-Open actions, REA is helping DG CNECT to contribute to the Commission's overarching 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 through a multi-disciplinary approach, which can sow 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 selected from bottom-up calls open to all fields of science 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 R&I players, will be key factors.

The FET-Open scheme is part of the pilot phase of the 'European Innovation Council' (EIC)[19] which aims to develop and scale-up ground-breaking, high-risk, high-gain innovation, able to create future markets and boost prosperity in Europe.

[19] COM/2016/0733 final - Europe's next leaders: the Start-up and Scale-up Initiative.

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

A programme such as FET-Open could only be launched at European level as such a bottom-up programme aiming to develop radically new future technologies through a multidisciplinary approach needs a critical mass of potential applicants to function. Furthermore, as the research funded is so innovative, there might only be a very limited number of specialists in the field at the 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.Project **TALVIN** is working on a new peptido-mimetic drug which inhibits the metabolism of cells from pancreatic, colon and prostate cancer. The main focus is on the pancreatic cancer – the cancer with the least therapeutic alternatives and worst prognosis. Given the dismal survival rates of pancreatic cancer, and the major health problem posed by cancer in general, the potential societal/economic benefit of the project speaks for itself. Currently, the project is performing tests in a subcutaneous pancreatic cancer model, and at cell/in vitro level. Simultaneous to that, the project is approaching big pharmaceutical companies to both study the market opportunities for their compound and to receive feedback on how to further develop the compound to meet the needs of the market.

### REA key achievements for 2018

For the call **H2020-FETOPEN-1-2018-2019-2020** (cut-off 16.05.2018), a total of 374 proposals have been submitted. This represents a decrease of 6% compared to the previous cut-off. Of the 356 proposals evaluated, 38 were included on the main list which represents a success rate of 10.7 % – significantly higher than that for the September 2017 cut-off of (6.8 %). The Independent Observer considered the evaluation process of high quality, fair, transparent and well organised. At the time of reporting, 31 of the 38 main listed grants had been signed, all on time.

For FET Innovation Launchpad (H2020-FETOPEN-3-2018-2019-2020, cut-off 16.10.2018) 42 proposals have been submitted, which represents a decrease of 21% compared to the last cut-off of the previous call (53 proposals submitted in September 2017). Evaluations for this call were on-going at the time of reporting.

In total, REA signed 77 FET-Open grants in 2018 (for call 2018 and 2017). The portfolio of FET-Open projects managed by REA on 31 December 2018 numbered 193 projects.

**77 grants signed**

**193 running projects**

In terms of execution of the budget planned for payments for 2018, 93 payments were processed during the year for a total amount of EUR 132.98 million, thereby spending 100 % of the budget.

### Policy feedback and D&E

The plan was sent to DG CNECT by the end of September 2018. The PF related activities of REA are considered by DG CNECT to be adequate.

The data collected from the beneficiaries on dissemination and exploitation activities shows that until the end of 2018, 207 FET-Open grants have led to a total of 1 107 publications. Of those, 707 have been published in peer-reviewed journals with 48% being high-impact journals. One other key indicator for assessing the results and impacts of FET-Open projects are patents applications and patents awarded. Until now, 3 patents have been awarded and 2 more have been filed.

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

### Contribution to achieving the Commission's objectives

DG GROW has delegated to REA the management of the 'Space' activity in the H2020 specific objective 'Leadership in Enabling and Industrial Technologies' of 'Industrial leadership'[20] and the actions of the Space theme in the FP7 Cooperation Programme.

In managing the H2020 Space activity and the FP7 predecessor action, REA is helping DG GROW to contribute to the Commission's overarching 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 EU policy and societal needs.

Europe has an interest in ensuring that its industry continues to thrive in this fiercely competitive market. 'Industrial Leadership' is aiming 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 in the projects managed by REA

The exploitation of satellite data plays an important role in a number of sectors directly influencing our lives, such as meteorology, communication, broadcasting, environmental management, navigation and disaster management. Europe has been developing its own satellite infrastructure through the European Space Agency (ESA) and has set up the COPERNICUS Programme – a system for monitoring the earth. This has positioned Europe as a major player in the global market. Over the course of successive H2020 calls, the relevance of earth observation has increased, promoting the development of innovative products and services based on satellite-enabled data. In line with this, since the beginning of H2020, REA has selected and funds around fifty H2020 projects on earth observation.

More than twice that number of projects in the H2020 Space programme deal with technology developments to enable and advance operations in space. Robotics and artificial intelligence play a major role in space operations, and REA funds a **cluster of currently eleven modular space robotics projects**, which have also successfully enhanced technological progress, for instance, for its large-scale testing event in the Moroccan Sahara offering similar conditions as the Mars surface. The tests focussed on a robotic rover's ability to take autonomous decisions, e.g. to best get to a destination or to manage its power, on creating useful information to take such decisions using data fusion from different sensors and cameras, on easy re-configurability of rovers with sensors chosen for different purposes, and on a dedicated robot operation system, the general software that brings all other functions together. Autonomous robotic rovers also find many terrestrial applications particularly in areas that are inaccessible or too dangerous for humans, such as the nuclear sector.

**1 call (budget : €107.00m)**

**183 proposals submitted**

**38 proposals main listed**

**20.8 % success rate**

[20] 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 2018

The evaluation for the SPACE-2018 call was completed in July. Out of 183 proposals evaluated (figure similar to last year), 38 were main listed (28 in 2017). This gave a success rate of 20.8%, significantly higher than the success rate for this activity last year (14.7%). On 31 December 2018, 33 grants had been signed within the TTG target. The GAP was still on-going for 5 proposals (EUR 14.94 million). 4 of these projects underwent security scrutiny and 1 still needed clarification of an ITAR restriction issue concerning a key process of a foundry involved before being able to sign the GA (EU-GaN4S); thus an extension of the TTG has been requested by the co-ordinator.

In total, 38 grants were signed in 2018 (33 from the 2018 call and 5 from the 2017 calls).

**38 grants signed**

**156 running projects**

At 31 December 2018, there were 156 running Space projects, out of which 143 were H2020 projects and 13 were FP7 projects.

In terms of execution of the budget planned for payments in 2018, a total of 105 payments were processed in 2018 using all the available payment appropriations (EUR 101.00 million for H2020 and EUR 5.09 million for FP7).

### Policy feedback and D&E

The PF strategy and plan was sent to DG GROW in spring 2018. Addressed at several occasions, including at directors' level, DG GROW provided a tacit agreement on the plan. REA has implemented all described actions. In addition, the REA unit in charge of Space activities reacted to further ad-hoc requests from the Parent DG in the course of the year.

The data collected from the beneficiaries on dissemination and exploitation activities shows that until the end of 2018, 174 H2020 Space grants have led to a total of 705 publications. Of those, 331 have been published in peer-reviewed journals with 28% being high-impact journals.

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

### Contribution to achieving the Commission's objectives

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

In managing part of the H2020 Societal Challenge 2, REA is contributing to the Commission's overarching general objective 1 'A New Boost for Jobs, Growth and Investment'. This scheme is fully embedded in the Commission's vision and also contributes to 'A Connected Digital Single Market' and developing 'A Resilient Energy Union with a Forward-Looking Climate Change Policy.'

The aim of the programme is to support R&I contributing to more productive, sustainable and resource-efficient production of food and bio-based products 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 boosting 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 the move to a circular economy and society.

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

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

For instance, the **PEGASUS** project illustrates how collaboration, networking and knowledge sharing between researchers, farmers, foresters, policy makers and other rural actors are crucial for effective land management. Agriculture and forestry have to meet the changing needs of society not only in terms of consumption, but also to address the environmental and social challenges (e.g. biodiversity, water quality, climate change). The project promotes a better understanding of the existing conflicts and opportunities for finding solutions so that decisions made on practices at local level have an impact on rural communities. The project delivered policy recommendations for the post-2020 EU Common Agricultural Policy emphasising the importance of local actors' engagement in land management decisions to deliver more environmental and social benefits.

In addition, the **UTOFIA** project shows the benefits of EU cooperation in marine science. SMEs and research centres across Europe combined their expertise to develop an innovative high-resolution 3D underwater camera to enhance the safety of maritime operations and prevent collisions. Moreover, the camera allows for improved collection of data to detect marine litter, underwater pollution and fish stocks to support the implementation of EU environmental and fisheries policies.

### REA key achievements for 2018

For the **single-stage calls**, 116 proposals were submitted of which 112 were evaluated and 32 included in the main list[21]. The success rate for the single-stage calls was at 28.6%, significantly higher than in 2017 (**15.7** %) but at the same level as in 2016 (28.8 %).

For the **two-stage calls**, 239 proposals were submitted of which 230 were evaluated at the first stage. At second stage, 78 proposals were evaluated of which 32 were included in the main list, corresponding to a success rate of **41.0 %**[22], considerably higher than in 2017 (31.3%) but at the same level as in 2016 (45.3 %). This may be explained by an important increase by 47 % in submissions compared to the 2016 two-stage calls.

The overall success rate for the 2018 calls (single- and two-stage calls together) of **33.7 %** was significantly higher than for the 2017 calls (21.3 %). This may be explained by a much lower subscription to the SC2-2018 calls: while in 2017, 625 proposals had been submitted in total, the figure dropped to 355 proposals in 2018.

**3 calls (budget: €401.80m) - single & two-stage calls**

**355 proposals submitted**

**64 proposals main listed**

**33.7 % success rate**

[21] 2 reserve list proposals have been promoted to the main list; it thus brought the total of single-stage main-listed grants from 30 to 32

[22] The success rate fell with the introduction of the rule that the projects selected at the end of the first stage may represent around three times, but not lower than two and a half times the available budget.

By the end of the reporting period, the GAP for the main listed proposals was finalised for the single-stage calls, all on time (29 grants were signed by the end of the year[23]). For the two-stage calls, the GAP was still running at the end of December 2018.

Overall, 68 grants were signed in 2018 (from 2017 and 2018 calls). At the end of 2018, REA managed a total of 222 running projects under this activity.

**68 grants signed**

**222 running projects**

In terms of execution of the budget for payment appropriations for 2018, 155 payments were processed during the year, using 100 % of the budget (EUR 319.48 million).

Challenge/ Difficulties:

Two single-stage topics for SC2 ended up with limited subscription and no proposals above the threshold. The experts involved in the evaluation of the proposals suggested paying further attention to the way the topics are written.

### Policy feedback and D&E

The final version of the PF plan was endorsed by the parent DGs during the Directors' Coordination meeting in December 2018. Discussions on the allocation of task are currently ongoing.

The data collected from the beneficiaries on dissemination and exploitation activities shows that until the end of 2018, 237 SC2 grants have led to a total of 1 636 publications. Of those, 724 have been published in peer-reviewed journals with 41% being high-impact journals.

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

### Contribution to achieving the Commission's objectives

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

In managing part of the H2020 Societal Challenge 6, REA is helping DG CNECT and DG RTD to contribute to the Commission's overarching general objective 1 'A New Boost for Jobs, Growth and Investment'. Through its migration related SC6-projects, REA also indirectly contributes to achieving the Commission's general objective 8 'Towards a new Policy on Migration'. The programme funds 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 a 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 aims at fostering a better understanding of Europe and is addressing these EU-wide issues by exploring new forms of social and technological innovation.

### Examples of EU added value in the 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

[23] At the time of reporting, the GAP was still on-going for 1 main listed proposal under topic RUR-20-2018 and for the two reserve list proposals (from calls RUR-2018-1 and SFS-2018-1) that have been promoted to the main list.

approach based on shared scientific knowledge which the 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 involves creating synergies by uniting researchers from all over Europe to solve pan-European issues.

In this context, the **TransSOL** project has considerably improved our understanding of collective and individual levels and practices of transnational solidarity. More practically, it has demonstrated that civic solidarity requires supportive institutional responses and public policies. European policy makers can now use the results achieved by TransSOL to develop strategies and enact political measures to make European solidarity work. Sustained success of such measures would give the EU a greater social capacity and enable a path away from a 'sense of survival' to a 'sense of purpose' built around social justice.

The **RECAP** project builds bridges between public administrators and farmers when it comes to monitoring farmers' compliance to rules of the agricultural policy of the European Union. Satellite and other spatial data, along with administrative data from public authorities and data generated by farmers and inspectors is entered into the platform for each of the farmers and is then translated into personalised guidance. Important is that by using RECAP the farmers become active actors within the overall monitoring procedure. Thus, the platform could contribute to a significant reduction of the time spent on and the cost for on-the-spot checks.

### REA key achievements for 2018

The total number of proposals submitted for three SC6-calls was 256, out of which 253 were retained for evaluation further to the admissibility and eligibility checks. Evaluations were organised fully remotely. The overall success rate of the 2018 calls was 13.8 %, up from 9.2 % in 2017.

**3 calls (budget : €120.95m)**

**256 proposals submitted**

**35 proposals main listed**

**13.8 % success rate**

The applicants were informed about the results in July 2018. 35 proposals were placed on the main list and invited to GAP. REA succeeded to use the budget flexibility provided for in the Work Programme in order to maximize the use of the available budget for the main list, in agreement with the parent DGs. TTG has been met for all 35 projects selected under the 2018 calls for proposals.

Overall, 50 grants were signed in 2018 (2016 and 2017 calls together). At 31 December 2018, 147 active projects were under management.

**50 grants signed**

**147 running projects**

In terms of execution of the budget for payment appropriations for 2018, 101 payments were processed thereby using 100 % of the available budget (EUR 116.51 million).

### Policy feedback and D&E

The PF Plan for Societal Challenge 6 was presented to the relevant Parent DGs. After several rounds of discussion, a joint meeting took place at the beginning of 2019 to agree on a final version.

The data collected from the beneficiaries on dissemination and exploitation activities shows that until the end of 2018, 167 SC6 grants have led to a total of 967 publications. Of those, 308 have been published in peer-reviewed journals with 31% being high-impact journals.

## 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 achieving the Commission's objectives

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

In managing part of the H2020 Societal Challenge 7 and FP7 Security research, REA is helping DG HOME and DG CNECT to contribute to the Commission's overarching general objectives 1 'A New Boost for Jobs, Growth and Investment', and 7 'An Area of Justice and Fundamental Rights based on Mutual Trust'.

The Horizon 2020 Secure Societies Challenge is about undertaking the R&I activities needed to protect our citizens, society and economy as well as our infrastructures and services, prosperity, political stability and well-being and enhancing 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.

In 2017, a major challenge for REA was the preparation for an extension of its mandate, entering into force on 1 January 2018, to manage Societal Challenge 7 projects generating EU classified information (EUCI). Special trainings for staff have been put in place and REA's infrastructure, including IT systems, upgraded to fulfil the criteria for handling classified information.

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

In the 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 the European level to maximise their efficiency and enhance their impact. The following examples of REA-funded projects illustrate this:

The **CREDENTIAL** project has developed innovative cloud-based services for securely storing, managing and sharing digital identity information and other critical personal information helping compliance with the EU's General Data Protection Regulation (GDPR). Compared to existing identity management systems, the CREDENTIAL solution, based on advanced proxy cryptography, ensures that the operator of an identity management system itself has no access to the users' personal data, and, in case of any hacker attack, no confidential data get into circulation. The usability, efficiency and flexibility of the solutions developed by the project have been successfully tested in pilots in safety-critical domains like eGovernment, eHealth and eBusiness.

The **SUCCESS** project has developed a novel security solution providing security monitoring and countermeasures which will significantly reduce the risks of cyber-attacks when next generation smart meters are deployed, and demonstrated their functioning in three field trials. This is of particular relevance as the transformation of the power grid into an open system, where devices at home, such as Smart Meters and Smart e-Vehicle chargers, can communicate directly with the utility providers, requires new technologies to increase cybersecurity in electricity distribution. Moreover, the solution will help addressing the recommendations of the Network and Information Security Directive on Critical infrastructure operators in full compliance with the EU's GDPR.

### REA key achievements for 2018

3 calls (budget : €219.83m)

229 proposals submitted

38 proposals main listed

17.8 % success rate

Evaluations for the three SC7 2018 calls were finalised towards the end of 2018: 38 proposals have been retained for funding out of 213 (299 in 2017) eligible proposals, resulting in a success rate at 17.8 %, slightly higher than in 2017 (14%). The drop in subscription and the increased success rate is exclusively due to the drop in the number of proposals in the DS Call (38) with respect to 2017 where the number of submitted proposals was exceptionally high (160).

42 grants signed (calls 2017)

137 running projects

While no SC7 grant has been signed yet for the 2018 calls, REA signed 42 grants from the 2017 calls.

By 31 December 2018, REA managed a total of 137 running projects under this activity, of which 116 were H2020 projects and 21 were FP7 projects.

In terms of execution of the budget for payment appropriations for 2018, a total of 147 payments were processed during the year, using 100 % of the budget for H2020 (EUR 136.01 million) and FP7 (EUR 18.49 million).

### Policy feedback and D&E

The unit at REA in charge of managing SC7 received from the relevant Parent DGs positive feedback on the Action Plan for 2019 in relation to the PF plan, while pointing to some areas to be further improved. A final agreement is expected in the first quarter 2019.

The data collected from the beneficiaries on dissemination and exploitation activities shows that until the end of 2018, 130 SC7 grants have led to a total of 793 publications. Of those, 147 have been published in peer-reviewed journals with 28% being high-impact journals.

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

### Contribution to achieving the Commission's objectives

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

In managing the H2020 Specific objective SEWP, REA is helping DG RTD to contribute to the Commission's overarching 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 EU in accordance with the principle of excellence.

Despite a recent tendency for convergence in the innovation performances, differences among Member States and Associated Countries remain. SEWP projects are targeting those countries that are low performers in terms of R&I, with a view to widening participation in Horizon 2020 and contributing to the realisation of the European Research Area (ERA), by 'Teaming' excellent research institutions with lower R&I-performing counterparts to create or upgrade centres of excellence, and 'Twinning' institutions through staff exchanges, expert visits and training courses. The 'ERA Chairs' action is also bringing outstanding researchers to universities and research organisations in the targeted countries to help them attract and maintain high-quality human resources and to implement the structural changes necessary to achieve excellence on a sustainable basis.

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

The targeted support provided through strong cooperation between the Member States can clearly be considered as 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 the H2020 ERA Chair project **BioECON** (New Strategies on Bio-Economy) which brings together a network of top scientists and technologists in the field of the conversion of large hydrocarbon molecules in Poland - with the aim to use their expertise and skills to develop new technology to convert biomass in a more efficient and cost-effective way. In short, by converting wood chips into sugars, this project focuses on the development of innovative, efficient and environmental-friendly processes for conversion of biomass.

### REA key achievements for 2018

3 calls
(budget : €138.00m)

1008 proposals submitted

proposals main listed: n/a

success rate: n/a

A total of 1 008 proposals has been submitted for the call under this activity, including 402 proposals under the call Widening Fellowships. While evaluations are on-going for the WIDESPREAD calls, they have been finalised for Widening Fellowships with a success rate of 8.2 %.

43 grants signed (2017 calls)

161 running projects

In 2018, 43 grants were signed from the 2017 calls. REA managed 161 SEWP projects at the end of 2018.

In terms of execution of the budget for payment appropriations for 2018, 76 payments were processed during 2018, using 100 % of the budget (EUR 62.48 million).

### Policy Feedback and D&E

The SEWP PF Plan was sent to DG RTD in July 2018 and received its agreement early 2019.

The data collected from the beneficiaries on dissemination and exploitation activities shows that until the end of 2018, 227 SEWP grants have led to a total of 2 202 publications[24]. Of those, 1 402 have been published in peer-reviewed journals with 41% being high-impact journals.

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

### Contribution to achieving the Commission's objectives

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

In managing the H2020 Specific objective SwafS, REA is helping DG RTD to contribute to the Commission's overarching general objective 1 'A New Boost for Jobs, Growth and Investment'.

[24] The number of publications is a key indicator for Widening Participation. However this should be read with care. Figures related to this KPI are extracted from the Corda database, in which are also included the publications from the two years before the start of the project (to establish the baseline) and the ones generated during the lifetime of the project.

The aim 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 along the following activity lines: attractiveness of scientific careers, gender equality, integration of citizens' interests and values in R&I, formal and informal science education, accessibility and use of research results, governance for the advancement of responsible R&I and promotion of an ethics framework for R&I, anticipation of potential environmental, health and safety impacts, and improved knowledge in science communication.

### Examples of EU added value in the 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 becoming increasingly crucial. Research impacts society as a whole and there is a need for European cooperation to promote participation in all Member States, which can only be initiated at the European level.

For instance, the H2020 project **TRUST** is catalysing a global collaborative effort to improve adherence to high ethical standards in research around the world, by building an international ethics governance structure between organisations across Europe, India, Sub-Saharan Africa, China, Russia and UNESCO. TRUST has identified good practices to help with risk assessment and mitigation strategies and put them together in a Global Code of Conduct, which is now a mandatory European Commission reference document for applicants to current (Horizon 2020) and future (Horizon Europe) funding programs, helping to ensure immediate and extensive impact.

### REA key achievements for 2018

**1 call (budget: €61.25m)**

**187 proposals submitted**

**26 proposals main listed (for SwafS-2018-1)**

**23.9 % success rate (for SwafS-2018-1)**

Overall, 187 proposals were submitted to the SwafS-2018 call. For the first time, two of the topics were subject to a two-stage evaluation. Evaluations for these topics were on-going at the time of reporting (out of the 187 proposals, 76 proposals were submitted to these topics). As regards the single-stage topics, 26 were main listed which corresponds to a success rate of 23.9 % - significantly higher than in 2017 (10.7 %).

**48 grants signed**

**99 running projects**

By end-December 2018, 24 grants were signed for the 2018 call, all on time. However, grant signature was delayed for two projects of the SwafS-2018 call at the request of the consortium.

In total, 48 SwafS-grants were signed by REA in 2018 (from 2018 and 2017 calls). At 31 December 2018, there were 99 running projects.

In terms of execution of the budget for payment appropriations for 2018, 68 payments were processed in 2018, using 100 % of the budget (EUR 78.51 million).

### Policy Feedback and D&E

The SwafS PF Plan was sent to DG RTD in July 2018. At the beginning of 2019, DG RTD agreed on the Plan on Policy Feedback and on D&E activities for 2019.

The data collected from the beneficiaries on dissemination and exploitation activities shows that until the end of 2018, 114 SwafS grants have led to a total of 200 publications. Of those, 64 have been published in peer-reviewed journals with 14% being high-impact journals.

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

### Contribution to achieving the Commission's objectives

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

In managing the FP7 RSME actions, REA is helping DG RTD to contribute to the Commission's overarching 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 or SME associations, which lack (sufficient) research capacity and are given the opportunity to outsource 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 those SMEs taking part.

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

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

A good example of translating medical-scientific research into marketable solutions with potentially significant benefits for the health and healthcare systems of Europeans is the CE-MICROARRAY project, an important first step toward improving clinical early diagnosis of sepsis. Researchers have developed three innovative prototype devices to enable doctors to diagnose sepsis more quickly and with greater precision, to save lives and improve patients' chances of recovery from the deadly disease. In addition, it has the potential to save several billion euros in European healthcare costs associated with the disease each year. The success of the project has helped the project partners in securing additional funding under Horizon 2020, further developing the devices and seeking investment funding that will allow scaling up and bringing the final product to the market.

### REA key achievements for 2018

**78 SME running projects**

**100 % payment execution**

The REA units managing the RSME are making good progress in closing down the FP7 legacy. In total, 42 SME projects were closed in 2018 and 78 were still running at the end of the year for an amount still to be paid of EUR 11.3 million.

To accelerate the winding down of the remaining portfolio of projects, REA will set up a **Task Force** for a centralised financial and legal management of the remaining cases (which include a high share of cases with bankruptcies, multiple changes in the consortia, OLAF cases, etc.). The Task Force will consist of financial and legal staff from the three units that currently manage the RSME legacy who will work part-time for the Task Force. The new Task Force will become operational on 1 March 2019.

In terms of execution of the budget for payment appropriations for 2018, 27 payments were processed during the year for a total amount of EUR 3.87 million, using 100 % of the budget.

## 1.10 Activity - Administrative and Logistical Support Services

### Contribution to achieving the Commission's objectives

The initial mandate of REA included, alongside the execution of certain parts of the EC Research and Innovation programmes, the management of the H2020 administrative and logistical support services. By providing support services, REA is helping the Research family to achieve the H2020 programme objectives and thereby contributes to the Commission's overarching general objective 1 'A New Boost for Jobs, Growth and Investment'.

REA's role as service provider of administrative and support services comprises:

- Call planning (and publication),
- Contracting and payment of expert evaluators and related activities,
- Logistical support for evaluations,
- Validation of the existence and the status of legal entities, LEAR appointment, and preparation of the financial capacity assessment (FCA).

Centralising these services at REA contributes to synergies, economies of scale and simplification for programme participants.

The Agency's delegation act outlines the list of support services and beneficiaries of the services provided by REA. Details of the scope and targets for this activity are set out in the 'Rules for the administrative and logistical support services provided by REA for H2020 and certain other programmes'[25]. For validation services, details are set out in the 'Rules for the validation support services provided by the Research Executive Agency for EU grant and procurement procedures based on e-Grant and eProcurement Corporate Information Systems in the context of the Single Electronic Data Interchange Area (SEDIA)', adopted by both the SEDIA Participant Register Steering Committee and the Grant and Procurement Steering Board (GPSB).

Over time, some of the tasks delegated to REA, notably for call planning and participants' legal and financial validation, were extended beyond the R&I family to include other programmes (such as COSME, ERASMUS+, etc.). The REA mandate was revised in 2016 to also include programmes managed by DG AGRI/CHAFEA (Agricultural promotion actions), DG HOME (AMIF, ISFP, ISFB[26]) and DG JUST.

A further revision of the mandate in the second semester of 2017 expanded the legal and financial validation services offered by REA in order to cover all grant and procurement procedures under direct management in the context of the Single Electronic Data Interchange Area (SEDIA). SEDIA provides applicants, candidates and tenderers with a single entry point to communicate and exchange information with the Commission services (including executive agencies and joint undertakings). The readiness of REA to deliver SEDIA-related services was positively evaluated at the end of 2017. As from January 2018 REA started the gradual on boarding of clients willing to use the corporate validation solution. The major challenges in relation to this transition were the harmonisation of business processes and the adaptation of the IT tools. Some of these processes are still ongoing by the end of 2018 requiring the implementation of transitional solutions where needed. Additional resources were engaged to reinforce the REA unit dealing with the extra workload linked to SEDIA.

In 2018, REA implemented a remodelling of the COVE Evaluation Platform according to a proposal agreed between REA and ERCEA in 2017. ERCEA has now moved its evaluation facilities to the 7$^{th}$ floor of the building and, to compensate for the space, REA has

[25] A revised version was approved by the REA Steering Committee on 28 February 2017.

[26] AMIF – Asylum, Migration and Integration Fund; ISFP – Internal Security Fund – Police; ISFB – Internal Security Fund - Borders and Visa.

created 25 additional meeting rooms, 17 of which are equipped with state of the art IT systems, including 12 with video-conferencing facilities, as well as an expert lounge. This remodelling has improved the efficiency of the building, increasing the capacity from 580 to 700 experts.

### REA key achievements for 2018

Major highlights and workload indicators related to the provision of the **evaluation support services** for H2020 and certain other programmes in 2018 are detailed below:

Global Planning 2020 completed

6 418 experts supported on site

110 evaluations supported on-site

8 804 requests received by RES

- REA coordinated the global planning exercise of 2020 call deadlines for the main H2020 calls and all selected non-H2020 ones, as well as establishing evaluation dates for 286 calls for proposals;
- REA provided logistical support to on-site activities, involving more than 6 418 experts on site[27]. The experts assisted the Commission for the evaluation of proposals;
- The remodelling of the H2020 Evaluation facilities was largely completed;
- The Research Enquiry Service – RES[28] responded to 8 804 requests for information from the public, 42 % of which were answered directly by the external service provider, EUROPE DIRECT Contact Centre. 93.6 % of the questions were answered within 15 working days;
- Evaluation and expert management support for the **EIC pilot**: 158 high level experts were hosted and reimbursed for the 4 sessions of EIC Interviews (February, April, June and November) in accordance with the special rules foreseen from Commission Decision (2007)5858;

As regards **the contracting and payment of experts** and related activities, support services were offered to REA units and to the R&I family, as well as EASME, INEA, GSA, and the BBI and Shift2Rail Joint Undertakings. 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 again very good.

16 781 expert contracts

25 686 payments to experts, for €51.39 m

TTP: 99.7%

- Around **7 000 legal entity files** (LEF) and more than **6 500 bank account files** (BAF) for experts were processed in 2018, an increase by 15% and 16% respectively compared to last year (in 2017, 6 100 legal entities files and 5 600 bank account files were processed);
- **16 781 expert contracts** and more than **615 amendments** were signed (evaluators and monitors) in 2018, representing an increase of 6.5% in the number of contracts (15 713 contracts last year). This increase is mainly due to H2020-MSCA calls (IF, ITN, etc.). The other calls experienced a general decrease in the average number of contracts.

[27] The figure is calculated on the basis of the number of badges issued via e-Pass. This disparity between the forecast, almost 45%, is largely down to an over estimation of the number of experts needed by operational units, and a reduction in the number of proposals evaluated.

[28] The RES was initially 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). In 2018 the mandate of the RES has been extended to cover, on top of research, participants' legal and financial validation matters.

- **99.43% of expert contracts were counter-signed** by REA in less than 10 calendar days from expert signature (compared to 98.7% in 2017). This figure could have been improved were it not for the considerable IT issues encountered during the signature of the H2020-MSCA-IF contracts. The major issues were the ability of the Compass IT workflow tool to handle the volumes of work and issues with registration of documents, resulting in delays with the signature of contracts, in addition to a number of complaints from experts.
- **25 686 payments to experts** were made (an 18.36% increase on the 21,700 payments made in 2017) for a total amount of **€ 51.39 million** (a decrease of 0.42% compared to the €51.62 million spent in 2017). For some remote evaluations (e.g. H2020-MSCA-IF) the number of experts was increased in order to reduce their workload;
- **99.7%** of payments were made within 30 days; the average time to pay was **8.57 days** (compared to 99.1% with a TTP of 10.5 in 2017). This achievement was possible in part due to the sheer number of payments made for experts who only worked remotely, and despite the delayed development, testing and roll-out of the first phase for the pre-filling of expert claim to streamline the payment process, due to IT problems. This is now foreseen for early 2019.

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.

REA also provided support for the launch of the **new Expert Common Services** (ECS) IT tool, identifying and reporting issues to the helpdesk and attempting to guide users through various processes to avoid overloading the helpdesk.

In 2018, the REA **validation services** validated the legal status of **7 360 entities**, which represents a decrease by 5.5 % compared to the previous year. In addition, REA validated **9 767 LEAR extended mandates** and processed **34 056 change requests** submitted by the LEARs, which represents an increase by more than 100%.

The H2020 SME Instrument provides support for breakthrough innovation projects carried out by small and medium-sized enterprises. Unlike FP7, the SME status of participants in the H2020 SME Instrument is based on a self-declaration complemented by an online self-assessment tool[29]. As part of its validation services, REA carries out checks on the SME status for a sample of applicants selected for funding. Whilst in the past the checks were carried out after the grant agreement signature, starting from 2018 the SME verification is performed at the completion of the evaluation process. In 2018, the REA validation services carried out **61 SME status verifications**.

During 2018, REA completed the preparation of **3 921 financial capacity assessments (FCA)**, which represents nearly three times the figure in 2017. REA's role in the preparation of the financial capacity assessment is limited to providing relevant data in a structured format, extracted from the participants' (certified)

**7 360 entities validated**

**9 767 LEAR extended mandate validated**

**34 056 change requests completed**

**3 921 FCA requests completed**

[29] Since 2014, the SME status has been based on an SME self-declaration. For schemes where the SME status is an eligibility criterion, this self-declaration requires the completion of a web-based questionnaire. The questionnaire, developed by DG DIGIT in cooperation with and under the guidance of REA, is accessible via the Beneficiary Register on the Funding & Tender Opportunities Portal. At the end of the questionnaire, the entity obtains a result that either confirms or rejects its self-declared SME status.

financial statements, in order deliver to the relevant authorising officers authenticated data for their assessment.

Finally, REA remained active in the **governance of the common IT tools** used for the support services, in particular PDM/ Beneficiary Register (SEDIA) and EMPP/EMI/ECS for expert contracting and payments which it has a leading role. As part of this process, the REA worked closely with DG RTD and operational units to support the development of the eExperts platform and revising the PMON workflow, both scheduled for release in 2019.

# 2. ORGANISATIONAL MANAGEMENT AND INTERNAL CONTROL

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

**The first subsection reports the control results and all other relevant information that support management's assurance on the achievement of the financial management and internal control objectives[30]. It includes any additional information necessary to establish that the available evidence is reliable, complete and comprehensive; appropriately covering all activities, programmes and management modes relevant to the 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 as Authorising Officer by Sub-Delegation (AOSD);
- the reports on recorded exceptions,non-compliance events and internal control weaknesses;
- the opinion on the state of control of REA’s officer responsible for Risk Management and Internal (RMIC);
- 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 of the effectiveness of internal control in REA;
- the report on REA’s risk-assessment exercise.

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

These reports are derived 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 REA's Director.

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

## 2.1.0 Control environment

Effective control provides reasonable assurance to the REA management as regards achieving 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 towards the achievement of objectives;
- the regulatory and legal requirements are met;
- assets and information are safeguarded; and
- financial and other management reporting is reliable.

### 2.1.0.1 Budget implementation in 2018

REA's first Key Performance Indicator targets full implementation of the budget entrusted to it in a given year. As detailed in the executive summary of this report, REA achieved this objective with a 100 % execution of commitment and payment appropriations[31].

In 2018, REA managed financial operations related to FP7 and H2020 grants, expert management and administrative expenditure. To give an idea of the relative weight of each of these operations, Table 3 presents the budget distributed per type of payments made over 2018[32] compared to 2017.

***Table 1: Total budget managed by REA in 2017 and 2018 (payments made) (in EUR million)***

| Operational and Operating (administrative) expenditure (in € million) | Pre-financing | Payments against cost statements | Total payments related to grant management | Expert payments | Grand total: Operational expenditure | Operating expenditure | Total budget managed |
|---|---|---|---|---|---|---|---|
| **2018** | 1 310.15 | 573.53 | 1 883.68 | 51.39 | **1 935.07** | 66.77 | **2 001.83** |
| **2017** | 1 102.07 | 545.73 | 1 647.81 | 51.62 | **1 699.43** | 66.12 | **1 765.55** |

This **section 2.1 provides details on the control results for the operational budget**, covering 96.67% of the REA 2018 expenditure[33].

[31] 100.0% of execution of the credits of the Voted Budget (C1), the carried-over assigned revenue (C5) and the EFTA/EEA contribution (E0).

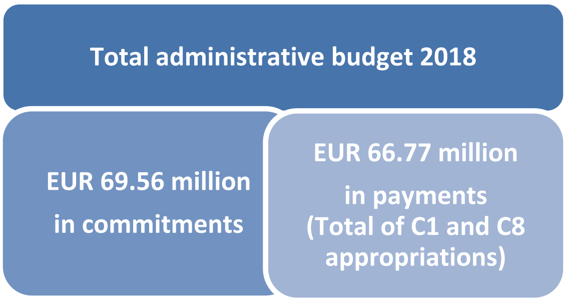
[32] From the REA Budget Execution Report as of 31 December 2018 – Operational and Administrative budget

[33] In terms of payments (as opposed to "relevant expenditure", calculated in Table 5).

As for the operating (administrative) budget, the following subsection summarises key information that will feed into the conclusions regarding legality and regularity of the transactions.

### 2.1.0.2 Operating budget

On 31 December 2018, the total execution of the 2018 operating (administrative) budget amounted to **EUR 69.56 million in commitments** (100% of the budget[34]) and to **EUR 63.46 million in payments[35],** to which an amount of **EUR 3.30 million** should be added in respect of the payments against the "Reste à liquider" (RAL – outstanding committed amounts) of the 2017 administrative budget[36].




About 90% of the Agency's 2018 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, OIB for the building infrastructure and movable properties, etc.). The mission costs of staff are processed with the help of PMO and are reimbursed in line with the Commission's rules for reimbursement of mission costs.

The remaining 10% 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 concerning the implementation of its administrative budget are low. Furthermore, for several years now, the European Court of Auditors (ECA) has given a positive opinion on the execution of REA's administrative budget without any comment. For these reasons, the REA's Director, in his capacity of Authorising Officer, did not express any reservation on the matter.

### 2.1.0.3 The control system underlying the implementation of REA's operational budget

In 2018, REA operated under a mandate that entrusted it with:

- the implementation of some 20 % of the Horizon 2020 Framework Programme;
- the management of the legacy of some 13 % of the Seventh Framework Programme (2007-2013);
- the provision of administrative and logistical support services to EU bodies implementing H2020 and other selected programmes, including, in particular, the contracting and payment of independent experts and the validation of programme participants.

[34] An amount of only €14,874.15 has not been committed at 31.12.2018 representing only 0.02% of the 2018 Budget.

[35] C1 - credits of the Voted Budget (C1)

[36] C8 - "Reste à liquider" (RAL – outstanding committed amounts) of the 2017 administrative budget

Operations of the two first items are implemented under the "direct grant management" control system, detailed in Annex 5 of this report, and amount to **EUR 1 883.68 million** paid in 2018[37].

Operations of the third item, the "support services", are manifold, and detailed under section 1.10 from an operational point of view. This section will focus on those aspects that have an impact on the declaration of assurance, in particular the legality and regularity of the expert related expenditure, amounting to EUR 51.39 million in 2018. Their underlying controls systems have been included in Annex 5.

##### 2.1.0.3.1 The grant management life-cycle

The control system in place at REA, applicable to both framework programmes, is structured in line with the internal control template in Annex 5. The ex-ante controls are implemented by REA, the ex-post controls for Horizon 2020 are operated by the Common Support Centre's Common Audit Service[38] (hosted by DG RTD) and the relating follow-up actions are carried out by REA.

An important aspect of REA's control system for grant management is the fact that most of it is designed at the level of the R&I Family. Since 2014, the Common Support Centre (CSC) has ensured the consistent and uniform treatment of all beneficiaries and the coherent implementation of the Framework Programme by providing common services for legal support, ex-post audit, IT systems and operations, business processes and programme information and data to all research DGs, executive agencies and joint undertakings implementing Horizon 2020.

As a consequence, for its H2020-related transactions, REA relies and depends on:

- common streamlined, harmonised and rationalised business processes;
- common training and improved documentation linked to 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;
- a common audit service implementing the ex-post controls and delivering feedback on the legality and regularity of the financial transactions;
- the consolidation and dissemination of results and data generated by projects managed by different actors.

While the coordination of these processes remains a collaborative process in which REA participates actively, responsibility for the overall design and set-up of the control systems is shared among all members of the R&I family.

##### 2.1.0.3.2 Inherent risks to REA's grant management operations

Beyond the standard risks and mitigating actions summarised in Annex 5, some specific considerations are listed below relating to the different specific programmes implemented by REA. These considerations will affect the targeted control measures it implements on a daily basis and are relevant to the monitoring of error rates in the underlying payments.

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[37] Please refer to Table 3: Total payments related to grant management

[38] As detailed in the ex-post control methodology under section 2.1.1.1.1.1.

### Risk profiles in FP7 operations

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.

As pointed out in the previous AARs, as regards the **FP7 People Specific Programme**, most recurring errors detected for other FP7 specific programmes (e.g. wrong calculation of hourly and overhead rates, absence of time-recording systems) have very little relevance for the mobility grants which use much simpler financing modalities, i.e. largely based on the use of unit costs.

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.

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, mainly due to 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 for small companies to apprehend.

The combination of these two factors explains this programme's higher risk profile compared to other programmes.

Indeed, being one-time participants, the vast majority of SMEs do not benefit from the learning effect of multiple participations and often lack the administrative resources to 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 R&I family level. As a consequence, REA adopted systematic ex-ante checks targeted on one of the main source of errors and discloses an error rate specific to the Research for the benefit of SMEs actions.

Another specific risk for the SMEs scheme is linked to the frequent bankruptcies of the participants. Although there is no direct financial loss for the EU budget as a result of interventions by the Participant Guarantee Fund, these cases negatively affect the programme's outcome since projects might not deliver on all expectations because of defaulting partners in the consortia. They also have a negative impact on the closure of the FP7 legacy, because of the complex legal and financial follow-up actions to carry out for each of them. REA is currently setting up a specific taskforce in order to ensure the consistent and timely treatment of those files.

It should be noted that the risk profile of the schemes has not changed over time as the rules governing the FP7 People Specific Programme and the SME actions have not been altered over recent years.

### Risk profiles in H2020 operations

Compared to FP7, the rules for Horizon 2020 have been considerably simplified via:

- 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 the beneficiaries usual accounting practices;
- more flexible rules for third parties and subcontracting;

- simpler and clearer rules for calculating productive hours (in view of calculating personnel costs);
- the extended use of unit cost model (MSCA).

This should result in 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). Although the risks arising from these three new elements cannot be avoided, the Commission and REA are taking action to mitigate them through guidance, training and a risk-based ex-ante control strategy.

At the same time, the burden of control must be balanced against the need to assure wide participation and an attractive programme, all within the overriding demand to attain 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 shall be carried out in a coherent manner *"to minimize the audit burden for participants"*.

REA, in cooperation with the R&I family, invests particular efforts to prevent errors:

- Improvements in ex-ante controls before payment: REA actively participated in the various workshops which resulted in the adoption of a common Ex-ante Control Strategy at the level of the R&I family. That strategy is designed according to four 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 for beneficiaries and effective financial control;
  - controls must be risk-based and cost-effective;
  - beneficiaries should be treated equally (FR, art. 135.7).
- In addition, REA continuously reflects on the improvements of the ex-ante controls. Specific guidelines for targeted checks to be carried out are set in checklists used for all steps. The latest developments in 2018 were linked to the reinforced monitoring applied for riskier projects and the training of financial staff on the rules for the use of third parties in projects (liked third parties, subcontractors, etc.).
- Guidance to beneficiaries and certifying auditors: under H2020 the Participant Portal offers a major improvement in terms of communicating to the beneficiaries and other stakeholders, with comprehensive guidance and clear templates.

As underlined in the previous editions of the AAR, the Marie Curie Actions already had a low risk profile under FP7 and under H2020. The design has been simplified even more with the extended use of unit costs for all the **Marie Skłodowska-Curie Actions**: all cost categories are based on unit costs fixed ex-ante in the H2020 Work Programmes.

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 is expected to be lower than for FP7.

#### 2.1.0.4 Support services

The support services represent an important share of REA's activities. They have both a direct and indirect impact on assurance building for REA and for the other bodies they serve.

The direct impact comprises the implementation of payments to experts for the whole H2020 (except ERCEA experts), amounting to **EUR 51.39 million**[39] paid from REA's operational budget.

The indirect impact lies in the fact that the support services are important components of the grant management system, thereby contributing to the achievements of all the client organisations' control objectives. Although they do not bear a direct financial risk, there are some risks relating to efficiency and reputation.

The following examples illustrate how the inherent risks to the support services might affect the achievement of objectives, and how REA contributes to their mitigation:

- Poorly organised evaluation sessions or bad performance in terms of Time-To-Pay to experts might discourage experts from working for H2020. This might lower the qualitative outcome of the programme. REA operational indicators (see the fifth KPI in particular) show that REA's performance is high and that the residual level of this risk is considered to be low.
- Late contracting or LE/BA validation for experts may affect the organisation of evaluations and the ensuing Grant Agreement Preparation (GAP) process if the start of evaluations is postponed. REA mitigates this through reminders at various stages before the closure of the call and the start of the evaluation, as well as discussions on contracting of experts in advance of the evaluation.
- Issues in call planning can have similar impacts, especially if the call planning is not finalised or properly adapted ahead of time. The impact can, as above, lead to delays in evaluations, over-booking of the evaluation premises, and delays in the GAP process. As a mitigating measure, REA liaises with the relevant stakeholders as often as possible in order to ensure that the call planning is kept up to date.
- The validation of the LEAR extended mandate during the GAP is a complex issue which may result in delays during this phase. REA has taken actions to simplify the process and thus ensure timely signature of grant agreements and procurement contracts.
- The change of the approach when carrying out SME status verifications from ex-post to ex-ante (i.e. before grant agreement signature) ensures better protection of the EU financial interest by avoiding to fund entities that do not qualify as SMEs.
- The REA validation services participated actively in the working group on the evaluation of EU Recommendation 2003/361 dealing with the definition of micro, small and medium-sized enterprises. The evaluation involves internal and external EU stakeholders and aims at ensuring that the objective of targeting competitiveness of the SMEs is met.

[39] From the REA Budget Execution Report as of 31 December 2018 – Execution of the operational budget 2018 – implementation of payments appropriations for experts – total H2020.

- During 2018 REA initiated a full harmonisation process on the approaches to select applicants for financial capacity assessment in the non-H2020 grants to strengthen the equal treatment of participants and streamline the REA validation processes.
- Legal and financial validations may be perceived as complex by entities which do not frequently apply in EU funded grants and tenders, especially in the context of international participation (i.e. from non-EU countries). In order to ensure that the participants' validation does not represent an obstacle when meeting the specific objectives in the area of international participation, the REA validation services took measures to clarify and ease the process (e.g. dedicated training in the context of the Science Counsellors Week, etc.).

### 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[40]. The Agency's assurance building and materiality criteria are outlined in the AAR Annex 4. Annex 5 outlines the main risks together with the control processes aimed to mitigate them and the indicators used to measure the performance of the relevant control systems.**

Effectiveness of the controls is demonstrated by the control results regarding the legality and regularity of the operations, the fraud prevention and other control objectives, in particular the safeguarding of assets. The most detailed results are based on the error rates detected by ex-post audits in the main expenditure items (grants). They constitute REA's fourth Key Performance Indicator.

The new 2018 Financial Regulation introduced additional reporting requirements for the Annual Activity Report. Information relating to those requirements is presented in Annex 10.

The efficiency of REA's operations is to be analysed in the light of the volume of activities performed and their quality and timeliness. Indicators such as Time-to-Grant, Time-to-Pay or Time-to-Contract for experts are also among REA's Key Performance Indicators.

The chapter dedicated to the economy of the controls give account of the investment needed to achieve the results reported above.

Finally, a conclusion regarding the cost-effectiveness of REA's operations will be drawn, based on the previous elements.

#### 2.1.1.1 Effectiveness of the controls

Control results are detailed here regarding the legality and regularity of the operations, the fraud prevention and other control objectives, in particular the safeguarding of assets. The benefits of the controls are summarised for the direct grant management and for the support services in a specific subsection.

##### 2.1.1.1.1 Legality and regularity of the operations

**REA has set up internal control processes aimed to ensure the adequate**

[40] 1) Effectiveness, efficiency and economy of operations; 2) *reliability of reporting; 3) safeguarding of assets and information*; 4) prevention, detection, correction and follow-up of fraud and irregularities; and 5) adequate management of the risks relating to the legality and regularity of the underlying transactions, taking into account the multiannual character of programmes as well as the nature of the payments (FR Art 36.2). *The 2nd and/or 3rd Internal Control Objective(s) (ICO) only when applicable, given the DG's activities.*

**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.**

**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 R&I family 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.

REA's general control objective for FP7, as stated in Annex 4 to this report, is to ensure for the Seventh Framework Programme 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 achieve a residual error rate as close as possible to 2 %, without necessarily expecting it to go below 2 %.

Whether or not REA is on track to achieve this objective is assessed annually, in light of the results of the Ex-post Audit Strategy implementation 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.

Of the REA support services, only the experts' management includes spending; the validation services are part of the Commission's corporate control system for budget implementation. Given the relatively low annual amount paid to experts, the legality and regularity of the transactions is assessed by ad hoc ex-post verifications.

The following subsections include information on the methodology underlying the ex-post audit results for the programmes and activities delegated to REA under FP7 and H2020 programmes and disclose detailed indicators regarding the status of the implementation of ex-post audit strategies and audit plans and the results of the ex-post audits per activity. A short subsection shows the control results for the experts' management.

###### 2.1.1.1.1.1 Ex-post control methodology

The principal methodology underlying the calculations of the error rates is defined in the Common Audit Strategies for FP7 and H2020 for the R&I family. Where relevant, REA complements the common indicators, in view of a more detailed reporting on the legality and regularity of the operations it manages.

**Definitions**

The Common Representative Sample (CRS)[41] provides an estimate, via a representative sample of cost claims across the R&I family, of the **overall level of error** in the Research Framework Programmes, for all services involved in its management. All of these grants follow the same homogeneous overall control system, which is set out in this report.

Whilst the CRS is thus the basic indicator of legality and regularity for the Framework Programme as a whole, REA also examines all the results of controls in its particular population to confirm whether the error rate detected by the CRS should be complemented by other evidence that may lead to **different conclusions on the error rate**.

The CRS is complemented by 'risk-based' audits, which are selected according to one or more risk criteria. These audits are intended to detect and correct as many errors as possible for instance by targeting the larger beneficiaries and through the identification of possibly fraudulent operators. These audits are also referred to as 'corrective' audits.

[41] For FP7, CRAS (Common Representative Audit Sample).

Different indicators are calculated to provide a comprehensive view on legality and regularity:

**Representative Error Rate for the Framework Programme**: this is the error rate derived solely from the results of the CRS, extrapolated to the overall population and calculated for each FP as a whole. This error rate provides an estimate of the level of error in the given Framework Programme at the time of the audits, but does not factor in the follow-up and corrections/recoveries undertaken by managing services after the audit, nor does it provide information on the net final financial impact of errors[42].

**Specific Detected and Local Representative Error Rates**: This error rate is calculated for actions that have a risk profile different from FP7 or H2020 mainstream actions: MCA and SME actions for FP7, and MSCA actions for H2020. For FP7, the specific detected error rate is based on a non-biased selection of transactions[43], without this being statistically representative. Nevertheless, it is seen as providing relevant indications on the error rate in the related population. For H2020, the **local representative error rate[44] for MSCA** is provided by the Common Audit Service (CAS), based on the CRS and a "second-layer" sample specifically created for this population.

**Residual Error Rate**: the residual error rate, on a multi-annual basis, is the extrapolated level of error remaining after corrections/recoveries undertaken by the managing services following the audits that have been carried out. 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. All non-audited expenditure of audited beneficiaries is clean from systematic material errors so that the residual error rate in this expenditure can be estimated to be equal to the non-systematic part of the representative error rate (for expenditure subject to extension of audit findings this is only assumed when the respective extension procedures have been closed).

The residual error rate develops over time and depends on the assumptions set out above. 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 the ex-post audit strategy, to deal with errors over a multi-annual basis. However, it remains an estimate as long as not all the cost claims have been received and not all the cases of extension of audit findings have been fully implemented.

**Specific Residual Error Rates**: The specific residual error rate is calculated using the same formula and assumptions as the Residual Error rate. It is based on the Specific Detected Error Rate for MCA and SME actions for FP7, and on the local representative error rate for MSCA actions in H2020.

### Error rates following the risk profile of REA's specific programmes

Since the **Representative Error Rate** predominantly reflects the errors encountered in the mainstream collaborative R&I projects, it can be considered as fully representative

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42 Not all overcharging results in overpayments detrimental to the EU budget. For example, when beneficiaries incur costs higher than estimated at the time of setting the maximum grant, some of its declared costs will not be funded and the rejection of such costs following an ex-post audit will not impact on the final grant paid.

43 See more explanations under the next title.

44 Terminology from the H2020.

for the FP7 **Space and Security** themes, and for all H2020 projects, except the MSCA actions for which a dedicated local representative error rate is defined.

The Research for the Benefit of **SMEs actions** in the Capacities Specific Programme and the **Marie Curie Actions** (MCA) in the FP7 People Specific Programme have a **different risk** profile compared to mainstream FP7 projects as explained above. As a consequence, the overall assessment of the risk exposure in terms of legality and regularity in the underlying transactions will be supported by the Specific Detected Error Rates.

The specific detected error rates for FP7 take into account:

(1) the audits that were part of the CRaS and were financed from the targeted REA 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 specific detected error rate as this would introduce a significant bias. By definition, risk-based audits, target high-risk beneficiaries and are launched by the ex-post audit service on the basis of information received from operational units expressing serious doubts about a beneficiary, the European Anti-Fraud Office (OLAF), the European Court of Auditors or whistle-blowers. Their findings are not representative of the population.

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

- 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 to those in FP6, which implies that most beneficiaries have gained a sufficient understanding of the funding rules, independently of their frequency of participation. As a result, a differentiation between error rates for incidental and repeat beneficiaries is no longer expected.
- Since the **SME actions** have many non-repeat beneficiaries, the share of the total budget covered by beneficiaries who have been audited for at least one FP7 project is low. For the SME actions, the audits targeting the top beneficiaries include mostly those selected as an add-on to a random selection[45]. As such, by excluding audits selected on the basis of a risk identification while including audits under the strand of 'top beneficiaries', no significant bias is expected in the detected error rate.

For H2020, the MSCA Local Representative Error Rate takes into account the results available in 2018 for:

(1) the audits in the random sample for MSCA (layer 2)

(2) the audits of MSCA in the random CRS (layer 1),

All H2020 audits are performed by the Common Audit Service (CAS) of the Common Support Centre hosted by DG RTD.

[45] 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.

#### 2.1.1.1.1.2 FP7 results for 2018

Following the state of play of the implementation of the common audit strategy and of the REA audit plan, the results of the FP7 audits are discussed below.

**Implementation of the FP7 audit strategy and plan**

The audit work for FP7 was almost completed in 2018. The last CRS (was launched by the CAS in 2016. By the end of 2018, just three audits of the CRS remained open.

REA spending on FP7 accounted for **6.2 % of the payments related to grant management**[46] and **40.3 % of the total "relevant expenditure"** [47] for operational expenditure in 2018. This share is expected to fall substantially in 2019.

Against this background, a wrap-up of the FP7 audit campaign is made below, and FP7 audits, which will be targeting exclusively risk based selections, will no longer be covered in detail in future AARs.

**575 audits finalised over the period 2009-2018**

**1,603 cost claims audited from 1,070 projects**

**Audit coverage : 56 %**

The **R&I family as a whole has 4 520 FP7 audit results** covering 64.7 % of the programme's expenditure, completed by the end of 2018.

The percentage of FP7 expenditure covered by the audits (64.7 %) refers to the value of the participations of the audited beneficiaries. It includes both the fully audited participations (8.5 %), also referred to as the 'direct' coverage, and the non-audited participations which nevertheless, after the full treatment of audit results, are clean from systematic errors (56.2 %), also referred to as the 'indirect' coverage.

REA had a **target of 518 audit results** for FP7. With **575 FP7 audit results, this target was exceeded by 11 %**. Once the FP7 audits still open and planned for 2019 are closed (33 audits open at the end of 2018 and up to 25 new risk audits planned for 2019), the original target for FP7 audits will have been exceeded by 115.

**22 FP7 audits launched in 2018**

**608 audits launched over the period 2009-2018**

**1,139 projects covered by audits**

The common FP7 Audit Strategy agreed at the level of the R&I Family was complemented by REA's ex-post audit plan for 2018/2019. As of 2017, no further random audit samples have been taken by the CAS or REA, and all new audits on FP7 are risk based. The REA audit plan is aimed at directing the limited resources for ex- post controls to give maximum impact by considering the specificities of each action managed by REA and by exploiting the experience gained through audit activity in previous years. This foresaw the launch of 21 ex-post audits targeting participations considered as a higher risk.

By the end of 2018, **22 audits were launched**, of which one risk-based audit was directed at the SME actions. For details on the audits launched, see Table 3 in Annex 10.

From 2009 to 2018, 608 audits were launched, covering a total of 1,139 projects[48]. This is further detailed by programme/theme and presented in Table 2 in Annex 10.

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46 Excluding Expert management. REA spending on FP7 decreases to 6.1% when calculated on the total operational expenditures (grant and expert management both included).

47 See Table 5 in the section 2.1.1.1.4.

48 For audits performed on different beneficiaries of one project, we count the project audited several times. The number of distinct projects covered by all of our audits is currently 818. It is ensured that projects audited with multiple cost statements are not counted multiple times within one audit.

In 2018, **14 risk-based audits were launched for the Space and Security** themes in the FP7 Cooperation Programme,

The audits which were finalised by the end of 2018 covered a total of **1,603 audited cost claims from 1,070 projects**[49]. In terms of budget coverage[50], REA estimates that 3.6 % of the EU contribution requested by the beneficiaries has been directly audited. However, also according to REA's estimates, some **56 % of the budget is covered in total** by adding the indirect coverage of 52.3 % through the extension of the audit findings[51] 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 5 of Annex 10).

### Results of the ex-post audits for FP7

***Representative and Specific Detected Error rates***

Representative Error Rate
Space & Security:
5.26 %

Based on 477 cost statements for which the audit is completed (98 % of the complete sample of 486[52] including CRaS 1, CRaS 2 and CRaS 3), the **Representative Error Rate** is **5.26 %**. The remaining cases are still subject to contradictory procedures with the beneficiaries. Consequently, the Common Representative Error Rate may still develop slightly. This result is considered as representative for the grants signed under of the **Space and Security** specific programmes.

The **detected error rates** are based on 121 and 363 cost statements for the **SME actions and the People Specific Programme** (regarding the Marie Curie Actions) respectively. Details of the audited cost statements can be found in Tables 5 and 6 in Annex 10.

Specific Detected Error Rate:
SME actions : 6.12 %
MCA (People) : 1.73 %

The **specific detected error rate** of the **People Specific Programme** is **1.73 %**[53], which corroborates REA management's assessment of a low inherent risk for this scheme.

The **specific detected error rate** determined for **SME actions** is **6.12 %.**

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49 The desk audits performed in 2014 and 2015 to ensure 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.

50 Audited EU requested contribution per beneficiary vs total EU requested contribution.

51 I.e. extrapolation of audit results to non-audit participations of audited beneficiaries; does not include the SME desk audits.

52 Of which 2 ongoing and 7 cancelled.

53 Results of the specific error detected in TOP and MUS (including CRaS) audits on costs statements for People are respectively 1.20 % and 4.05 %. 'MUS' audits are audits selected on a random basis to form part of the common representative sample for the R&I family DGs. 'TOP' audits are audits of 'top beneficiaries' with a high frequency and value of participations designed to maximise audit coverage by value of the total REA contribution.

### *Residual Error Rates*

The Representative Error Rate (for Space and Security) and REA's Specific 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 carried out.

Residual Error Rates:

Space : 3.49 %

Security: 3.78 %

SME: 5.77 %

MCA (People): 1.55 %

Even though the risk profile of the Space and Security themes is similar, the subpopulations may differ and thus justify 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 under the first, second and third CRaS, the **residual error rate** considered for the **Space** theme is **3.49 %** and **3.78 %** for the **Security** theme.

For the **SME actions** and for the **People** Specific Programme (Marie Curie actions – MCA), **the residual error rates** are calculated at **5.77 %** and **1.55 %** respectively (both based on the detected error rates).

## Overview of the FP7 error rates for the period 2009-2018 at 31 December 2018

Table 4 below gives an overview of the calculated error rates for the FP7 specific programmes managed by REA. It is based on the conclusions of the available final audit reports.

**Table 2: Overview of the FP7 error rates for the period 2009-2018 at 31 December 2018 (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 | |
| **Representative Error Rate** | 5.26 % | **Representative Error Rate** | 5.26 % | **Detected Error Rate** | 6.12 % | **Detected Error Rate** | 1.73 % |
| **Residual Error Rate** | 3.49 % | **Residual Error Rate** | 3.78 % | **Residual Error Rate** | 5.77 % | **Residual Error Rate** | 1.55 % |

## Comments on the results

The audit strategy for FP7 has been fully implemented.

There are no REA audits outstanding[54]. Since only three CRaS audits remain open, it can be assumed that the final Residual Error Rate is final.

The results are in line with the conclusions expressed in the AARs over the years: the Common Representative Error Rate resulting from FP7 audits will be around 5 % at the end of the programme and the residual error rate at around 3 %.

These figures do not necessarily mean that there is a loss to the EU budget. Many of the projects spend more than the capped project budget, so the real loss to the EU budget

[54] From the CRaS. Risk based corrective audits are still implemented, when needed.

will be lower than when estimating the financial impact by using solely the error rates above.

The reservation in the declaration of assurance for FP7 expenditure is addressed in section 2.1.5.

REA, together with the R&I Family, has made continuous efforts to mitigate the risk of error in FP7 expenditure, including:

- a number of simplifications introduced in 2011 (for example accepting average hourly rates without a certificate on methodology, unit costs for owner/managers not receiving a salary, etc.) and modifications to the Model Grant Agreement;
- a major communication campaign on the most recurring errors to be avoided, targeting beneficiaries and their auditors;
- continuous review of ex-ante control procedures, often based on the results of audits by the Commission auditors as well as those of the European Court of Auditors;
- 575 ex-post audits, performed by external or in-house auditors, together with the recovery of overpayments and the extrapolation of systemic errors to unaudited cost claims from the same beneficiaries.

However, it is clear that the targeted 2 % residual error rate for FP7 will not be attained. Nevertheless, the lessons learned from FP7 audits have been used to develop the general framework for the Horizon 2020 programme.

###### 2.1.1.1.1.3 H2020 results for 2018

The state of play regarding implementation of the common audit strategy and the first results of the H2020 audits are presented below.

**Results of the ex-post audits and expectations for Horizon 2020**

At this stage of the programme lifecycle, **cost claims totalling 9 billion euros** of requested funding had been received by the services by the end of 2018. The first Horizon 2020 audits were launched in the middle of 2016 and further audits were launched in 2017 and 2018. Two Common Representative Samples (CRS), Common Risk Samples and Additional Samples have been selected. In total, by December 2018, 2 383 participations had been selected for audit, covering all the services signing grants in Horizon 2020.

**H2020**

**Common Estimated Representative Error Rate: 3.32 %**

In total, the audit of 1 155 participations has been finalised by 31.12.2018 (out of which 763 from the 2018 selection). The error rates for the H2020 programme overall at 31.12.2018 are:

**The Detected Error Rate**[55]**,** based on 164 out of 303 participations selected in the first CRS, is 2.43%. However, if we take into account the draft audit reports, then the expected representative error rate for the full sample will be around **3.32%.**

**H2020**

**Estimated Residual Error Rate for REA: 2.60 %**

**Residual Error Rate for the Research and Innovation Family**: 2.22 % (2.25% for REA alone), expected to rise to around 2.45% when taking into account the draft audit reports (**2.60%** for REA alone).

[55] For 2018, the error rate calculated from the common representative sample audits is disclosed as "detected" instead of "representative", because of the non-conclusive character of the partial results.

In addition, **for the MSCA, 150 participations on average**[56] will be selected annually for audit (up to 2025), covering both 50 randomly selected participations feeding into a specific local representative error rate for this action and risk-based audits selected following a bottom-up approach (i.e. participations having a specific risk profile and those identified by project officers as particularly at risk over compliance issues). The 50 randomly selected participations to be audited will allow REA to build a sample over time that will provide reliable indications on the exposure to errors in the MSCA.

**H2020**

**Estimated local representative Error Rate for MSCA REA: 1.73 % (based on FP7)**

As for the MSCA part of the programme, for which a specific control target was set in the AWP 2018, the **audit results available do not allow, at this stage, for a reliable conclusion or estimate to be drawn**. Only 92 audited MSCA participations have been finalised with an actual local representative error rate of only 0.05%. Many audits from the representative sample have not yet been completed and therefore the representative error rate is expected to increase further when additional audit findings become available. For the purpose of the assurance building, **REA will refer to the last-known FP7 specific detected error rate of 1.73 %, considered as still reliable, until more MSCA representative audits will be closed**.

For the **Specific Residual Error Rate for MSCA**, following a conservative approach, **REA will also refer to the last residual error rate for FP7 in 2017, i.e. at 1.55 %, for the calculation of the amount at risk under the H2020 MSCA programme**.

The risk exposure under H2020 being considered equivalent or lower compared to FP7, REA is of the opinion that the error rates from FP7 offer a conservative estimate for the detected and residual error rates of MSCA under H2020.

### Comments on the H2020 results

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

There is nevertheless evidence that the simplifications introduced in Horizon 2020, as well as the increased experience of major beneficiaries, are reducing the number and level of errors made by beneficiaries. However, beneficiaries still make a number of errors, sometimes because of a lack of understanding of the rules, sometimes because of a non-respect of the rules.

To improve clarity of the rules and compliance with them the following actions were already taken:

- The Model Grant Agreement, and its accompanying annotations, have already been adjusted to introduce simplifications or clarifications on different points. The results of the first audits were considered in a working group bringing together auditors from the Commission and the Court of Auditors to see where additional simplifications and clarifications may be needed[57].

[56] 166 in 2018 and 195 in 2019

[57] This meeting took place on 14 March 2018.

- Considerable efforts have been made by the CAS, with contributions from REA, to ensure clear communication of the rules and guidance to participants and their auditors. In 2018, the CSC attended and coordinated 15 events organised by the National Contact Points of members States and associated members with a total of 1819 participants.
- Lump sum funding has already been used for the SME stage 1 calls grants. Trials of lump sum funding for collaborative projects began in 2018 to evaluate if this form of entitlement funding, which would avoid errors of legality and regularity, is appropriate for achieving all the objectives of the research policy. These trials will continue in 2019 and 2020, and will include selected topics in calls managed by REA.

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 %****.*"

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

In conclusion, REA still considers that the overall error rate will fall within the range established in the Financial Statement, so it does not consider that a reserve is needed for Horizon 2020 expenditure.

For the MSCA in particular, the first audit results, from the CRS and other audits, suggest that, over the multiannual period, the residual error rate will be below 2 % as was already the case under FP7.

###### 2.1.1.1.1.4 Legality and regularity of the expenditure relating to experts

The contracting and payment of experts uses a fully decentralised circuit with no counterweight. This is considered to be the most appropriate circuit due to the very high volume of transactions, the low value of the payments and the short legal time limit to pay. In order to mitigate the risk of this circuit, the Financial Support and Verification Sector of REA's central finance unit performs ex-post checks on a sample of payments executed and authorised by the unit in charge of contracting and payment of experts.

This exercise, covering payments made between January 2017 and June 2018, verified if the experts' contracts and payments were in line with the requirements laid down in the expert contracts and complied with applicable rules and procedures. It was based on a “stratified” sampling to ensure that all periods and types of payments were analysed and to factor in the complexity and risk factors associated to each type of payment.

Overall, the verification showed that the files were in line with Commission Decision C(2007)5858 and the available guidelines. In general, payments respected the approved methodology, ensured equal treatment and appropriate timeliness of payments to expert evaluators and monitors.

No systematic errors were detected and only one error was identified with a limited financial impact (€200.00). The total value of the payments checked amounts to € 264 085.60; therefore, the error rate resulting from this sample is 0.076%, far below the level of materiality generally applied (2%). As an additional outcome of the verification, some recommendations were made, mostly in order to improve the information registered in the relevant IT tools.

This result corroborates the assumption that this segment of REA's expenditure is not affected by material errors. Therefore, the 0.5% estimated error rate applied in the calculation of the amounts at risk in subsection 2. 1.1.1.1.5 is considered as a reliable and conservative approach.

###### 2.1.1.1.1.5 Conclusion on the legality and regularity of the operations in 2018

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

**For the Research Executive Agency, the estimated overall amount at risk *at payment*[58] for the 2018 expenditure[59] is EUR 38.44 million. This is the AOD's best, conservative estimation of the amount of *relevant expenditure*[60] during the year (EUR 1 637.62 million)[61] not in conformity with the applicable contractual and regulatory provisions at the time the payment is made[62].**

**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[63] for the 2018 expenditure amount to EUR 6.55 million. This is the amount of errors that the Agency conservatively estimates to identify and correct from controls that it will implement in successive years.**

**The difference between those two amounts leads to the estimated overall amount at risk *at closure* for the 2018 expenditure of EUR 31.89 million.**

[58] In order to calculate the weighted average error rate (AER), the *detected or equivalent* error rates have been used.

[59] Total of the operational expenditures and the administrative expenditure of REA in 2018.

[60] "*relevant expenditure*" during the year; *see note to the table.*

[61] Total of the operational expenditures and the administrative expenditure of REA in 2018.

[62] "*payments made*" or *equivalent; see note to the table*.

[63] The historic corrective capacity, reported by DG BUDG at 1.3 % has been adjusted based on the difference between the relevant Representative/Detected Error rate and the relevant Residual Error/specific residual error rate for the expenditure item. The impact of this methodology on the overall figures for the estimated amount at risk at closure is the following: if the corrective capacity of 1.3 %, provided by the central services through corporate reports, was applied without adjustment, the estimated overall amount at risk at closure would amount to EUR 21.29 million, to be compared to EUR 31.89 million declared below.

**Table 3**: **Estimated overall amount at risk at closure**

| | Payments made[1] (in 2018; m€) | *minus* new[2] prefinancing (in 2018; m€) | *plus* cleared[3] prefinancing (in 2018; m€) | relevant expenditure[4] (for 2018; m€) | Estimated Representative/ Detected Error Rate[5] (%) | Estimated overall amount at risk *at payment* (2018; €) | Estimated corrective capacity based on the residual error rate[6] ( %) | Estimated future corrections (for FY; €) | Estimated overall amount at risk at closure (€) | Share of the amount at risk in % of the relevant expenditure |
|---|---|---|---|---|---|---|---|---|---|---|
| **H2020** | | | | | | | | | | |
| Excellent Science - Marie Sklodowska Curie actions | 822.10 | 623.16 | 217.68 | 416.62 | 1.73% | 7 207 513 | 0.18% | 749 914.68 | 6 457 599 | |
| Excellent Science - FET Open | 132.53 | 102.93 | 12.55 | 42.14 | 3.32% | 1 399 055 | 0.72% | 303 409.54 | 1 095 646 | |
| LEIT - Space | 100.58 | 73.21 | 36.38 | 63.74 | 3.32% | 2 116 300 | 0.72% | 458 956.52 | 1 657 343 | |
| Societal Challenge 2 | 319.01 | 225.64 | 37.27 | 130.65 | 3.32% | 4 337 469 | 0.72% | 940 656.02 | 3 396 813 | |
| Societal Challenge 6 | 116.18 | 83.58 | 36.75 | 69.36 | 3.32% | 2 302 719 | 0.72% | 499 384.93 | 1 803 334 | |
| Societal Challenge 7 | 135.48 | 100.34 | 72.48 | 107.62 | 3.32% | 3 572 828 | 0.72% | 774 830.24 | 2 797 998 | |
| Spreading Excellence and Widening Participation | 62.40 | 37.40 | 4.74 | 29.74 | 3.32% | 987 322 | 0.72% | 214 118.08 | 773 204 | |
| Science with and for Society | 78.44 | 63.88 | 12.12 | 26.67 | 3.32% | 885 504 | 0.72% | 192 036.93 | 693 467 | |
| **Total H2020:** | **1 766.71** | **1 310.14** | **429.96** | **886.53** | **2.57%** | **22 808 711** | **0.47%** | **4 133 307** | **18 675 404** | |
| | | | | | | | | | | |
| **FP7 legacy** | | | | | | | | | | |
| People | 89.53 | 0.01 | 432.37 | 521.89 | 1.73% | 9 028 744 | 0.18% | 939 407 | 8 089 337 | |
| Cooperation - Space theme | 5.09 | 0.00 | 17.38 | 22.46 | 5.26% | 1 181 572 | 1.77% | 397 601 | 783 970 | |
| Cooperation - Security theme | 18.49 | 0.00 | 49.63 | 68.12 | 5.26% | 3 582 938 | 1.48% | 1 008 127 | 2 574 811 | |
| Capacities - SME actions | 3.87 | 0.00 | 16.59 | 20.46 | 6.12% | 1 252 044 | 0.35% | 71 604 | 1 180 441 | |
| **Total FP7:** | **116.97** | **0.01** | **515.97** | **632.93** | **2.38%** | **15 045 298** | **0.38%** | **2 416 739** | **12 628 559** | |
| | | | | | | | | | | |
| **Total Grant Management** | **1 883.68** | **1 310.15** | **945.93** | **1 519.47** | **2.5%** | **37 854 009** | **0.43%** | **6 550 046** | **31 303 963** | |

| | Payments made[1] (in 2018; m€) | *minus* new[2] prefinancing (in 2018; m€) | *plus* cleared[3] prefinancing (in 2018; m€) | relevant expenditure[4] (for 2018; m€) | Estimated Representative/ Detected Error Rate[5] (%) | Estimated overall amount at risk *at payment* (2018; €) | Estimated corrective capacity based on the residual error rate[6] ( %) | Estimated future corrections (for FY; €) | Estimated overall amount at risk at closure (€) | Share of the amount at risk in % of the relevant expenditure |
|---|---|---|---|---|---|---|---|---|---|---|
| **Expert management [7]** | **51.39** | **0.00** | **0.00** | **51.39** | **0.5%** | **256 931** | **0.00%** | **0** | **256 931** | |
| **Total operational expenditure** | **1 935.07** | **1 310.15** | **945.93** | **1 570.85** | **2.4%** | **38 110 939** | **0.42%** | **6 550 046** | **31 560 894** | |
| **Administrative expenditure [8]** | **66.77** | **0.00** | **0.00** | **66.77** | **0.5%** | **333 827** | **0.00%** | **0** | **333 827** | |
| **Grand total** | **2 001.83** | **1 310.15** | **945.93** | **1 637.62** | **2.3%** | **38 444 767** | **0.40%** | **6 550 046** | **31 894 721** | |
| **Amount at risk at closure in percentage of the relevant expenditure [6]** | | | | | | | | | | **1.95%** |

[1] Payments made or equivalent, such as after the expenditure is registered in the Commission's accounting system, after the expenditure is accepted or after the pre-financing is cleared. In any case, this means after the preventive (ex-ante) control measures have already been implemented earlier in the cycle.

[2] New Prefinancing (PF) actually paid out by REA during the financial year (FY) (i.e. excluding any PF received as transfer from another DG).

[3] PF actually having been cleared during the FY (i.e. their 'delta' in FY 'actuals', not their 'cut-off' based estimated 'consumption').

[4] For the purpose of equivalence with the ECA's scope of the EC funds with potential exposure to L&R errors (see the ECA's 2017 AR methodological Annex 1.1 point 15), also our concept of "relevant expenditure" includes the payments made, subtracts the new pre-financing paid out, and adds the previous pre-financing actually cleared during the FY. This is a separate and 'hybrid' concept, intentionally combining elements from the budgetary accounting and from the general ledger accounting.

[5] In order to calculate the weighted Average Error Rate (AER) for the total relevant expenditure in the reporting year, the common representative error rate for FP7 and the family expected representative error rate for the full sample for H2020 including draft reports have been used. For MSCA grants, the latest measured FP7 audit results have been used.

[6] The correction percentage is based on the difference between the Representative/Detected Error rate and the Residual Error rate. This is the best 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.

[7] The error rate for administrative expenditure and experts related payments is estimated at 0.5% accordingly to best practice identified in the Research and Innovation Family.

[6] The total amount in % here is the sum of the detail lines and, for rounding reasons is not equal to the sum of the "operational" and "administrative" subtotals.

#### 2.1.1.1.2 Fraud prevention, detection and correction

**REA has developed and implemented its own Anti-Fraud Strategy (AFS) since 2013, elaborated on the basis of the methodology provided by OLAF. It was updated in September 2017.**

Strategies and measures of fraud prevention, detection and correction are derived from the Financial Regulation's principle of sound financial management that involves reducing the risk of fraud and irregularities in order to better protect EU financial interests by building relevant preventive and protective measures in the Internal Control Systems. Specific benefits of the system are reduced fraud risks such as intentional overcharging of cost, multiple claims for the same resource, fictitious subcontracting, and fictitious participants, multiple financing of consortia of connected companies, plagiarism and conflict of interests in project selections/evaluations/reviews. These benefits are not easily quantifiable as fraud prevention has a strong deterrence effect that prevents these risks from actually materialising.

**Strategies and action plans**

REA Anti Fraud Approach and related action plan implemented as planned in 2018

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

REA regularly updates its Anti-Fraud Approach and related action plan as laid down in the AWP 2018[64]. The revision in September 2017[65] reflected the interpretation of the application of financial penalties.

The **Common Anti-Fraud Strategy in the R&I family** agreed by the CSC Executive Committee will continue to improve fraud risk awareness through communication activities and training for operational staff, by linking databases and information with other R&I DGs and services for intelligence analysis, and through risk-based audit preparation and selection.

The Actions of REA complementary to the Common Anti-Fraud Strategy of the R&I family was adopted in August 2016 to take into account specific risks linked to the REA's managed actions. In a nutshell, REA developed additional **guidance** to address the specificities of the Marie Skłodowska-Curie Actions under H2020.

The next update of the REA Anti-fraud Approach is foreseen in 2019 and will take into account the update of the Research Anti-Fraud Strategy (RAFS) prepared in December 2018 in the FAIR committee and the updated Commission Anti-Fraud Strategy (CAFS) that has been submitted for Inter-service Consultation (ISC) in December 2018. It will take into account the recent ECA's special report on fighting fraud in EU spending[66] as well.

The R&I 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 was involved in three of the working groups set up to implement some actions of the action plan, namely:

[64] Cf. Relevant objectives and indicators for financial management: See corporate objective 3, indicator 1 of the Annual Work Programme 2018: "Updated anti-fraud strategy (AFS) of the REA, elaborated on the basis of the methodology of OLAF".

[65] Final version of the updated REA Anti-Fraud approach dated 31/10/2017 (Ares (2017)5317716).

[66] Special report No 01/2019: Fighting fraud in EU spending: action needed

- 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);
- to develop a common approach for reinforced monitoring (leading service: DG RTD); and
- to develop a number of case studies (leading service: EASME).

**Mandatory anti-fraud training for staff members employed in operational units**

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. In addition, and as laid down in the AWP 2018, REA continued its actions to increase fraud awareness among its staff and made the training on ant-fraud mandatory for staff employed in operational units, ensuring that they had followed it in due time following their start date in their function. At the end of 2018, 60.7 % of REA staff members of an operational unit had followed an anti-fraud training[67].

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

### Control results

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

REA provides its management with quarterly updates on cases involving OLAF and bi-annual updates 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 2018, REA transmitted 8 new cases to OLAF. The table below lists the number of OLAF cases relating to participations managed by the Agency over the year.

**Table 4: Indicator: number of pending OLAF cases relating to participations managed by the REA**

| | |
|---|---|
| **Number of pending OLAF cases at 1 January 2018** | 61 |
| **New OLAF cases handled by REA in 2018** | 16 |
| **Cases that stopped being followed-up and reported in 2018** | 14 |
| **Number of pending OLAF cases at 31 December 2018** | 63 |

| | |
|---|---|
| **New cases transmitted by REA to OLAF in 2018** | **8** |
| **New cases transmitted by REA to OLAF in 2018 and retained for further investigation** | 2 |
| **New OLAF cases transmitted by REA to OLAF in 2018 and dismissed by OLAF** | 1 |
| **New OLAF cases transmitted by REA to OLAF in 2018 for which OLAF's decision is still pending** | **5** |

| | |
|---|---|
| **Cases for which OLAF concluded in 2018 its investigations and issued its conclusions** | 4 |

Internal trainings on 'An introduction to fraud prevention' have been organised at REA since 2011. Three training sessions on fraud detection and prevention were organised in 2018, in cooperation with OLAF, for project and financial officers to support them in detecting anomalies at an early stage.

[67] Cf. Relevant objectives and indicators for financial management: See Corporate objective 3, indicator 2 of the Annual Work Programme 2018: "Fraud awareness is increased for target population, as identified in the REA's AFS".

#### 2.1.1.1.3 Other control objectives: safeguarding of assets and information, reliability of reporting

With respect to the **administrative budget**, the Agency protects its assets through a good internal control system which guards against loss due to theft or errors, and provides reasonable assurance regarding the prevention or timely detection of unjustified or inappropriate acquisition, use or disposal of its assets that could have a material financial impact. During 2018, no retirement has been introduced due to a loss of asset. The annual physical inventory has been finalised.

The Agency was granted a clean opinion on its 2017 accounts.

With regard to the **operational budget**, the Table 4 in Annex 3 reports REA's overall assets. These assets of **EUR 1 913 945 800.06** are predominantly pre-financings paid to research grant beneficiaries and to the various 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 validation of the cost claims or the relevant periodic management reports.

DG BUDG has carried out an assessment of the control environment in Executive Agencies. This exercise concluded that no weaknesses were identified "on the design or implementation of the local systems in place in REA, which would indicate that they do not meet the validation criteria laid down by the Accounting Officer of the Commission." Nevertheless, it has yielded a list of 5 recommendations on specific aspects of REA's Accounting Internal Control environment. Recommendations related to the Accounting Quality have been addressed in 2018.

#### 2.1.1.1.4 Benefits of the controls

The quantifiable benefit of the controls described above is the effective and efficient implementation of the EU budget, expressed in absolute values for the total amounts committed and paid by the Agency. On top of these figures indicated in previous sections, the following unquantifiable benefits should be underlined, for grant management on the one hand and for the support services on the other hand.

**Direct grant management**

REA benefits for an effective and efficient grant management from the R&I Family preparatory work in designing the H2020 Work programmes and calls for proposals.

It should be stressed that a good work programme and well-publicised calls for proposals generate a large number of good quality projects, from which the most excellent can be chosen. As a result, the more proposals REA receives, the higher competition for EU funding can take place. Other qualitative benefits also worth mentioning are optimised procedures, a common approach on multiple issues (e.g. audits, fraud, legal aspects, reporting, etc.). A better reporting overall on the H2020 framework programme implementation leads to a better management and implementation of the actions.

The controls taking place during the evaluation, ranking and selection of proposals guarantee that external expert evaluators provide independent expertise and up-to-date knowledge in the field of reference of the calls and allow for a scientific peer review based process. This has a positive impact on the whole project lifecycle and leads to better planned and better implemented projects.

During the contracting and pre-financing phase, quality checks (plausibility check on budget, prevention of ethics issues, etc.) take place and improve the quality of project implementation. This stage ensures compliance with contractual obligations, achievement of the project objectives and a higher degree of policy objectives achieved.

Continuous monitoring of the projects, from the administrative and scientific point of view, produces several additional benefits: the legal and operational sound implementation of projects, the prevention of fraud and the safeguarding of accountability, among others.

After completion of the projects, ex-post reviews and audits add multiple benefits, which include (i) the improvement of ex-ante controls and processes by feeding back findings from audits, (ii) a learning effect for beneficiaries, in particular if they intend to apply for funding again, and (iii) a deterrent effect with regard to fraud. These ex-post controls also deliver operational and policy feedback that shall feed into the design of future funding instruments and framework programmes.

Implementation of the results from ex-post audits/controls has also concrete, financial benefits by detecting and recovering ineligible/erroneous expenditures.

**Support services**

Effective and efficient controls for the legal and financial validation of project participants are guaranteeing a timely contracting and initiation of grants, and also a high level of satisfaction from the participants, which is crucial to continue attracting the best proposals and experts or scientists in their fields.

The Research Enquiry Service (RES) has similar qualitative benefits. It offers an efficient information system to potential participants, allowing for timely and relevant applications for EU funding, resulting in adequate competition and excellent project proposals. There is a high degree of satisfaction with the service, which supports attracting the best candidates and proposals of the highest quality. Information received from the RES also provides REA with valuable feedback about its programme implementation.

For the management and support of experts, controls in place provide for a harmonised and efficient organisation of the evaluation sessions and project monitoring. . The controls help avoiding unnecessary peak loads of work and overcrowded facilities, hence increasing the satisfaction of external experts and Commission services managing the call evaluation. The timely contracting and payment of expert evaluators and monitors, as shown by the results of a survey conducted during the third external evaluation of REA, improve the satisfaction of the experts with the Commission services, which is crucial for continuously attracting the best talents in their respective scientific fields.

##### 2.1.1.1.5 Conclusion on the effectiveness of the controls

**Based on the control results detailed in the previous subsections, REA's operations are effective with regard to the legality and regularity, the fraud prevention and other control objectives, in particular the safeguarding of assets.** This overall conclusion is not affected by the two reservations relating to FP7 payments. As stated in the follow-up of the last year's reservations, *"… there is no longer any possibility to change the rules or the contractual arrangements for FP7. The level of open projects (and therefore expenditure) is falling fast, so any change in the control system would have no significant effect on the error rate at the end of the programme".* The remaining scope to reduce the actual financial impact of errors will be addressed through ex-ante control and audit implementation work.[68]

#### 2.1.1.2 Efficiency of the controls

The following section includes the main workload and performance indicators and their results, first for grant management, second for the administrative and logistical support services.

[68] For further details, please refer to the follow-up on those reservations in Annex 10.

The grant management operations are presented following the four control stages:

1. call implementation and selection of proposals;
2. conclusion of grant agreements;
3. monitoring of grant agreements;
4. ex-post controls and recoveries.

It should be noted that most of this information has been detailed per activity under part 1 of this report or can be found in annex.

#### 2.1.1.2.1 Efficiency of the direct grant management operations

##### 2.1.1.2.1.1 Stage one: call implementation and selection of proposals

This first stage relates to the preparation of the calls and evaluation of the submitted proposals. At this stage, the overall control objective 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 programme adopted by the Parliament and the Council and the ensuing Work Programmes adopted by the Commission.

The efficiency of this control stage is assessed through three main indicators. The first two demonstrate the quality and robustness of the evaluation/selection process (they constitute REA's third KPI). The third indicator measures compliance with the five-month time limit to inform the applicants about the outcome of the selection process (Time-to-Inform).

These figures are complemented by other indications of the quality of the selection process, provided by the independent observers.

**Overall volume of the activity**

In 2018, REA implemented **20 calls** (REA Annual Work Programme 2018), evaluated **14 420 proposals** out of which 1 903 have been selected for funding (mainlisted proposals).

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

The H2020 evaluation review procedure[69] gives applicants the possibility to file a complaint if they think that there were shortcomings in the handling of their proposal during the evaluation. An independent evaluation review committee analyses all complaints and, where appropriate, may recommend the re-evaluation of the proposal.

For the 2017 calls, all the review committees finalised their work in 2018. Overall, 181 complaints were introduced through the evaluation review procedure. The review committees concluded that 47 cases should be upheld. Of these, it was decided that 19 would go through a re-evaluation; two of these 19 cases were funded after re-evaluation.

The low share of review requests submitted and cases upheld for the WP 2017 calls – 1.2 % and 0.31 % respectively – gives a good indication of the robustness of the proposal evaluation process. The indicators are even better compared to the good results already achieved for the 2016 calls when the evaluation review requests totalled 1.39 % and the cases upheld 0.39%.

Overall, by the end of the reporting period and based on the evaluation review procedures for the H2020 WP 2017 calls, only 2 of the 19 re-evaluated proposals received funding. REA has respected the 4 months deadline to handle the review requests for all cases received.

[69] Formerly called "redress procedure" under FP7.

In 2018, one Article 22 request[70] to review the legality of acts of REA has been treated by the Commission services. The complaint received concerned a proposal submitted under the call for proposals SEC-16-BES-2017. The complainant requested the Commission to review the legality of the decision of REA to declare the proposal ineligible with respect to additional eligibility and inadmissibility conditions of the call for proposals and against REA's letter confirming the rejection of the proposal. The Commission has rejected this request.

### Results of the selected projects

The effectiveness of the selection process can also be demonstrated by reference to the fact that 91.7 % of all REA H2020 projects[71] reached all or most of their objectives (as reported under KPI 3). Indeed, the most valuable benefits of these controls relate to the qualitative assurance that the most excellent projects are selected out of the many proposals received, which is a prerequisite for their successful implementation.

Similarly, based on the most recent reports received from the beneficiaries, experts reviewers and project officers estimate that around 82% of the H2020 projects will produce significant impact and results that could be later disseminated and exploited.

### Continuous improvements in the evaluation process

REA also confirmed its commitment to continuously improve the evaluation process in order to maintain efficiency of the controls set at the first stage of the granting process. The following examples should be highlighted:

The new IT system (ARIS) provides **automatic detection of a Conflict of Interest** (CoI), applying text-mining to the list of participants submitting proposals and to the pool of experts linked to a certain call. Potential links pointing to possible conflicts of interest can be identified. This support tool incorporated in SEP is streamlining the working methods during the evaluation process for all REA operational units. The system was tested during 2018 and is performing optimally.

After having identified the need for more guidance on the evaluation review procedure, REA has set up internal guidance, outlining the steps to be followed, which are not covered in GoFund. During 2018, experts' briefings for all calls were optimised through the design of common slides to make the briefings more attractive and concise. Manuals, briefing slides and videos were produced, which includes confidentiality and CoI issues for experts.

The use of vice-chairs was improved by analysing their tasks allocation during evaluation, and dedicated training material was developed.

A REA task force was set up deadline with "maintaining and improving the quality of experts" with representatives from DG RTD and INEA working on common recommendations. Guidelines regarding the selection of experts are also under development.

A feasibility study to monitor experts' performance has been prepared and discussed concluding that it would be possible to set a monitoring system in place, but the efforts of managing complaints outweigh by far the potential benefits.

[70] Cf. Council Regulation (EC) No 58/2003 of 19 December 2002. This article provides that any act of an executive agency which injures a third party may be referred to the Commission by any person directly or individually concerned or by a Member State for a review of its legality.

[71] For which at least one report has been received and processed so far.

### Feed-back from independent observers

The efficiency of these controls is also confirmed by the reports of the independent observers who are appointed to assess the objectivity, impartiality and transparency of the evaluation for each call. These reports underline REA's success in ensuring smooth, fair, transparent, effective, efficient and high-quality evaluation processes, making only minor suggestions for improvement and indicating examples of very good practice which should be continued.

They recognise the complexity of the process and highlight among other things, the very good organisation of the evaluations by REA staff. The observers value the efforts made to select only experts with a high level of expertise while ensuring that both experienced and new experts are included in the evaluator's database. The continuous efforts made to improve the preparation and delivery of expert briefings are acknowledged. Best practices were identified to optimise the use of vice chairs and their task allocations. The processes and procedures to ensure that experts receive timely and comprehensive information are continuously optimised. Experts are systematically supported to ensure that implemented quality controls lead to the desired outputs, especially the reports produced. They pointed out that the IT system could still be fine-tuned, which has been initiated by REA and implemented for several aspects.

Finally, they conclude that the most relevant best practices are applied, often including a number of advanced improvements. Overall, they share the opinion expressed by many experts that the quality of the evaluation is very high, also compared to national and international schemes.

### Time-to-Inform the applicants

TTI: 100 % (127 days on average)

Following the Financial Regulation, REA has a maximum of five months (153 days) to inform applicants of the outcome of the scientific evaluation (TTI: Time-to-Inform).

In 2018, REA informed all its applicants in time, with an average TTI of **127 days**.

#### 2.1.1.2.1.2 Stage two: conclusion of grant agreements

The second control stage in grant management comprises the grant finalisation process for those proposals at the top of the ranking list. A series of key controls and preventive checks are performed within a three-month time limit, the quality of which will guarantee the smooth implementation of the projects. They are based on a specific risk-assessment and might include clarification of ethical requirements, examination of the financial capacity of the project coordinator, or a security scrutiny, where necessary.

During 2018, GAP guidelines were updated taking into account various changes on ethics, as well as the migration of the Participant Portal into the new Funding & Tenders Portal. Updated documents were prepared and will be made available to units.

Trainings were given to POs by the Ethics Correspondents prior to the start of the GAPs to reassure and support the POs to become more proficient when dealing with the Ethics requirements' implementation. The GAP stage is the most critical time in the projects lifetime as far as ethics is concerned. Unit Fact Sheets on the management of ethics requirements, how they are followed during project implementation and the approach towards the ethics checks were set up.

### Overall volume of the activity

In 2018, REA concluded **403 grant agreements** and processed the payment of **1 809 prefinancings**.

### Time-to-Grant

REA has eight months (245 days) between the call deadline and grant signature (Article 20(2) of the H2020 Rules for Participation). This is called the 'Time-to-Grant' (TTG) and is one of the most important performance indicators for the implementation of the H2020 programme.

Over time, REA has steadily improved its TTG performance. With 100 % of all grant agreements signed in 2018 (calls 2017 and 2018) in less than 245 days, the results were excellent again – close to the best ever achieved by REA last year. The average TTG performance stands at 198 days (only 5 more than in 2017), 47 days before the target.

For the 2018 calls, the TTG performance for only eight calls was available at the time of reporting (100 %). For the rest of the calls, the eight-month TTG period was still running at the end of 2018.

Further details are provided in Annex 12, section 11 'Overview of implementation of H2020 and predecessor actions under FP7 delegated to REA'. Please refer to Table 1 on calls financed under the 2018 commitment budget and Table 2 on calls financed under the 2017 commitment budget.

**TTG: 100 % grants signed in less than 245 days (198 days on average)**

### Time-to-Pay for prefinancing payments

For **H2020 grants**, performance on the payment of pre-financings remained excellent and improved by 1 percentage point compared to 2017, with **99.8 %** processed within 30 days.

#### 2.1.1.2.1.3 Stage three: monitoring grant agreement execution

This stage entails the monitoring of the project activities, mainly through the scientific and financial reports. It involves reviews by scientific experts (monitors) as well as ex-ante checks on the participants' cost claims, before interim and final payments.

The R&I family has designed a **common Ex-ante Control Strategy for H2020**. REA implements this common guidance aiming to strike a good balance between the cost of controls and their benefits by targeting the controls on identified risks. REA, through its Network of Financial Officers, invested particular efforts in the implementation of the reinforced monitoring of projects with a specific risk profile and in the controls of the use of third parties (linked third parties or subcontractors).

Topical workshops on important issues related to ex-ante controls were organised. One workshop focussed on reinforced monitoring and another focused at types of organisations participating in H2020 grants (third parties, subcontractors, in-kind contributions). The existing guidance on reinforced monitoring was promoted and a coherent application was reminded, using the finance unit as central reference partner.

The eligibility of costs of the final review meeting carried out after the end of the project in H2020 and the interpretation of the relevant provisions of the MGA and the related annotations was discussed. An internal note provides options regarding the organisation of the final review and the consequences for the eligibility of the related costs.

Also in 2018, very positive feed-back was received for this segment of the grant management cycle from the Internal Audit Service, and further improvements will be acheived in 2019, according to the agreed action plan. More details can be found under section 2.1.3.

The efficiency indicators of the third control stage are the operational budget implementation, which is REA's first KPI, the Time-to-Pay and the Time-to-Amend.

In the context of the guidance on grant reductions in the research family, work is in progress to operationalise grant reductions. REA's networks are tasked to prepare and document practical advice for the implementation of grant reductions in REA.

Trainings were organised about project monitoring and reporting to follow up (non-) compliance to the Grant Agreement obligation under Article 29.2 'Open Access to scientific publications'. The discussion focused on the means to assess the fulfilment of obligations in practice. Based on the outcome of the discussions, the consequences of non-compliance with the contractual obligations will be further elaborated.

### Overall volume of the activity

In 2018, REA processed **910 interim and final payment for FP7** and **1 715 for H2020**. 1 628 amendments were signed by REA, including respectively 133 for FP7 and 1 495 for H2020.

### Implementation of the budget

As in previous years, the appropriations delegated to REA under the EU's General Budget (i.e. REA's operational budget) were fully implemented by the Agency at 31 December 2018, having reached **100%** in both, commitment and payment appropriations, for an amount of EUR 12 055.52 million[72] and EUR 1,691.19 million, respectively.

### Time-to-Pay

An important indicator is 'Time-To-Pay' (TTP) which is defined as the percentage of payments made within deadlines set by the Financial Regulation. Table 6 in Annex 10 gives an overview of the Agency's performance in funding grants, per programme and per type of payment. The results indicate a high compliance with the payment deadlines with **98.2%** of all payments processed in time (compared to 96.9% in 2017).

In 2018, the performance for **FP7 grants** remained at a very good level and in line with previous years, reaching **94.6%** of the interim/final payments processed on time.

For **H2020 grants**, 98.4% of the interim and final payments have been processed in time (as against 97.6% in 2017), which indicates that the procedure has become mature.

In general, performance in terms of average gross TTP improved for H2020, thanks to the automation of the procedure and the paperless workflow.

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

As regards the performance for 'Time-To-Amend' (TTA) for H2020 grants, this continues to be very favourable with an **average net TTA** of **13 days** in 2018. This is significantly **below the contractual target of 45 days** and indicates a comparable performance to last year. Compared to FP7 (net TTA of 25 days in 2018) the excellent performance for H2020 continued thanks to the automated workflow (for more details see Annex 12, Tables 7 and 8).

As regards **FP7**, the TTA continued to reduce further in 2018, with an **average net TTA of 25 days** (as against 27 days in 2017), significantly below the target of 45 days (for more details see Annex 12, Tables 7 and 8).

#### 2.1.1.2.1.4 Stage four: ex-post controls and recoveries

The fourth stage includes the ex-post controls as well as the recovery of any amount paid in excess of that due. For **H2020, all the audits are carried out by the Common Audit Service of the R&I family's Common Support Centre**. For details

[72] This amount refers only to C1 credits (voted budget), not to be compared to the Annex 3 Table 1, referring to all the fund sources.

on the audits implemented, see under section 2.1.1.1.1. In 2018, REA carried out ex-post controls only on FP7 payments[73], but implemented ex-post audit results for both FP7 and H2020 programmes.

In 2018, REA focussed its efforts on the further improvement of the implementation of the audit results, with a particular attention to the complex legal and financial follow-up operations ranging from a simple offsetting with a subsequent payment to enforced recoveries needing a Commission decision or legal proceedings in bankruptcy cases. As an example of the challenging issues, there is room for improvement in the timely detection and follow-up of bankruptcy cases.

In 2018 the guidance on waivers and cancellations has been updated and published on REA intranet. The revisions include a shortening of the workflows for the simpler cases.

For bankruptcies the key messages are the importance of quickly establishing the final debt and swift request for an intervention of the PGF; the files for waivers have to be prepared without delay following the request of DG BUDG and negative recovery orders are to be issued without delay after waiver decision.

A risk assessment in view of a possible update of the design of REA's financial circuits was conducted with the conclusion that the current partially decentralised circuit with counterweight for financial verification is the most appropriate for REA.

### Implementation of FP7 audit results – including extensions of audit findings

In 2018, a total of 187 adjustments were reported as implemented following audits (58 cases) and extension of audit findings (129 cases) against 142 in 2017. 76 % of the adjustments were implemented by recovery orders or by the 'no financial impact'[74] implementation method. This high sharewas expected given that the end of FP7 programme management is drawing near and most implementation is related to projects for which the final payment had already been made.

By the end of 2018, and in cumulative terms, adjustments were proposed for 572 audited REA projects. Of the total amount for implementation (EUR 25 126 891), EUR 19 539 605 has been implemented effectively.

**Table 5: Implementation of REA FP7 ex-post audit results up to 2018 (cumulative over FP7) – adjustments in favour of the EU budget**

| | Results from external audits | | Adjustments implemented | | Adjustments pending implementation | |
|---|---|---|---|---|---|---|
| Cumulatively | Number of projects | Funding adjustments (in €) | Number | Value | Number | Value (in €) |
| FP7 | 572 | 25 126 891 | 502 | 19 539 605 | 70 | 5 587 286 |

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). Any systematic errors found in a beneficiary's audit are extended to this beneficiary's non-audited participations. To date, 455 cases have been closed for a total sum of over EUR 3.4 million. The remaining 494 cases will be implemented or closed as non-applicable in the coming years.

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[73] The implementation of the audit plan is detailed under section 2.1.1.1.

[74] The 'no financial impact' implementation method is applied to cases where the rejection of costs does not lead to an unjustified EU contribution.

**Table 6: 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** | 664 | 2 163 | 2 827 | 1 878 | 455 | 3 430 918 | 494 |

At the end of 2018, the cumulative implementation rates for FP7 audit adjustments and extensions of audit findings were 87.8 % and 82.5 % respectively (including the projects for which no extrapolation correction was required). These results are consistent with the advanced stage of the FP7 programme's life cycle.

## Implementation of H2020 audit results

In 2017, a total of **179 adjustments** were reported as implemented following audits (242 cases), including adjustments in favour of the audited beneficiary and neutral adjustments.

In terms of adjustments in favour of the EU budget (negative adjustments), a total of 17 adjustments were reported as implemented following 45 audits with findings in favour of the EU budget. The implemented audit corrections amount to **EUR 111 944.69** out of a total amount for implementation of EUR 314 827.21. All negative adjustments were implemented via offsetting against the subsequent payment; the workflow to implement audits was not yet available in 2018, a catch-up exercise will take place in 2019.

***Table 7: Implementation of REA H2020 ex-post audit results up to 2018***

| Cumulatively | Results from external audits | Adjustments implemented | Adjustments pending implementation |
|---|---|---|---|
| **H2020** | 242 | 179 | 63 |

| H2020 Audit Adjustments | Results from external audits | | Adjustments implemented | | Adjustments pending implementation | |
|---|---|---|---|---|---|---|
| | Number of projects | in euro | Number of projects | in euro | Number of projects | in euro |
| Positive adjustments | 28 | N/A | 26 | N/A | 2 | N/A |
| Neutral adjustment | 169 | 0 | 136 | 0 | 33 | 0 |
| Negative adjustment | 45 | -314 827.21 | 17 | -111 944.69 | 28 | -202 882.52 |
| **Total** | **242** | | **179** | | **63** | |

By the end of 2018 the workflow for the extension of audit findings was not yet available in the IT suite for grant management; this is foreseen for 2019.

## Liquidated damages for FP7 grants

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. To date, **168 cases** of liquidated damages have been implemented for a total of **EUR 901 701**.

Liquidated damages have a relatively low financial impact on the total amounts to be recovered. Under H2020, beneficiaries whose costs have been declared ineligible following an audit are no longer requested to pay liquidated damages. However, financial penalties or grant reductions may be imposed following a case-by-case assessment.

##### 2.1.1.2.2 Efficiency of the administrative and logistical support services

REA provides administrative and logistical support services to the whole of H2020 and to certain other programmes. Since January 2018, REA is also performing the legal validation and the preparation of the financial capacity assessments for all participants in grants and procurements under the European Commission's direct management as part of the SEDIA project.

Despite additional validation services related to SEDIA and the changes in business processes related to it, REA improved its performance in every aspect compared to the previous year, with performances close to or above the targets:

- **96.7% of the participant validations were ensured timely** (compared to 95.1% in 2017), namely performed within 90 days from "raise priority" date[75].
- With respect to the timeliness of **experts' contracting and payments**, the performance of the REA services reached respectively **99.4% and 99.7%** (compared to 98.7% and 99.1% in 2017)

For each service, the trend is clearly positive and shows continuous improvements in operational efficiency. More details on the administrative and logistical support services are available in the section 1.10.

#### 2.1.1.3 Economy

Considering that REA's mandate is to implement direct grant management for the FP7 and H2020 programmes and provide administrative support services, this section gives an overview of the costs linked to those two different control systems.

For ensuring consistency with other information reported on the use of the REA administrative budget, in particular in the annex 10, the figures are presented as follows:

- **the total operating (administrative) budget** has been broken down per activitiy and per control stage for the grant management part;
- this has been complemented by the **expert costs** dedicated to the project monitoring, which are charged to the operational budget.
- **the cost of experts' management relating to the evaluation of proposals** are reported in two different contexts:
    - in table 8, as the coss of one of the control systems in REA;
    - in Table 11 as a part of the shared R&I family costs, in addition to the expert costs charged to the operational budget.

##### 2.1.1.3.1 Cost of the controls

The table below gives an overview of the cost of controls. It shows that

[75] The priority setting for validations is automatically set by the PDM system.

**EUR 44.19 million from the operating budget** was necessary to carry out the grant management-related controls, which cost EUR 47.79 million in total, including the experts’ costs.

The administrative and logistical support services provided by REA cost EUR 16.02 million in total.

**Table 8: REA’s total cost of controls – broken down control systems/activities**

| | | Total staff costs (in €) (Title 1 of the administrative budget) | Other expenditures (in €) | | Total cost of controls (in €) |
|---|---|---|---|---|---|
| | | | of which charged to the administrative budget (Titles 2 and 3) | of which charged to the operational budget (expert reviewers) | |
| **Grant Management** | Ex-ante controls | 35 267 960 | 7 560 598 | 3 604 252 | 46 432 810 |
| | Ex-post controls | 819 957 | 536 990 | 0 | 1 356 947 |
| | Total: | **36 087 916** | **8 097 588** | **3 604 252** | **47 789 757** |
| | | **44 185 504** | | | |
| **Administrative & logistical support services** | Validation services & Research Enquiry Service | 5 904 248 | 1 267 071 | 0 | 7 171 319 |
| | Experts management & Evaluation Platform | 4 680 197 | 4 171 609 | 0 | 8 851 806 |
| **Other tasks** | Coordination and administrative support | 5 398 351 | 1 158 504 | | |
| | Total: | **52 070 712** | **14 694 772** | | |
| | | **66 765 484** | | | |

It should be noted that the overall amount of administrative expenditure has been affected by an important payment delayed to 2019, relating to the rent of the COVE building. The provisional amount of this expenditure item is over EUR 3.5 million.

### 2.1.1.3.2 Cost of the controls compared to the budget implemented

REA operations are carried out under two main control systems: direct grant management and support services. The cost of direct the grant management and of the experts management, as part of the support services, can be compared to the relevant implemented budget. The validation services are provided at a corporate level and do not relate to spending.

Overall, **the cost of controls for grant management represents 2.54 % of the total amount paid in 2018 for FP7 and H2020 grants**, which is quite similar to the cost of 2.59 % obtained in 2017. These costs also include the controls relating to the prefinancings (indicated in Annex 3 as contingent assets).

Considering only the administrative costs of the programme implementation (without the cost for experts charged to the operational budget), the management cost accounts for only 2.35 % compared to the total amount paid for grants.

**Table 9: REA's cost of controls as a percentage of the operational spending in 2018**

| | Costs (M€) | Operational payments made for grants (M€) | overall cost effectiveness ratio |
|---|---|---|---|
| REA total cost of controls (experts / reviewers included) | 47.79 | 1 883.68 | 2.54% |
| REA cost of controls (operating cost only) | 44.19 | 1 883.68 | 2.35% |

The costs of controls relating to the **experts' management represents 8.42%** of the total amount paid in 2018 to experts (evaluators and monitors included). This **relatively**

**high rate** is due to the high number of transactions with very low amounts (see the number of transactions under section 1.10).

**Table 10 REA's cost of controls regarding the experts' management in 2018**

| | Costs (M€) | Operational payments made for experts (M€) | overall cost effectiveness ratio |
|---|---|---|---|
| REA cost of controls (staff costs only*) | 4.68 | 55.56* | 8.42% |

** Evaluators and monitors included (for the R&I family, only the evaluators are contracted and paid under the shared services)*

The positive consideration of these results is corroborated by the conclusions of the 3rd external evaluation study[76] on REA's performance. The study states that:

"*Substantial savings to the EU budget and high value for money generated by REA's performance indicate that this outsourcing solution remained considerably more cost-effective than the in-house scenario, generating substantial savings to the EU budget*".

Actually, the savings estimated by the initial cost-benefit analysis underlying the delegation agreements to REA have been even higher than expected.

#### 2.1.1.3.3 Cost of the controls including the shared services

REA operates in a control system that is designed and managed at the corporate level (R&I family). REA relies on the services provided by the CSC, as explained in section 2.1.0.3 detailing the control system underlying the implementation of the Agency's operational budget.

The support services relating to the experts' management, provided by REA to the H2020 implementing bodies, are part of this family-wide integrated control system.

The complete picture regarding the cost-effectiveness of H2020 grant management in REA is summarised in the table below.

It has to be noted that, in line with the New Methodology for the calculation of the cost of controls, the **costs relating to the REA validation services are not anymore included**. Since 01.01.2018, these services are **corporate** and covering **all participants** (for grant and procurement), therefore excluded from the scope of cost-effectiveness of the H2020 direct grant management.

[76] Evaluation study covering the period 2015 –2018.

**Table 11: Overall cost of the controls for H2020, including the cost of shared services costs**

| **Effectiveness indicator in direct grant management** | **Total costs** (m€)[1] | **2018 Grants payments for H2020 Family** (m€)[2] | **Overall rate** (total costs/total amount paid) % |
|---|---|---|---|
| ***Services provided by the Common Support Centre*** | | | |
| Ex-ante controls (mainly Common services in IT systems and operations, business processes) | **47.00** | 8,080.00 | **0.58%** |
| ***Services provided by REA*** | | | |
| Evaluation experts' costs[4] | ***56.63*** | 6,726.00 | ***0.84%*** |
| | | **Operational payments for grants 2018 REA** | |
| REA costs of controls for grant management | ***47.79*** | 1,883.68 | ***2.54%*** |
| **Overall cost effectiveness for grant management in REA** | | | ***3.96%*** |

[1] Costs (M€)data from Atlas 08.01.19 and 2018 budget execution CSC 19.01.2019 )

[2] Data from corda 22.01.2019

3 Ex-ante controls (mainly Common services in IT systems and operations, business processes)

[4] Operational and administrative costs (expert cost claims and staff and logistic costs)

With **3.96 % of costs compared to the implemented budget**, REA is fully in line with the objectives set in the H2020 legislative proposal.

#### 2.1.1.4 Conclusion on the cost effectiveness of controls

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

As demonstrated by the results detailed in the previous sections, also corroborated by the external evaluation and various internal audit reports, the effectiveness and the efficiency of the controls carried out in REA are consistently very good and in line with the objectives set at for the programmes implemented or the support services. They are also proportionate to the risks underlying the operations.

The costs incurred for carrying out these controls with the above-mentioned quality are in balance with the control objectives set in terms of effectiveness and efficiency. The retrospective CBA analysis carried out for the third external evaluation study (2015-2018) also underlined the efficiency and the overall cost-effectiveness of the Agency.

The control systems applied in REA aim to keep the cost of programme implementation at a reasonable level and, at the same time, to guarantee the quality of the operations and to mitigate various risks. Therefore, they are subject to continuous adjustments to the current business environment.

For FP7, REA continued with its control system without a change in strategy, since the programme is near to be closed. For H2020, REA is implementing its Control strategy inspired by that of the R&I family, adjusted for certain specific risk profiles, like for MSCA. In 2018, beyond the corporate developments, resources were invested by REA, in the following processes[77]:

- further fine-tuning of the ways in which the Agency can provide feedback to its parent DGs on the outcome of the funded projects, which can contribute to the development of R&I policies;
- harmonising the ex-ante checks with regard to the implementation of the reinforced monitoring stemming from the common ex-ante control guidance;
- rolling out of the new corporate guidelines on ethics checks during the grant preparation;
- improving the timely follow-up of bankruptcy cases mainly affecting the closure of FP7 legacy programmes;
- contributing, through the various governance structures of the Common Support Centre, to the development of corporate business processes and relating IT tools or guidance.

### 2.1.2 Audit observations and recommendations

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

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

In its report on implementation of the budget for the financial year 2017, the European Court of Auditors (ECA) concluded that the most likely error rate for Chapter 5 'Competitiveness for growth and jobs' was 4.2 % (4.14 % for the DAS 2016). ECA found that most errors related to the reimbursement of ineligible personnel costs, other ineligible direct costs (e.g. travel and equipment costs not related to the project) or ineligible indirect costs declared by beneficiaries. They included calculation errors, lack of supporting evidence for declared costs and costs incurred outside the allowed time period.

**DAS 2018**

In the framework of the DAS 2018, the ECA launched 22 audits on payments (interim, final or expert payment) for REA. For eight audits, on-the-spot checks were carried out and eight preliminary findings[78] were received (five relating to H2020 and three to FP7).

[77] These improvements are detailed under the relevant sections in Parts 1 and 2.

[78] The cost items have been selected by the ECA using monetary unit sampling (MUS) to obtain a representative view of the legality and regularity of the entire audited population for Competitiveness for Growth and Jobs. Thus, the sum of the error percentages shown above does not constitute an error rate for the audited project, but contributes to the overall evaluation of EU expenditure.

For five of these, the ECA had no comment. For the remaining three, the ECA commented:

1. For the first transaction relating to an FP7 Marie Curie ITN action, the ECA highlighted the ineligibility of some management and travel costs. Since the errors only affected the management costs and the total error on the audited cost claim was below the materiality threshold for raising a quantifiable observation, the finding was reported as "other compliance issue" without material financial impact.
2. For the second transaction relating to the FP7 security theme, the ECA identified weaknesses in the hourly rate calculation and in the time-recording system. The incorrect calculation of the hourly rates and the disallowed hours charged to the project during leave led to minor ineligible costs, which however were compensated by a considerable understatement in the indirect costs declared by the beneficiary.
3. For the third transaction relating to H2020, the ECA identified the ineligibility of some travel and personnel costs related to the SME owner/manager who did not receive a salary. These resulted in some ineligible indirect costs. The error rate was 6.03%. The audit was performed as a joint audit with the CAS and the contradictory procedure is on-going.

In conclusion, the ECA did not find any errors different in nature from those REA had already detected in its own ex-post audits. Therefore, the ECA audits did not require any reassessment of the assurance provided by the REA's control systems.

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

In January 2019, no outstanding recommendation was derived 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 made in implementation is reported under section 2.1.2.1.

#### 2.1.2.3 Commission's Internal Audit Service

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

In 2018, the IAS performed several audits and follow-up audits. The section below details their subject and outcome.

**IAS audit on H2020 Grant Management in REA phase II**

The audit focussed on project monitoring and ex-ante controls. It followed an audit on the implementation of projects from the call publication to the grant signature (phase I) and built on a previous audit on the overall design of the procedures (the latter audit was at the level of the research family).

| |
|---|
| *From the report: "The IAS acknowledges the ongoing efforts made by REA in ensuring effective project monitoring and the implementation of ex ante controls on H2020 grant payments in the context of an increasing workload. In particular, the IAS highlights the strong control environment implemented in REA, including reviews of the periodic reports by independent experts and the internal networks of Project Officers, Financial Officers, Ethics Correspondents and Legal Officers, which is a solid basis for the effective implementation of the project management and ex ante controls on H2020 grant payments. The IAS concludes that overall the project management process and the ex-ante controls on H2020 grant payments in REA are effective."* |

IAS concluded its report with **two important recommendations**: the first on the implementation of the risk based approach for ex-ante controls (related to the implementation of reinforced monitoring and previous ex-post audit results) and the second on the implementation of ethics requirements and the key aspects for monitoring.

The action plan to implement the two important recommendations proposed by REA in early 2019 was approved by IAS and will be implemented throughout 2019.

### IAS audit on REA's preparedness for managing SEDIA

The audit on SEDIA assessed the current state of preparedness of the Agency to effectively deliver SEDIA-related services and aimed at detecting any weaknesses that could later jeopardise the full achievement of the project's goals.

After the initial survey IAS made the following conclusions:

a) The project governance arrangements introduced by REA for the provision of the legal validation and financial verification services under the SEDIA framework are adequate, and REA's organisational structure supports the delivery of new services.

b) The Agency has, together with stakeholders, put in place adequate processes and procedures for the provision of the validation services to clients.

c) There are adequate business continuity arrangement in place.

d) HR-related aspects are adequately managed in terms of quantity and quality of staff necessary to deliver the services. The main challenges are well known and are being closely monitored.

e) The Agency has designed an adequate monitoring and reporting system on the provision of SEDIA-related services.

These positive conclusions have led the IAS to close the audit after the preliminary survey. A new audit on the implementation of SEDIA-related services may be included in the IAS audit plan when the project is more mature and the corporate SEDIA framework is fully rolled out.

### IAS multi DG audit on dissemination and exploitation of H2020 results

This multi-DG audit covered, at central level, the CSC as responsible for the design of the process and, at operational level, a sample of H2020 implementing bodies (RTD, CNECT, ERCEA and REA) to assess the implementation of the process. REA received the draft IAS report in late December 2018 and replied to IAS in January 2019 that all findings and recommendations are accepted.

Whilst the auditors acknowledged as strengths the common IT tools supporting the D&E aspects, the D&E practitioners'' platform (D&E Net) and the H2020 Dashboard reporting on the KPI's, they also concluded that very important weaknesses still exist in the practical application of the current process, since the CSC has not adopted a Vademecum on D&E providing detailed instructions for the checks to be performed. This audit came shortly after the adoption of an updated D&E strategy for H2020 that is currently only in the initial stages of effective implementation. The IAS's observations have to be considered in the light of these recent developments.

**Two important recommendations** are addressed specifically to REA at operational service level.

- The first is relating to the monitoring of the compliance with the contractual obligations and the reporting requirements for beneficiaries. REA should raise awareness of the project officers and collaborate with the CSC for the design of the D&E guidance and a targeted approach on the controls.

- The second aims at improving the effectiveness of the dissemination and exploitation support initiatives. REA should give the CSC an appropriate feedback on the implementation of the process and raise awareness among the project officers about D&E support actions.

Considering that the recommendations are similar among the audited H2020 implementing services, REA will collaborate in 2019 with the CSC and the D&E Net for a coordinated and consistent action plan to be developed.

#### 2.1.2.4 Actions resulting from previous IAS audits

**IAS follow-up audit on the closure of FP7 projects (2017)**

All recommendations and actions are considered implemented by REA and were reported to IAS as "ready for review". The closure note with the outcome of the follow-up audit is expected for the first quarter of 2019.

**IAS follow-up audit on human resources management in REA (2016)**

All recommendations and actions are considered implemented by REA and were reported to IAS as "ready for review" at end of 2017 and reported in the AAR 2017. The closure note for this follow-up audit is expected for the first quarter of 2019.

**IAS follow-up audit on H2020 Grant Management in REA phase I (2016)**

All recommendations and actions are considered implemented by REA and were reported to IAS as "ready for review". Three recommendations were closed by IAS in previous years.

The audit on H2020 grant management phase II (see above) assessed also the implementation of the remaining important recommendation No 3 for reinforced monitoring and reporting, addressed to REA in the audit on phase I. IAS concluded that the recommendation was partially implemented since not all risks regarding the application of reinforced monitoring in REA have been mitigated, as described in finding No 1 of the audit for phase II. As a result, the original recommendation No 3 from the 2016 audit for phase I was closed and the relevant outstanding issues will be followed up in the context of the implementation of recommendation No 1 of the audit for phase II.

**Conclusion**

IAS has not issued very important recommendations to REA in 2018. No major or severe internal control deficiencies were identified. During the 2018 audit activities, IAS has highlighted that REA has implemented a strong control environment and that adequate controls are in place. In conclusion, the IAS audit activity does not require any reassessment of the assurance provided by REA's control systems.

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

**The Commission has adopted an Internal Control Framework (ICF) based on international good practice, aimed to ensure the achievement of policy and operational objectives. In addition, as regards financial management, compliance with the internal control framework 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 internal control objectives, in accordance with the internal control principles (ICP) of that framework and having due regard to the risks associated with the environment in which it operates.**

#### 2.1.3.1 Implementation of the new Internal Control Framework (ICF)

In 2018 REA has adopted the revised internal control framework[79], finalised its internal control monitoring criteria, progressively reviewed its reference documents and reassessed the procedures of its IC system according to the new framework. In this 2018 AAR, REA reports against the 17 Internal Control Principles.

The revised control framework, based on DG BUDG's intranet pages, is posted on REA's intranet since early 2018. The detailed control framework has been reviewed with a top-down analysis and a bottom-up assessment process. The outcome, detailed below, was presented to the REA Management on 23.10.2018 and to the REA Steering Committee on 07.12.2018.

#### 2.1.3.2 Assessment of the effectiveness of the internal control system

For 2018, the assessment of REA's internal control system was carried out in a series of five internal control workshops dedicated to "*control activities*", "*ethics, values, and supervision*", "*information management and communication*", "*monitoring the internal control framework*", and "*human resources*". No workshop on the "risk management" component was organised, because of the dedicated campaign performed in autumn 2017, already under the new framework. The overall objective of these workshops was to:

- assess the effectiveness and the efficiency of the REA’s internal control mechanisms against the new framework;
- raise awareness of REA staff and management about the new framework;
- identify the larger internal control framework in which REA operates (R&I family, SEDIA project etc.);
- identify the particular strengths and challenges of the Agency, with regard to the internal control principles;
- identify areas for potential improvements, in particular with regard to changes in REA's operations or control environment.

These workshops were attended by both staff and management who demonstrated an effective interest in building and maintaining efficient internal controls. The REA management discussed the outcome of the assessment and the follow-up actions in October 2018. A final action plan will be validated in the first quarter 2019.

In summary, REA's internal control framework has been assessed as effective and efficient. For the components *Control activities, Risk assessment* and *Monitoring* the assessment showed that controls are in place and are functioning well. With regard to the *Control environment* and *Communication activities* components, the assessment demonstrated that, while controls are in place, there is still room to increase the maturity level of their implementation. For example, possible improvements would relate to:

- further developing the skills of personnel in the Agency;
- career development of staff and the recruitment processes;
- the use of social media by REA (in line with corporate policies).

[79] Based on the EC communication C(2017)2373 final, 19.4.2017

#### 2.1.3.3 Six-monthly reporting of the AOSDs

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

- activities assigned from REA's AWP 2018;
- implementation of the internal controls within their unit (in accordance with the overall design of internal control for REA as a whole), exceptions, non-compliance events 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 might affect the Director's Declaration of Assurance (DAS), other than those already noted in this report, were indicated via the 2018 AOSD reports.

#### 2.1.3.4 REA register of exceptions, non-compliance events and internal control weakness

REA's units have to report on all exceptions, non-compliance events and internal central weaknesses through a dedicated procedure and templates. In 2018, eleven non-compliance reports, nine exceptions and one internal control weakness were recorded.

##### 2.1.3.4.1 Non-compliance events

The expert management unit has sent in total 7 quarterly reports to the Director to report non-compliance events regarding the expert process. One (1) non-compliance report covered a case related to a monitor contract for MSCA (ITN), which did not reflect the actual location of the review, because of an IT bug and the incomplete implementation of the revised model contract in the IT tool EMI. Four reports (2-5) dealt with experts who "exceeded the maximum number of working days fixed in the contract". Two reports were submitted (6-7) because the expert's task was not covered by the contract. Ethics evaluators had drafted consensus reports, although the task was not defined in the contracts and an ethics pre-screening had been undertaken although the experts were briefed that the task was not included in the contract.

In one case (8) a Head of Unit had signed an invitation letter to tender, which should have been signed by the RAO of REA's Administrative Budget (i.e. the REA Director) in accordance with the internal rules of budget execution.

One case (9) related to the administrative budget, where the established procedures and rules for procurement were not respected. The budgetary commitment and the purchase order were established after the expense for training sessions occurred. Two non-compliance reports (10-11) concerned the grant management process. One dealt with a late intervention of the Guarantee Fund leading to a delayed recovery procedure, while the other event dealt with an amendment that changed the substance of a grant agreement.

##### 2.1.3.4.2 Ex-ante exceptions

Three exception requests (1-3) were made to extend the expired final date of implementation (FDI) to allow the units to make payments. REA's Director instructed units to ensure that, in line with the Financial Regulation, extension requests must be entered before the expiration date. As of June 2018, no further FDI extension requests were granted. One exception (4) related to the exceptional situation where the only proposal submitted to the topic did not pass the threshold. An advanced notification of the evaluation outcome was made, allowing the parent DG to publish a new topic with a new deadline to use the budget reserved. One exception (5) was granted for the administrative budget to allow interim agents to initiate as OIA/FIA a number of payments, which is under the Financial Regulation reserved to statutory staff.

One exception (6) approved that the authorisation of expert payments were temporarily delegated to an experienced contract agent. Following an IAS audit, the REA Director approved the list of internal registered exceptions (7) allowing interim staff to endorse invoices "certified correct". Two exceptions (8-9) concerned the grant management process. In an MSCA ITN grant (8) the limitation of secondments to a maximum of 30% of the time devoted to the research project was not respected but agreed by the relevant Project officer. In another exception (9) the transaction costs paid to RTD performers were not included in the Form C.

##### 2.1.3.4.3 Internal Control Weakness

The recorded weakness related to the FP7 'Research for the benefit of SMEs' funding scheme. It addressed the non-compliance with the instructions received by DG RTD to establish the debt and a recovery order as soon as possible in case of bankrupt beneficiaries. REA can define eligible costs and the final amount of the debt of a participant only after the ex-ante checks of all transactions at the stage of the final payment. The establishment of the debt is sometimes done at a considerable time after the bankruptcy of the beneficiary. The elapsed time period to comply with the instructions received is considered as a weakness.

REA has set up a register of cases in order to allow a better forecast of expected interventions.

The inventory of pending bankruptcy cases is shared with DG RTD to coordinate the follow-up of bankruptcies and ensure that a recovery procedure is launched upon confirmation of the final claim.

The follow-up of the cases has been included in the biannual AOSD reports.

For future bankruptcies in the FP7 SME scheme, a financial closure will be done when REA is notified of the bankruptcy.

The required ex-ante checks will be performed for the bankrupt beneficiary and a debt will be established on this basis.

The overall amount resulting of these events in view of providing assurance[80] is not significant compared to the budget implemented in 2018. Mitigating measures have been put in place to address the non-compliance events, exceptions and the internal control weakness.

#### 2.1.3.5 REA risk assessment exercise

A risk-assessment exercise is performed at REA level on a yearly basis in preparation for the following year's AWP. REA has not identified any critical risks which need to be reported in the context of the AWP 2019. However, the significance of the identified risks will be closely monitored and reassessed in the course of 2019. They are reported to the central services and REA's Steering Committee.

The first risk, the impact of a Brexit with no deal, is the most significant for REA's performance in core business tasks. REA will coordinate with RTD and other EAs and stands ready to act on Brexit in line with corporate instructions to be issued.

The second risk is related to the use of the participant database for programmes managed by national agencies (e.g. Erasmus+). There is a fundamental incompatibility

[80] Not all type of deviations from rules are considered as materially affecting the legality and regularity of the operations.

between direct and indirect management actions which pollutes the REA participants register. The debate about a structural solution is ongoing. The agreed solution is the separation of both databases.

Following an IAS recommendation to another service on financial circuits, REA performed a risk assessment for the financial circuits in 2018. The assessment confirmed that REA's circuits were fit for purpose and no changes were proposed.

#### 2.1.3.6 REA control system and operating procedures

The operations managed by REA are similar to the research management activities carried out by other Commission services. Therefore, REA's internal control system and operating procedures are streamlined with those of the parent DGs. The relevant control system for FP7 and H2020 grant management (AAR Annex 5) is closely aligned to that used within the R&I family of DGs and services. To take into account the extended mandate, REA is documenting in its AAR Annex 5 the relevant control systems for the areas of participant validation and expert management and support.

REA's Responsible Officer for Risk Management and Internal Control (RMIC) supervises and coordinates the application of the internal control principles (ICP) 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, are listed in this section[81].

#### 2.1.3.7 DG Budget's considerations on governance and supervision of executive agencies

DG BUDG has confirmed the 'maturity' of the current arrangements, with an emphasis on the tools that are embedded in the way Executive Agencies are set up (for example, the secondment of managers, the direct applicability of the Commission's financial and HR rules and the system of full transparency through shared IT systems and read-access for the Commission). REA's Steering Committee received detailed explanations about all the means which allow the Commission maintaining supervisory control over REA's operations. The arrangements for the research agencies were considered best practices (harmonised MoU and reporting and the use of corporate IT tools).

#### 2.1.3.8 Reservations

As in previous years, REA will qualify its declaration of assurance with two reservations relating to FP7 payments. Those do not impact on the overall effectiveness of the REA internal control system, as explained under section 2.1.1.1.5 and in Annex 10.

#### 2.1.3.9 Conclusion of the RMIC

REA has implemented the 17 ICPs and its control environment is in line with that of the Commission. The controls in place are working overall effectively and are considered as indicative of a mature internal control structure. REA's internal control structure is robust and functions well at the level of the Agency and internal control over operations is effective. The efforts made to improve the effectiveness and efficiency have been monitored on a quarterly basis and the REA Authorising Officers by Sub-Delegation (AOSD's) have reported bi-annually about the effectiveness and other relevant control issues.

[81] Dedicated section 2.1.3. Assessment of the effectiveness of the Internal Control Systems.

Internal Control topics are regularly discussed with the Steering Committee, in the Agency's management meetings, between the Director and Heads of Department, amongst the Heads of Department and in dedicated REA networks, task forces and the members of the Key User Groups.

Activities of the REA networks have been presented in management meetings, activity reports against annual roadmaps are prepared for the Director's attention. News and reference documents are posted on the intranet. REA representatives in Key User Groups and H2020 governance groups for the main H2020 business processes report to REA management about the outcome of meetings, highlighting the most relevant topics.

The implementation of recommendations from action plans resulting from internal control activities (IAS, risk exercise, etc.) have been regularly monitored and followed-up. 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 of the ICF, internal and external audit recommendations, the internal control effectiveness assessment exercise, the AOSD-reports from management and the annual risk assessment, it can be concluded that the controls in place are working as intended and the internal control system is providing an effective framework for managing the risks to achieve REA's objectives.

Close audit scrutiny and internal monitoring demonstrate that REA's underlying framework and state of control are robust, forming a solid basis for future tasks and growth. Improving the effectiveness and the efficiency of the ICF is a constant process which remains high on the agenda of REA management. It will be pursued in close collaboration with the CSC which designs business processes, control strategies, legal interpretations, etc. for the R&I Family as a whole.

The RMIC confirmed not to be aware of any critical weaknesses in the REA's system of internal control which would jeopardise the achievement of its business objectives.

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

**In addition, on the principles 2 ("parent DGs demonstrate independence from REA management and exercise oversight of the development and performance of internal control"), 10 ("REA selects and develops control activities that contribute to the mitigation of risks to the achievement of objectives to acceptable levels") and 12 ("REA deploys control activities through corporate policies that establish what is expected and in procedures that put policies into action"), even though they are present and functioning overall, some improvements are needed relating to**

- **the policy feedback mechanisms to be further adapted to the Commission services' needs;**
- **the H2020 ex-ante controls to be further harmonised with regards to ethics deliverables or contractual obligations for D&E and in the context of the reinforced monitoring of riskier projects;**
- **the awareness of REA project officers regarding the D&E aspects of the H2020 project management.**

### 2.1.4 Conclusions on the impact as regards assurance

**This section reviews the assessment of the elements reported above (in Sections 2.1.1, 2.1.2 and 2.1.3), the sub-conclusions above, and draws the**

**overall conclusion supporting the declaration of assurance and whether it should be qualified with reservations.**

The information reported in part 2 stems from the results of monitoring by management and auditors, based on 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 gives a true and fair view, and sufficient guarantees regarding the completeness and reliability of the information reported and results in the complete coverage of the budget delegated to the REA Director.

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

- expenditure implemented under direct grant management for the H2020 Framework Programme;
- expenditure implemented under direct grant management for the People programme (Marie Curie Actions) in FP7 Framework Programme;
- expenditure implemented under the single budget line for H2020 experts;
- payments relating to administrative expenditure.

Based on the rate of residual errors with regard to the accuracy of cost claims in FP7 grants, the assurance relating to the following part of the 2018 expenditure is qualified with a reservation:

- expenditure implemented under direct grant management for the Space and Security themes in the FP7 Cooperation Specific Programme;
- expenditure implemented under direct grant management for the SME actions in the FP7 Capacities Specific Programme.

Indeed, REA maintains the reservations made in its AAR 2017 as regards the **material impact of residual errors in the SME actions and the Space and Security themes financed under FP7, both exceeding the materiality level of 2%**. This is in line with the general reservation made by DG RTD for the R&I family, which states that the rate of residual errors with regard to the accuracy of cost claims in FP7 grants is expected to remain above 2%, given the inherent risks related to the funding modalities.

These results are also corroborated by the ECA's Annual Report on the implementation of the budget for the financial year 2017, which concluded that **the most likely error rate for Chapter 5 'Competitiveness for growth and jobs' was 4.2%** (4.14% for the DAS 2016). ECA found that most errors related to the reimbursement of ineligible personnel costs, other ineligible direct costs (e.g. travel and equipment costs not related to the project) or ineligible indirect costs declared by beneficiaries. They included calculation errors, lack of supporting evidence for declared costs and costs incurred outside the allowed time period.

As a follow-up to the previous reservations, REA pursued reasonable efforts to reduce the errors in cost claims. Details are disclosed in Annex 10. Nevertheless, following the near closure of the last FP7 ex-post audit campaign, no further information will be available for assessing the impact of those actions. Moreover, errors in FP7 payments will have a limited impact on future declarations of assurance, given the significant decrease of this programme's share in the total expenditure.

In summary, and according to the figures provided in Table 5, 'Conclusion on the control effectiveness as regards legality and regularity' summarised below in Table 13, **'relevant expenditure' with a material error rate in 2018 represents 6.82% of the total**.

**The overall amount of risk at closure represents 1.91% of the implemented budget.** Taking into account the different materiality criteria to apply to its components, this result is not to be interpreted as above a more global materiality threshold.

**Table 12: Summary of the estimated impact of errors in the 2018 relevant expenditure**

| Expenditure items | Relevant expenditure (m€) | % of the total relevant expenditure | Amount at risk at closure (m€) | % of the total relevant expenditure |
|---|---|---|---|---|
| **qualified with a reservation** | | | | |
| FP7 Security, Space themes and SME actions | 111.54 | 6.82% | 4.56 | |
| **without reservation** | | | | |
| FP7 MCA | 522.04 | 31.91% | 8.09 | |
| H2020 | 887.67 | 54.25% | 17.99 | |
| Expert related payments | 51.44 | 3.14% | 0.26 | |
| Administrative budget | 63.46 | 3.88% | 0.32 | |
| *Subtotal* | *1 524.62* | 93.18% | *26.65* | |
| **Total** | **1 636.16** | | **31.21** | **1.91%** |

**In conclusion, under the prevailing risk environment and considering the balance between all the control objectives examined under chapter 2.1, the REA AOD's professional judgment regarding the assurance remains positive – even with a reservation for the FP7 Space and Security themes and for 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 FP7 Space and Security themes and one concerning the FP7 SME actions.**

### 2.1.5 Declaration of Assurance and reservations

# Declaration of Assurance

***I, the undersigned, Marc Tachelet,***

***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[82].***

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

***This reasonable assurance is based on my own judgement and on the information at my disposal, such as the results of the self-assessment, ex-post controls, the work of the Internal Audit Service and the lessons learnt from the reports of the European 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***

***as in 2017.***

***Brussels, 27 March 2019***

***Signed***
***Marc Tachelet***

82 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

| DG | Research Executive Agency |
|---|---|
| **Title of the reservation, including its scope** | Reservation concerning the rate of the residual errors with regard to the accuracy of cost claims impacting on granted EU funding for the **Space and Security themes of the Cooperation Specific Programme** financed under the Seventh Framework Programme for Research and Technological Development (FP7). |
| **Domain** | Direct management of grants in FP7. |
| **Programme in which the reservation is made and total (annual) amount of this programme** | **FP7 Cooperation Specific Programme – Space and Security themes**<br>Payments made in 2018 (excluding expert payments): EUR 24.08 million, including EUR 5.59 million for Space and EUR 18.49 million for Security.<br><br>The amount at risk is calculated with reference to the amount paid, pre-financing excluded, increased with the amounts of the pre-financings cleared: **EUR 22.96 million for Space and EUR 68.12 million for Security, or EUR 91.08 million in total.** |
| **Reason for the reservation** | At the end of 2018, the residual error rate is not below the materiality threshold laid down for the multi-annual period. |
| **Materiality criterion/criteria** | 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.<br><br>The control objective was 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.<br><br>The risk profiles for the Space and Security themes are similar and do not differ from the mainstream collaborative research. This is the reason why the CRaS error rate is used to calculate the residual error rate affecting the payments processed. However the subpopulations may differ and justify the calculation of different residual error rates for each theme since the correction of the systemic errors in the audited population may differ.<br><br>The calculated residual error rates are as follows:<br>- 3.49 % for the Space theme<br>- 3.78 % for the Security theme |

| | |
|---|---|
| **Quantification of the impact (= actual "exposure")** | 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.<br><br>For 2018, EUR 91.08 million relate to intermediate and final payments and EU funding accepted and cleared against previously paid pre-financing – this is the total for both Space and Security themes. In 2018, **for the Space theme the estimated impact at closure (i.e. taking into account future corrections) is around EUR 0.80 million; for the Security theme, the estimated impact is around EUR 2.57 million.** |
| **Impact on the assurance** | Legality and regularity of the affected transactions, i.e. only payments made against cost claims. |
| **Responsibility for the weakness** | The main reason for errors are:<br>– 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;<br>– the fact that there are many thousands of beneficiaries making claims, and not all can be fully controlled.<br><br>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. |
| **Responsibility for the corrective action** | The possibilities to simplify the FP7 rules have been exhausted, and the FP7 audit campaign is now closed. The remaining scope to reduce errors will be addressed in particular through the following actions:<br>– continuing ongoing efforts to give guidance and feedback to the participants and certifying auditors to prevent errors occurring;<br>– continuing ex-ante control and audit implement tation work in order to reduce the financial impact of errors.<br><br>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 %. |

## Reservation 2

| DG | Research Executive Agency |
|---|---|
| **Title of the reservation, including its scope** | 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 in the Capacities Specific Programme** financed under the Seventh Framework Programme for Research and Technological Development (FP7). |
| **Domain** | Direct management of grants in FP7. |

| | |
|---|---|
| **Programme in which the reservation is made and total (annual) amount of this programme** | **FP7 Capacities – Research for the benefit of SMEs**<br>Payments made in 2018 (excluding expert payments): **EUR 3.87 million.**<br><br>The amount at risk is calculated with reference to the amount paid, excluding pre-financing, increased with the amounts of the pre-financings cleared, be **EUR 20.46 million** in total. |
| **Reason for the reservation** | The rationale for the reservation is that the results obtained in the context of ex-post control specifically targeting the SME actions indicate an error rate which is above the materiality criterion. Considering the estimated residual error rate of 5.77 % the risk exposure resulting from SME participations is significantly higher than the FP7 average.<br><br>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 SME participation, and the cost of controls, the ex-post controls cannot be increased significantly. Therefore, by the end of the programme period, it is not expected that the residual error rate will be below the materiality threshold defined in Annex 4. |
| **Materiality criterion/criteria** | The overall materiality criterion is the residual error rate, i.e. the level of errors that remain undetected and uncorrected, at the end of the management cycle.<br><br>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 life cycle, a reservation would (still) be made. |
| **Quantification of the impact (= actual "exposure")** | The maximum impact is calculated by multiplying the residual error rate by the 'relevant' amount of FP7 payments.<br><br>For 2018, **EUR 20.46million relate to intermediate and final payments and EU funding accepted and cleared against previously paid pre-financing.**<br><br>This residual error rate takes as its starting point the errors detected 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.<br><br>The detected error rate for 2018 is 6.12%, while the residual error rate is 5.77%. On the basis of the 5.77% estimated residual error rate **the impact at closure (i.e. taking into account future corrections)** is estimated at **EUR 1.18 million.** |
| **Impact on the assurance** | Legality and regularity of the affected payments made against cost claims. |

| | |
|---|---|
| **Responsibility for the weakness** | The main reasons for errors are:<br>– 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;<br>– the fact that most participants are non-recurrent beneficiaries.<br>– 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);<br>– the fact that there are many thousands of beneficiaries making claims, and not all can be fully controlled.<br><br>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. |
| **Responsibility for the corrective action** | The possibilities to simplify the FP7 rules have been exhausted, and the FP7 audit campaign is now closed. The remaining scope to reduce errors will be addressed in particular through the following actions:<br>– continuing ongoing efforts to give guidance and feedback to the participants and certifying auditors to prevent errors occurring;<br>– continuing with its ex-ante control and audit implementation work in order to reduce the financial impact of errors.<br><br>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 %. |

## 2.2 Other organisational management dimensions

**In this subsection, REA reports on key achievements in the fields of human resources, information management and external communication.** A complete report on all outputs identified and all objectives and indicators of the AWP 2018 is available in Annex 2.

### 2.2.1 Human resource management

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

The Agency's 2018 administrative budget provided for an establishment plan of 179 temporary staff (TAs), of whom 42 were seconded Commission officials, and a budget for 582 contract staff (CAs), including 31 contract staff financed from third-country contributions. As in previous years, in 2018, there were no seconded national experts (SNEs) working at REA. On 31 December 2018, REA had **736 occupied positions** (735 active staff and 1 staff member on leave on personal grounds)[83] within a total staffing plan of 761.

The **total number of staff recruited** in 2018 was 94, among them: 6 seconded Commission Officials (TAs-SEC), 15 Temporary Agents (TAs-EXT) and 73 Contract Staff (CAs). This represents 80 newcomers and 14 CA staff who were successfully moved on to a new contract with a higher function group. The total number of staff who left the agency was 24, which is a turnover of 3.4%. At the end of the year, 24 staff were on leave on personal grounds (CCP)[84], which represents 13 new requests and 11 renewals. In 2018, 44 staff had internal mobility within REA.

In 2018, for the fourth consecutive year, REA carried out the **workload assessment** to adjust the distribution of the 2019 staff allocation and to fine-tune the units' size. This regular annual exercise is based on the input parameters provided by the units in charge of programme implementation (Departments A and B) for the budget delegated to them for the management of the respective programmes, the average grant size, the number of grants, the person-days required to manage a project and the project life-cycle with the relative weight of each stage. In the Administration, Finance and Support services Department (Department C), for the units (REA.C1 and C2) in charge of the Agency's functioning in terms of administration and finance, a decision had been taken in 2015 to keep constant levels for the staff allocation. The other two units of the department (REA.C3 and C4), which are in charge of providing administrative and logistical support services, the staff allocation followed the ceilings of the revised Specific Financial Statement (2017).

As regards the **gender balance** in the middle-management team at the year end, the share of the female managers was at 29.4%. Please note that this indicator is not under the full control of REA as its middle managers are selected and seconded by the Commission.

[83] See footnote 84.

[84] 24 staff members in CCP, including one for which it is required to block a position

### Recruitment and HR procedures

The selection procedure aiming to establish three **reserve lists of Temporary Agents 2)f** "Research Programme Administrators" (AD6) in three different scientific profiles[85] was finalised end of December 2018. It was organised with the assistance of EPSO. In total, 2 704 applications were received and 62 candidates were shortlisted. REA will recruit as from early 2019 according to its recruitment needs.

In 2018, **8 CAST selection procedures for contract staff** ('selection panels') were organised by REA to meet the 2018 and 2019 needs. Of these, 5 selection panels had been closed by the end of 2018 and 3 are ongoing. REA focussed also on **Inter-Agencies selection** procedures (11 selection procedures for contract agents and 10 for temporary agents).

A total of 656 staff appraisal reports were launched early 2018 for the REA staff. The reclassification exercise was concluded mid-October, with 85 staff members (41 temporary and 44 contract staff) reclassified, corresponding to a rate of 17.4% of the total REA eligible staff population.8 officials seconded to REA were also promoted.

### Decisions and Implementing rules

The Steering Committee Decision REA/SC(2017)4.5 for the **engagement and use of contract staff**[86], applying by analogy the Commission Decision C(2017)6760, took effect for the REA staff on 1 January 2018. In addition, during 2018, six **implementing rules** were adopted by the Steering Committee.

REA treated three complaints under Art.90 §2, relating to a dismissal at the end of the probationary period, a non-renewal of a contract and a non-admission to the next step of a TA selection procedure. Moreover, one Art.24 "request for assistance" was treated".

### Learning and Development

In 2018, REA continued to roll out the second phase of its project "**REA competency framework**" that provides a self-assessment tool to staff to test their competencies. It also adopted the **Agency's Learning and Development Framework Strategy** and started implementing it.

A first **job shadowing exercise** took place in 2018. A total of 59 colleagues participated: 14 REA staff did their shadowing in another unit in REA, 16 REA colleagues were hosted by other Agencies and REA welcomed 29 colleagues from other Agencies or DGs.

The **REA Managers Feedback Exercise** (360° feedback) started in 2018 in consultation with the Staff Committee, involving 20 managers, including Heads of Sector. In addition, in the context of the **Peer Learning group for Managers**, REA organised 5 working sessions on teleworking and talent, motivation, dealing with difficult colleagues/co-workers, purpose driven management and the cooperation of junior and middle managers with the REA Network of Project Officers (NPO).

Since October, 3 training sessions on PM$^2$ (**Project Management Programme**) and 2 exam sessions were organised. Such trainings will continue in 2019. REA also organised

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85 "Engineering, ICT, Physics, Mathematics, Chemistry and/or Space science";" Biology, Environmental and Geoscience and/or Satellite imagery, Life sciences" and "Human and Social science and/or Economics".

86 The new General Implementing Provisions (GIPs) create several advantages, such as (i) faster selection procedures (candidates can be tested several times per year); (ii) inter-"agencies" mobility (CA 3a posts are published on My Intracomm and accessible to other agencies and to the Commission staff); (iii) more favourable grading conditions for CA 3a (less professional experience needed compared to the previous rules); and, (iv) the possibility for a quicker access to indefinite duration contract for CA 3a (1 year + 1 year + indefinite duration).

13 **team buildings**, resulting in a high satisfaction rate of the participants, in particular for the ones focused around volunteering activities. Furthermore, as the central service in charge of the SEDIA tool for registering beneficiaries, REA provided validation training to other agencies and EC services.

**REA Wellbeing Days took** place in October, trigging high participation and very positive feedback. REA is part of the network of internal coaches and has among its staff one of the 40 certified coaches for the European Commission and Agencies. It is also member of the Agencies' network of Confidential Counsellors and 3 out of the 14 counsellors at the disposal of colleagues are working in REA.

#### Staff Committees

Four meetings were held between the **Staff Committee** and the REA's senior management during 2018. The Staff Committee's mandate ended on 15/12/2018. The elections for a new Staff Committee took place during the last quarter of the year. The new Staff Committee started on 17/12/2018.

In November 2018, DG HR transmitted to the EAs a final draft of the model decision on the **creation of the EA Common staff Committee** for opinion. The consultation of the Network of Executive Agencies Staff Committees and the local Staff Committees on the model decision took place beginning of December 2018.The agencies should be able to adopt the text in the beginning of 2019.

In July 2018, DG HR transmitted to the Executive Agencies a draft model decision on the creation of a **Committee for the prevention and protection at work** (CPPT). The model decision setting up CPPT for the EAs was elaborated in close collaboration with the Commission CPPT and fully mirrors its operations. The creation of the committee is planned for early 2019.

### 2.2.2 Information management aspects

REA has established appropriate processes and procedures to ensure a comprehensive, secure and efficient organisation of information management that complies with the applicable Commission rules.

In 2018, four **new ARES versions** were deployed to improve the registration, filing and quality of the metadata. Information sessions and guidelines were provided to REA users. For the version 3.0, the REA DMO team ran a specific communication campaign and organised training sessions (with some 100 participants) to highlight the important changes coming with the version concerned. .

In collaboration with the respective system developers and with the aim of improving the current situation, efforts were made to integrate **EMI[87] and PDM[88]** in Hermes-Ares-Nomcom (**HAN**). Despite substantial improvements made in 2018, the integration process was incomplete by the end of the year. As a consequence, these integrations are not yet fully compliant with the Commission's document management (e-Domec) rules and should be fine-tuned. In this regard, an ad-hoc group on document management was established. The purpose of the group is to work on the HAN implementation of the **eProcurement tool** (SEDIA) and on further improving the eDomec compliance of the **eGrant suite**. It will also follow up on the EMI and PDM integration. DG RTD R.1 was designated chair of the ad-hoc group.

[87] EMI: Expert Management Internal - Management of external experts, mainly contracts and payment transactions

[88] PDM: Participant Data Management - Registration of beneficiary and validation of legal entity and financial data

Following the **IAS audit on the closure of the FP7 projects**, the DMO team coordinated the archiving exercise. In 2018, a total of 1 777 files were transferred by the operational units to the REA Central Archives.

Together with the Local Security Officer (LSO) and the Registry Control Officer (RCO), considerable progress has been made on the implementation of arrangements for handling **sensitive classified projects**. In this respect, technical and administrative arrangements for EU Classified Information were made. The security inspection held by DG HR.DS and the Council on 9 October confirmed REA's compliance with the security rules set in place.

To ensure a correct implementation of the e-Domec policy within the REA units, several **e-Domec correspondent network meetings** took place. In parallel, the usual **ARES helpdesk tasks** were continued and the **library activities** ran smoothly, in particular the good practices related to "supporting documents" and "external transmission" features in ARES were reminded to the HR sector. Together with the document creators, the DMO team equally listed the most recurrent types of HR documents and prepared specific registration and filing instructions in this regard.

The yearly file **assessment** is also completed. Its purpose is to identify files that could be made more widely accessible to both REA and Commission staff. Analysis showed very little margin for further increasing the share of open files.

As regards the **results on the three performance indicators** of the Annual Work Plan (AWP) 2018, the percentage of unfiled registered documents (indicator number 1) is once again very low (0.02 %). This is one of the best performances throughout the entire Commission.

With respect to the performance on the two other indicators related to the sharing of files within the Agency (indicator number 2) and with other Commission services (indicator number 3), the results are in line with our current policy on ARES file access rights.

#### 2.2.2.1 Compliance with Regulation 2018/1725 on Data Protection

##### New templates for Record and Data Privacy Notice"

The REA Data Protection Officer (DPO) team created new templates for the record and for the data privacy notice, which was a crucial and intense action.

The new templates are coherent and reflect the new Regulation requirements as well as the recommendations of the European Data Protection Supervisor (EDPS). They were sent to the EDPS for revision, comments and approval. The EDPS endorsed the proposed templates with only minor changes. The final templates were published under the REA intranet (section "Data Protection").

These new templates will also be used by INEA and EASME.

##### Assessment of compliance with general principles (Art. 4 Reg. 2018/1725)

In the new record template, there is a section called "Compliance check". This section, which provides a short checklist for the most important rules, allows the controllers to check their compliance with data protection rules.

At the end of the compliance checklist, there are also some screening questions to allow the controller to verify whether the processing operations under his/her area of responsibility are subject to "high risks". If so, these would require further analysis or a Data Privacy Impact Assessment (DPIA).

#### Porting and updating existing notifications to the new record template

As soon as the new templates for records and for the data privacy notice were finalised, the data controllers started the update of the existing notifications and their porting to the new record template. During the period November-December 2018, two new records (ex-notifications) have been created by the respective controllers and five are in the process of finalisation. The remaining (old) notifications will be updated and ported to the new record template during the first semester of 2019.

Two notifications, one in the context of anti-harassment and another in the context of disciplinary procedures, will be drafted as a joint effort between all the Executive Agencies during 2019.

#### Information provided to the data subjects

For every record, an accompanying data privacy notice is created which informs the data subjects about the processing of their personal data by REA. In 2019, all data protection notices will be created and published under the REA intranet section dedicated to data protection.

The data privacy notices will also be published on the REA public website under a new section ("Data Protection") that will be created for this reason.

### 2.2.2.2 Inventory and register of data processing operations

The REA DPO has established a detailed inventory of REA processing operations involving personal data. During 2019, this inventory will be further reviewed and enhanced in collaboration with the concerned data controllers.

The central register of REA processing operations involving personal data, managed by the REA DPO, will be published during the first quarter of 2019 on the REA intranet ("Data Protection" section). Although the REA DPO keeps the register of records, REA as controller – and by extension the persons responsible on behalf of the controller – remains responsible for the content of the records.

### 2.2.2.3 Establishment of internal rules governing the restrictions of data subjects rights

Various horizontal DGs of the Commission are preparing Decisions that will constitute the legal basis for the restriction of data subjects' rights related to their personal data (e.g. right of access/rectification/erasure etc.). These actions are taken in the context of the horizontal data processing activities performed by these DGs (e.g. OLAF investigations). The common goal of the Executive Agencies (EAs) is to be included and covered by these Decisions.

The EC DPO requested the EAs to send detailed information on their current practices restricting the data subjects' rights. DG RTD (Common Support Centre - CSC) is responsible for the communication between the EAs and the horizontal services of the Commission. Early November 2018, the EAs provided the DG RTD Data Protection Correspondent (DPC) with the information requested.

In 2019, further discussions with DG RTD and the EC DPO will be held to ensure the EAs' common goal is reached.

## 2.2.3 External communication activities

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

In 2018, REA worked towards its objectives to boost awareness of new funding opportunities and broaden the participant group in several ways.

REA organised and/or participated in information days and coordinators' days. Overall, there were 24 events for beneficiaries, potential applicants and experts, to promote the programmes managed by REA and ensure their smooth implementation.

News alerts were dispatched to REA stakeholders (currently 3058 subscriptions) on a variety of subjects, which included information on upcoming Horizon 2020 funding opportunities and call for experts.

To raise awareness about the European Innovation Council (EIC) and its actions, REA produced a series of videos that were filmed during a REA event featuring 15 FET Innovation Launchpad projects as part of the EIC pilot.

Further, REA participated to international events where MSCA funding opportunities were promoted: the AAAS conference in Austin (Texas) and the MIT Career Fair (Boston). The programme was also promoted in a series of information events organised by the EU Delegation in Washington.

Following the RISE Coordinator's day, a video to promote the RISE programme was produced in-house and disseminated through social media. Another video to attract more participants to RISE calls was filmed during ESOF 2018 in Toulouse.

On its objective to consolidate its service oriented communication, in 2018 REA increased efforts to target participants and experts. In particular, REA launched a campaign to attract new experts to Horizon 2020: a video was prepared and disseminated through social media (Twitter, LinkedIn, Facebook and SMARP via YouTube). The video had a very powerful impact on social media (80,000 views on LinkedIn) resulting in some 2,000 new experts registered in the Participant Portal in April 2018 alone.

Further on experts, a series of animated briefings to support expert evaluators has been produced. The briefings cover topics such as the evaluation process, evaluation criteria and conflict of interest.

On participant validation, the role of SEDIA and REA have been featured in a video that was disseminated via social media, targeting future applicants to EC calls for proposals/tenders[89].

In 2018 REA's objective to support partner DGs in giving visibility to EU research and innovation via success stories continued to be a core part of REA's communication activities. Indeed, a total of **282 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. In addition, **55 REA**-managed projects have been featured in articles published in the Horizon Magazine. REA projects have also been retained for Futuris episodes by Euronews. On social media, each project on research published in the Info-centre on Europa has been automatically fed into DG RTD Facebook and Twitter accounts. The same applied to articles featured in the Horizon Magazine.

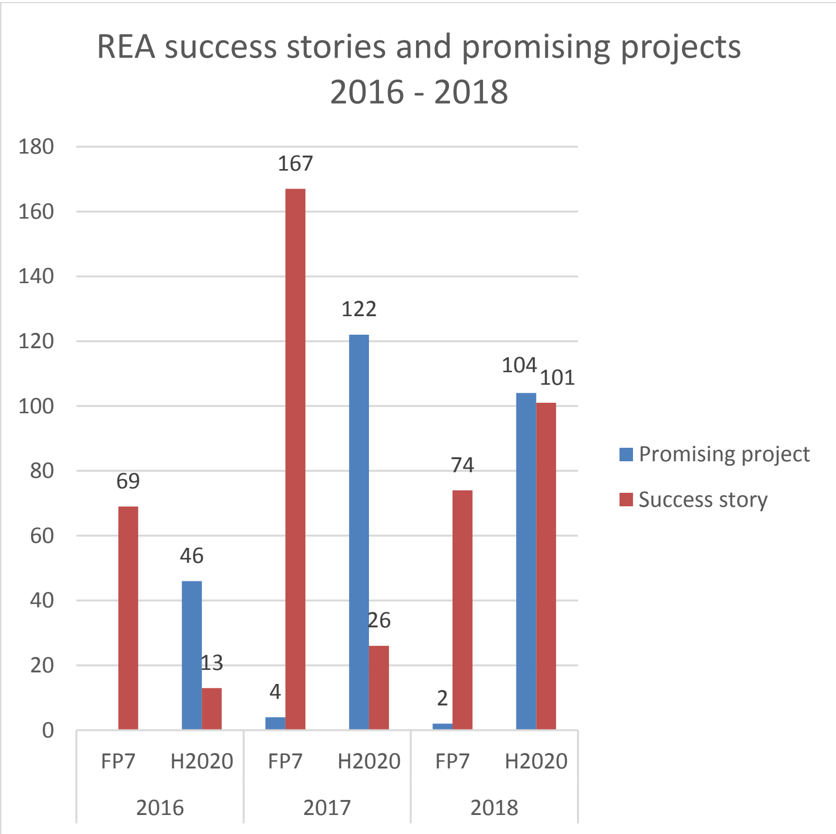
[89] Register in the Participant Register: 'Your key to EU grants and tenders: the Participant Identification Code (PIC)'. See http://ec.europa.eu/research/participants/docs/h2020-funding-guide/grants/applying-for-funding/register-an-organisation_en.htm

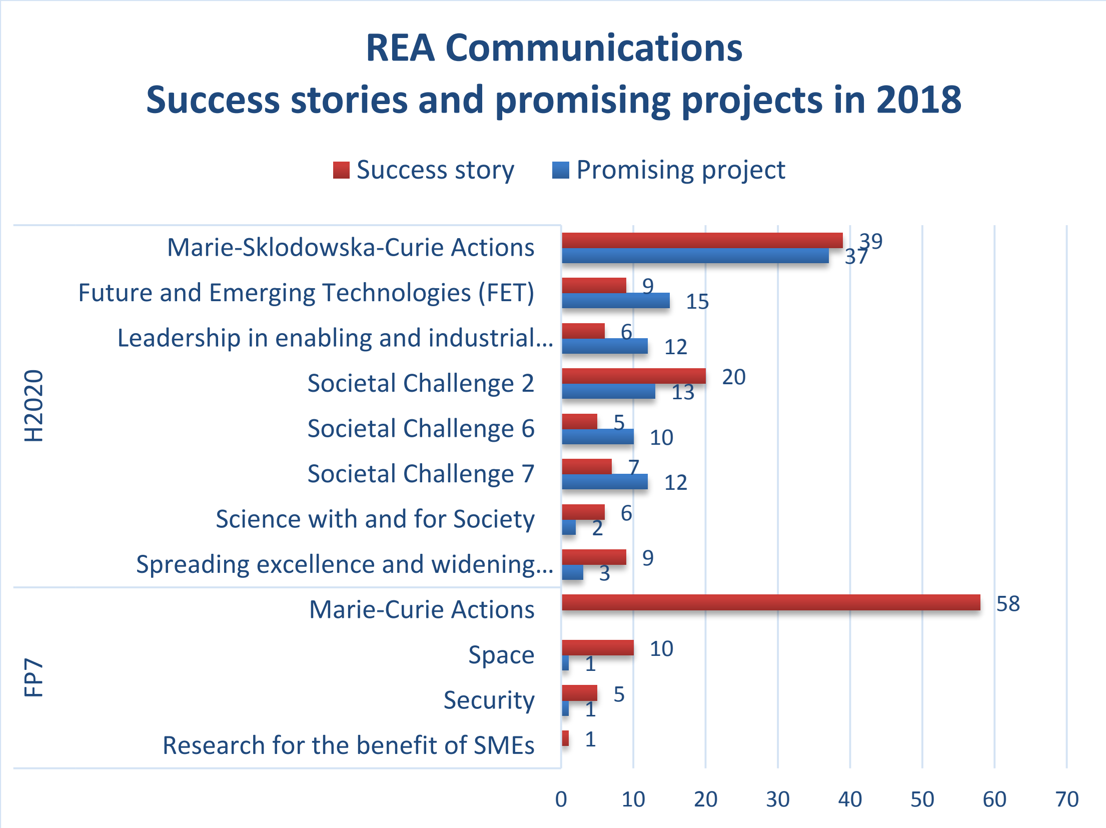
Communication on successes of projects managed by REA was also achieved by participation to, provision of input for, or co-organisation of 17 conferences and workshops.

Among conferences were REA participated with projects and/or REA staff the following can be highlighted: AAAS conference in Austin, the MIT European Career Fair in Boston, the ESOF 2018 in Toulouse, the Web Summit 2018 in Lisbon, the ICT 2018 in Vienna, High Level Conference "EU Research in our daily life" and the Security Research Event 2018.

During the Commission's Open Doors event, in May 2018, REA projects were also featured on the R&I stand (under the responsibility of DG RTD), Moreover, REA staff helped to manage the stand and to interact with the audience to promote the results of the EU-projects featured at the event.

REA continued to work closely with the Operational Communication Network (OCN) for the R&I family on identifying successful projects with high communication potential, the so-called "success stories" and "promising projects". With more than 281 'success stories' and 'promising projects' in the course of 2018 (slightly lower than in 2017 with 319), REA accounted for about 26% of all success stories provided to the R&I common pool. REA's target for 2018 to identify 200 success stories has almost been reached with 175; in addition 104 promising projects were identified and put forward. DG RTD's subcontractor is in charge of drafting the fact sheets which are then published on the Research & Innovation website.






## 2.2.4 Specific efforts to improve economy and efficiency of financial and non-financial activities

According to the Financial Regulation (Article 74.2[90]), 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 concerns the best relationship between resources employed and results achieved.

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. REA is continuously fine-tuning its internal arrangements in order to improve the efficiency and economy of its operations.

In its AWP 2018, REA planned the clustering of review meetings to boost the quality and efficiency of its **policy feedback** to the European Commission and to foster networking of project partners In terms of support services, significant quantitative and qualitative benefits were targeted with the **participant registration and validation process with the implementation of the SEDIA** (Single Electronic Data Interchange Area) project.

[90] Article 74(2) of the Financial Regulation: "For the purposes of paragraph 1 of Article 74, the Authorising officer by delegation shall, in accordance with Article 36 and the minimum standards adopted by each Union institution and having due regard to the risks associated with the management environment and the nature of the actions financed, put in place the organisational structure and the internal control systems suited to the performance of duties. The establishment of such structure and systems shall be supported by a comprehensive risk analysis, which takes into account their cost-effectiveness and performance considerations."

#### 2.2.4.1 Project cluster/review meetings for better policy feedback to the EC

The large majority of projects managed by REA have the contractual obligation to organise a mid-term 'review / check meeting', to review the progress of the action's implementation. Currently, most of these meetings are organised either in Brussels or at the premises of the coordinator/ beneficiary, attended by the REA Project Officer and usually also by an external expert who assists the agency in the monitoring.

During these meetings REA obtains interesting feedback which is often also very valuable to the parent DGs. However, a targeted policy feedback from REA to the EC services in a given topic/ scientific domain is sometimes difficult to provide based on individual project reports.

Therefore, REA explored for selected topics to move from individual project review/ monitoring meetings, towards clustered review meetings organised in Brussels, bringing together several projects from the same scientific domain.

The purpose of these meetings is twofold: first, to check/review the proper implementation of the contractual obligations of each action; second, to gather structured information from the various projects related to a specific topic/scientific field, to be used for a comprehensive policy feedback to the relevant parent DGs.

In 2018, ***clustered review meetings*** have been piloted in various parts of the actions managed by REA. In particular, it has been tested in **SC6** 'Inclusive, Innovative and reflective societies' and **SC2** 'Sustainable resources for food security and growth'.

This initiative has allowed REA to keep its high-quality project monitoring standards and to gather policy feedback in a more efficient and effective way, whilst making the process more cost-efficient:

- Each meeting organised in Brussels brought together several projects from the same scientific domain. The external expert did not have to visit the projects individually, but came to Brussels. Consequently the number (and cost) of experts were lower than in the case of individual monitoring missions. This organisation has also a positive impact on REA's operating costs (saving time and costs for missions for project officers accompanying the experts).
- The experts' reports were complemented by synthetised information retrieved from individual projects, summarising the most relevant elements for a structured policy feedback.

From the scientific and policy point of view, this initiative fosters the cross-fertilisation across projects as well as helps maximising the exploitation of complementarities and synergies between projects. Moreover, it allows the combination of the review meetings with policy sessions, with the participation of policy officers from the different EC services working on the domain.

The pilots carried out have also helped in identifying other aspects which should be taken into account. In particular, the fact that an extended implementation of clustered reviews would best be limited to projects with thematic areas that are closely interlinked and running simultaneously – as reviews should take place at the same time.

In this respect, this year's experience builds on the positive outcome of the clustered mid-term review of 58 Twinning projects, which took place in 2017. This process was coordinated with the parent DGs in order to complement the clustered project reviews with a policy questionnaire, which altogether resulted afterwards in a policy report 'Twinning mid-term review report'. This successful experience is expected to be implemented again in 2019 linked to the final review of the projects.

Moreover, it may be highlighted that clustered meetings, beyond project reviews, for policy support have been organised in 2018.

Beyond clustered review meetings, REA organised three ***clustered monitoring meetings*** for **MSCA** projects on three different thematic areas of relevance for EC policies:

- Batteries and fuel cells
- Obesity, Diabetes and Human Metabolism
- Smart Cities

Compared to a standard monitoring mission, these clustering events are more useful for both the fellows and EC services, as the assessment is easier and more meaningful when projects are grouped and compared instead of being individually considered. For the researchers, this was the occasion to meet other MSCA-IF fellows, to compare their outcomes and practises, and to exchange on their personal experience. For the EC-services, this is the occasion to monitor progress in a different way, and to facilitate evaluation at program level instead of project level. It is also a way for REA to obtain structured information and enhance the policy feedback with its parents DGs.

#### 2.2.4.2 Implementation of SEDIA (Single Electronic Data Interchange Area)

Significant quantitative and qualitative benefits are expected for the participant registration and validation processes with the implementation of SEDIA (Single Electronic Data Interchange Area). The centralised validation services under SEDIA are expected to bring a more efficient Commission-wide use of resources with net savings of approximately EUR 2.5 million per year at cruising speed[91].

Since January 2018, the centralisation in REA of (i) the legal validation and (ii) the preparation of the financial capacity assessments of participants in grant and procurement procedures under direct management has become a reality. The gradual onboarding of the Commission services in the corporate validation solution is still ongoing, alongside with the deployment of the e-Procurement platform and the onboarding of the remaining non-H2020 programmes in e-Grants. Due to the complexity of these processes and the continuous improvements in the IT suite, the implementation of centralised validation services under SEDIA is still not at cruising speed at 31 December 2018.

The **gradual onboarding of the Commission services** represented an important challenge for REA:

- **common definitions** such as Participant[92] and Participant Register[93] have been adopted and the definition of the Participant Identification Code (PIC) has been confirmed;
- **common rules** governing the use of the REA validation services and the legal basis for the participants' legal and financial validation have been proposed by REA and endorsed by the SEDIA governing bodies;
- **processes and procedures** linked to legal and financial validation have been agreed with the EC central services and fully harmonised for both grants and procurement domains;

[91] Source: CBA for the centralisation of legal and financial validation concludes with net savings of EUR 2.5 million per year from 2021 onwards, corresponding to 16 FTEs.

[92] All legal entities and natural persons participating in grant and procurement procedures

[93] On-line web interface offering registration and data update services for participants via the Tender and Funding Opportunities Portal)

- **simplification measures**, where necessary, have been deployed in order to streamline the processes and ensure smooth transition to corporate validation services;
- REA deployed significant efforts in **bilateral meetings** with new and forthcoming clients and – together with DG DIGIT – provided on boarding sessions for e-Procurement.

The SEDIA project requires important IT developments for which implementation is still ongoing. Some EU services are not ready to integrate their activities within the corporate IT suite that provides direct access to REA and therefore transitional measures had to be applied. Although the corporate IT tools are still requiring further improvements, REA has advanced on some important points during 2018:

- The temporary IT solution allowing SEDIA clients to access the REA validation services for procurement procedures has been put in production on time. Some improvements to this solution, such as the request for registration of the participants' bank accounts, became available during the course of 2018.
- The migration to the corporate process and workflow management IT tool (COMPASS) started in 2018 and will cover, in the course of the next years, all validation processes carried out by REA.
- REA took the necessary measures to ensure that security aspects of the SEDIA IT environment are properly dealt with.

The single electronic data interchange area became a step forward into the **deployment of fully electronic processes** for the legal and financial validation of entities, which (i) eases the interaction between participants and the REA validation services, (ii) reduces the time to receive and validate supporting documents and (iii) streamlines its management.

The already on boarded SEDIA clients can therefore benefit from a single service provider offering the full range of participant validation services (legal and financial validation, and registration of bank account). The advantage of such corporate solution is that validations are handled by REA in a consistent manner for all clients and in conformity with common processes and procedures.

The reusability of participants' data under SEDIA represents an additional benefit. Participants that have already been validated in the scope of a EC grant or procurement procedure must not undergo the same process for the following applications. Such simplification helps to reduce the administrative burden for both the EC services and the participants.