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NOTICES FROM EUROPEAN UNION INSTITUTIONS, BODIES, OFFICES AND AGENCIES

Court of Auditors

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(Notices)

NOTICES FROM EUROPEAN UNION INSTITUTIONS, BODIES,
OFFICES AND AGENCIES

COURT OF AUDITORS

Annual report on the EU Joint Undertakings for the financial year 2018

(2019/C 426/01)

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Acronyms

This list of acronyms includes the EU Joint Undertakings and other EU bodies covered by this report.

Acronym	Full name
Artemis	The Artemis Joint Undertaking to implement the Joint Technology Initiative in Embedded Computing Systems
BBI	The Bio-based Industries Joint Undertaking
CAS	Common Audit Service of the Commission's DG RTD
CEF	Connecting Europe Facility
CFS	Certificate on Financial Statement
CS	The Clean Sky Joint Undertaking
DG RTD	Directorate General for Research and Innovation
EA	Executive Agency
EASA	The European Union Aviation Safety Agency
ECSEL	The Electronic Components and Systems Joint Undertaking
ENIAC	The European Nanoelectronic Initiative Advisory Council
EIT	The European Institute of Innovation and Technology
EUAN	European Union Agencies' Network
Euratom	European Atomic Energy Community
EUROHPC	The European High-Performance Computing Joint Undertaking
EVM	Earned value management
FP7	Seventh Framework Programme for Research and Technological Development (2007-2013)
F4E	The Fusion for Energy Joint Undertaking
FCH	The Fuel Cells and Hydrogen Joint Undertaking
H2020	Horizon 2020 Framework Programme for Research and Innovation (2014-2020)
IFAC	International Federation of Accountants
IMI	The Innovative Medicines Initiative Joint Undertaking
INTOSAI	International Organization of Supreme Audit Institutions
ISAs	The International Standards on Auditing of IFAC
ISSAIs	The International Standards of Supreme Audit Institutions of INTOSAI
ITER	International Thermonuclear Experimental Reactor
JU	Joint Undertaking
MFF	Multiannual financial framework
NFA	National funding authority
P2P	Public to Public Partnership
PMO	Office for Administration and Payment of individual entitlements
S2R	The Shift2Rail (European Rail Initiative) Joint Undertaking
SESAR	The Single European Sky Air Traffic Management Research Joint Undertaking
SNE	Seconded National Expert
TEN-T	Trans-European Transport Network programme

CHAPTER 1

THE EU JOINT UNDERTAKINGS AND THE ECA'S AUDIT

INTRODUCTION

1.1. The European Court of Auditors (ECA) was established by the Treaty on the Functioning of the European Union as the external auditor of the EU's finances. In this capacity, we act as the independent guardian of the financial interests of the citizens of the Union, notably by helping to improve the EU's financial management. More information on our work can be found in our activity reports, our annual reports on the implementation of the EU budget, our special reports, our landscape reviews and our opinions on new or updated EU laws or other decisions with financial management implications.

1.2. Within this mandate we carry out an annual examination of the accounts and the underlying transactions of EU research Joint Undertakings.

1.3. This report presents the results of our audit of the EU research Joint Undertakings (collectively referred to as 'Joint Undertakings' or 'JUs') for the 2018 financial year. The report is structured as follows:

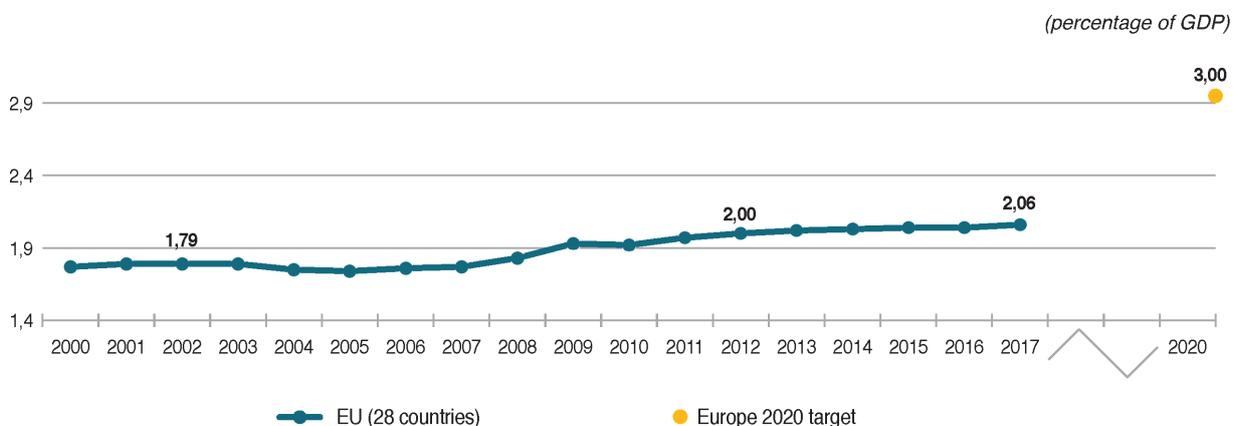
- Chapter 1 describes the JUs and the nature of our audit,
- Chapter 2 presents the overall results of the audit,
- Chapter 3 contains, for each of the eight JUs, a statement of assurance with our opinions and observations on, firstly, the reliability of their accounts and, secondly, the legality and regularity of the underlying transactions.

THE EU JOINT UNDERTAKINGS

Public-private partnerships as a powerful tool to deliver research and innovation in Europe

1.4. One of the key aims of the EU has been to encourage increasing levels of research investment, in order to provide a stimulus to the EU's competitiveness. One of the five key targets of the Europe 2020 strategy, adopted in 2010, is to devote 3 % of the EU's gross domestic product (GDP) to research and development (R&D) activities (see Figure 1.1).

Figure 1.1

Gross domestic expenditure on R&D, EU-28, 2000-2017

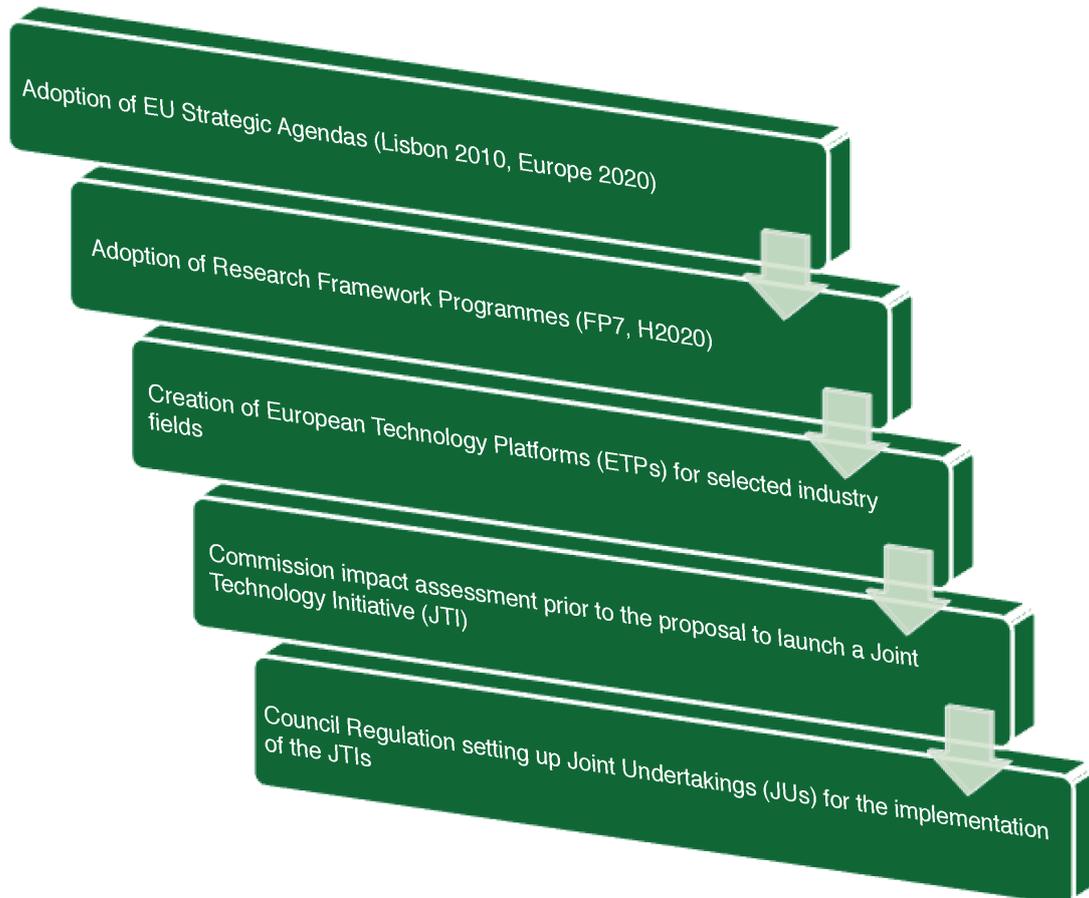
Source: ECA based on Eurostat data, June 2019.

1.5. Although progress towards the 3 % target has been slow, the European Commission has placed renewed emphasis on the conversion of Europe's scientific expertise into marketable products and services. A key element was to join forces with the private sector and with Member States to achieve results that one country or company is less likely to achieve alone.

1.6. In June 2005, the Commission presented the report 'Fostering Public-Private R&D Partnerships to Boost Europe's Industrial Competitiveness', calling for the creation of Joint Technology Initiatives (JTIs) as dedicated programmes to implement industry-specific Strategic Research Agendas under the legal form of JUs (see Figure 1.2).

Figure 1.2

From EU Strategic Agendas to Joint Undertakings



Source: ECA.

JOINT UNDERTAKINGS OPERATING UNDER THE RESEARCH FRAMEWORK PROGRAMMES

1.7. JUs are partnerships between the Commission and industry, and in some cases also research, that aim to bring project results in strategic areas of research and innovation closer to the market and improve the link between research and societal growth. They are established under Article 187 of the Treaty on the Functioning of the European Union or (in the case of Fusion for Energy) Articles 45 to 51 of The Treaty establishing the European Atomic Energy Community.

1.8. JUs are a form of public-private partnership endowed with legal personality. Their public member is typically the European Union (represented by the Commission) and the private members are from industry and in some cases from research. There are also other partners (participating states, international organisations). JUs adopt their own research agenda and award funding, mainly through open calls for proposals. An exception to this is F4E, a JU responsible for providing Europe's contribution to ITER, the world's largest scientific partnership that aims to demonstrate fusion as a viable and sustainable source of energy.

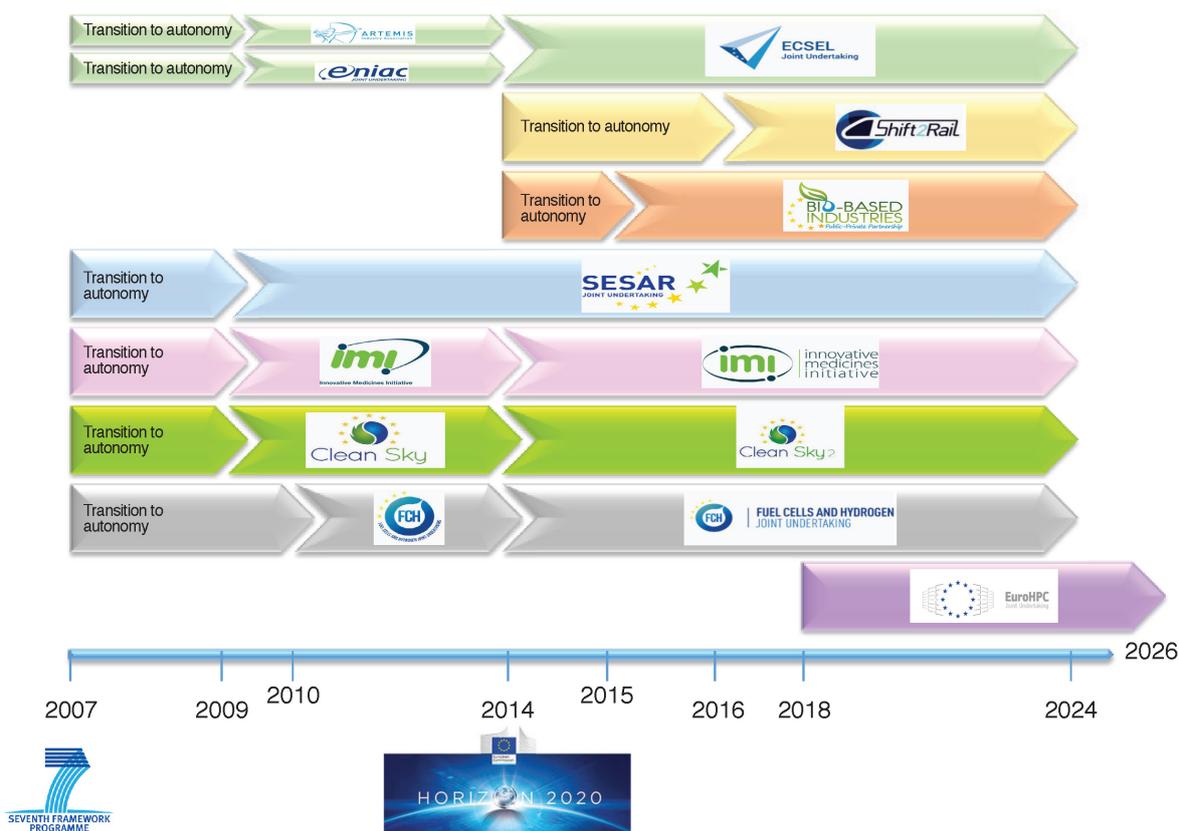
1.9. JUs are highly visible and have significant influence in important areas of European citizens' daily life, such as transport, energy, health, the bio-economy and the digital economy. In this report, we refer to specific JUs by their acronyms, a list of which is provided at the beginning of this report.

1.10. Under the FP7 programme, based on a proposal of the Commission, the Council adopted regulations setting up the first six JUs: Single European Sky Air Traffic Management Research (SESAR), Clean Sky (CS), Innovative Medicines Initiative (IMI), Fuel Cells and Hydrogen (FCH), Nanoelectronics (ENIAC) and Embedded Systems (Artemis).

1.11. All JUs set up under FP7 were extended in 2014 under the H2020 programme for an additional period of 10 years (i.e. until 2024). The EU's overall financial contribution to the JUs doubled. In addition, two new JUs were created — Bio-based Industries (BBI) and Shift2Rail (S2R) — while Artemis and ENIAC were merged into one JU, the Electronic Components and Systems for European Leadership (ECSEL) (see Figure 1.3).

Figure 1.3

Evolution of European Joint Undertakings



Source: EC based on the Council regulations establishing the JUs, modified by ECA.

JUs under H2020

1.12. These JUs implement specific parts of H2020 in the areas of transport (CleanSky2, Shift2Rail and SESAR), transport/energy (FCH2), health (IMI2), bio-based industries (BBI) and electronic components and systems (ECSEL). The main objectives of each JU are presented together with their statements of assurance in Chapter 3.

1.13. The Clean Sky JU develops new generations of greener aircraft. Its main achievements so far include the Open Rotor demonstrator, laminar wings, innovative rotor blades and a high compression engine for light helicopters, innovative ice detector sensors and advanced avionics systems.

1.14. The Innovative Medicines Initiative JU (IMI) is speeding up the development of innovative medicines, particularly in areas where there is an unmet medical or social need. Its main achievements so far include a pan-European network of hundreds of hospitals and laboratories to advance antibiotic development, tests to improve medicines safety, a new approach to clinical trials for dementia treatments, and a greater understanding of the underlying causes of diseases such as diabetes, rheumatoid arthritis, and severe asthma.

1.15. The Shift 2 Rail JU (S2R) pursues innovation on railways in support of the achievement of the Single European Railway Area. Its main objectives include cutting the life-cycle cost of railway transport by half, doubling railway capacity and increasing reliability and punctuality by up to 50 %.

1.16. The Single European Sky Air Traffic Management Research JU (SESAR) is developing the next generation of air traffic management. Its main achievements so far include the world's first flight in four dimensions (3D + time), remote tower services, free routing to reduce flight and fuel emissions, and seamless information interchange between all providers and users of ATM information.

1.17. The Fuel Cells and Hydrogen JU (FCH) develops clean solutions for transport, energy and storage. Its main achievements so far include the deployment of fuel cell powered buses for clean public transport; the establishment of a EU value chain for fuel cell stack with improved performance and reduced costs; the development of the electrolysis technology for green hydrogen production; the development and commercialisation of micro combined heat and power (mCHP) units for the supply of residential heat and electricity; as well as improved performance and durability of materials and reduced costs for components and systems. It also launched a 'Regions initiative' joined by over 90 regions and cities and 55 industry partners that fosters synergies and smart specialisation efforts in Europe.

1.18. The Bio-based Industries JU (BBI) is implementing a programme of research and innovation activities in Europe that assess the availability of renewable biological resources that can be used for the production of bio-based materials, and on that basis support the establishment of sustainable bio-based value chains. Its main achievements so far include producing a range of innovative bio-based products in view of a new bio-based community.

1.19. The Electronic Components and Systems for European Leadership JU (ECSEL) funds research, development and innovation projects on electronics design and manufacturing capabilities. Its main achievements so far include CESAR (Cost-Efficient methods and processes for Safety Relevant embedded systems), which has made a significant impact on the European embedded systems industry, and the E3Car, which overcame the main challenges facing electrical vehicles using advanced semiconductor components.

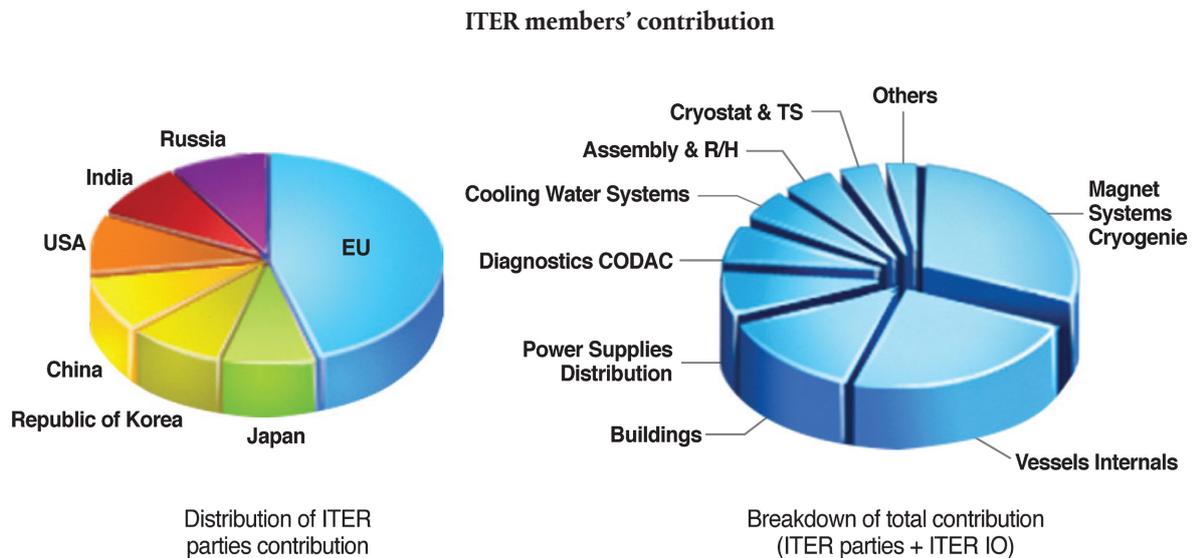
1.20. The European High-Performance Computing JU (EuroHPC) is the most recent JU, established by the Council in November 2018. It is a joint initiative between the EU and other European countries to develop a world class supercomputing ecosystem in Europe. EuroHPC will remain operational until the end of 2026. We will audit the accounts of this JU for the first time in 2020.

One JU operates under Euratom

1.21. The ITER (originally the International Thermonuclear Experimental Reactor) project officially initiated in 1988, and its conceptual and design activities have been running for several years. On 21 November 2006, the project participants formally agreed to build and operate an experimental facility to demonstrate the scientific viability of fusion as a future sustainable energy source. The ITER Agreement entered into force on 24 October 2007, at which date the ITER Organisation legally came into existence. It is hosted in Saint-Paul-lès-Durance (France), with the main fusion facilities to be built at Cadarache (France).

1.22. The project involves seven global partners: the EU represented by the European Atomic Energy Community (Euratom), the United States, Russia, Japan, China, South Korea and India. Europe has taken the lead with a 45 % share of the construction costs, of which 80 % is funded from the EU budget and 20 % by France as the ITER host country. The other ITER members' share is around 9 % each. This cost distribution will change in the operational phase, with Europe providing 34 % of costs (see Figure 1.4).

Figure 1.4



Source: F4E.

1.23. ITER's construction involves over 10 million components being built in factories around the world. About 75 % of its investment is spent on the creation of new knowledge and cutting-edge materials and technology. This offers European high-tech industries and SMEs a valuable opportunity to innovate and to develop 'spin-off' products for exploitation outside fusion (such as the broader energy sector, aviation and hi-tech instruments like nuclear magnetic resonance (NMR) scanners).

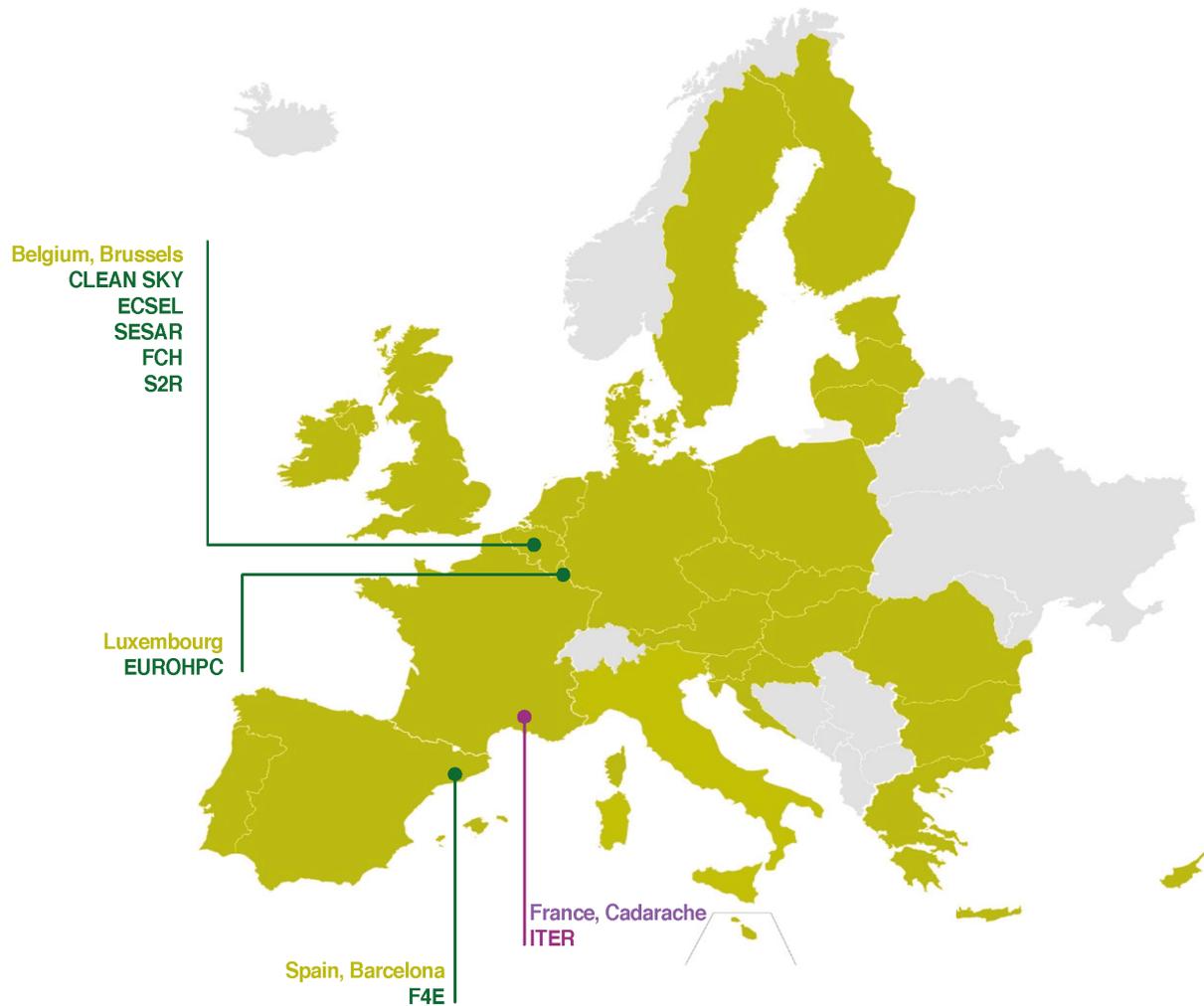
1.24. Fusion for Energy (F4E) is the JU in charge of the European contribution to the project. Its main objectives include providing Euratom's contribution to ITER and ensuring the Broader Approach activities with Japan for the rapid realisation of fusion energy. It also prepares and coordinates a programme of activities in preparation for the construction of a demonstration fusion reactor and related facilities, including the International Fusion Materials Irradiation Facility.

JUs are located in the European Union

1.25. Seven JUs are located in Brussels (CS, S2, SESAR, FCH, IMI, BBI and ECSEL). EuroHPC is located in Luxembourg.

1.26. F4E is located in Barcelona, Spain. ITER (the International Thermonuclear Experimental Reactor), to which the European Union is contributing via F4E, is being built next to the Cadarache facility in Saint-Paul-lès-Durance, in Provence, southern France (see Figure 1.5).

Figure 1.5

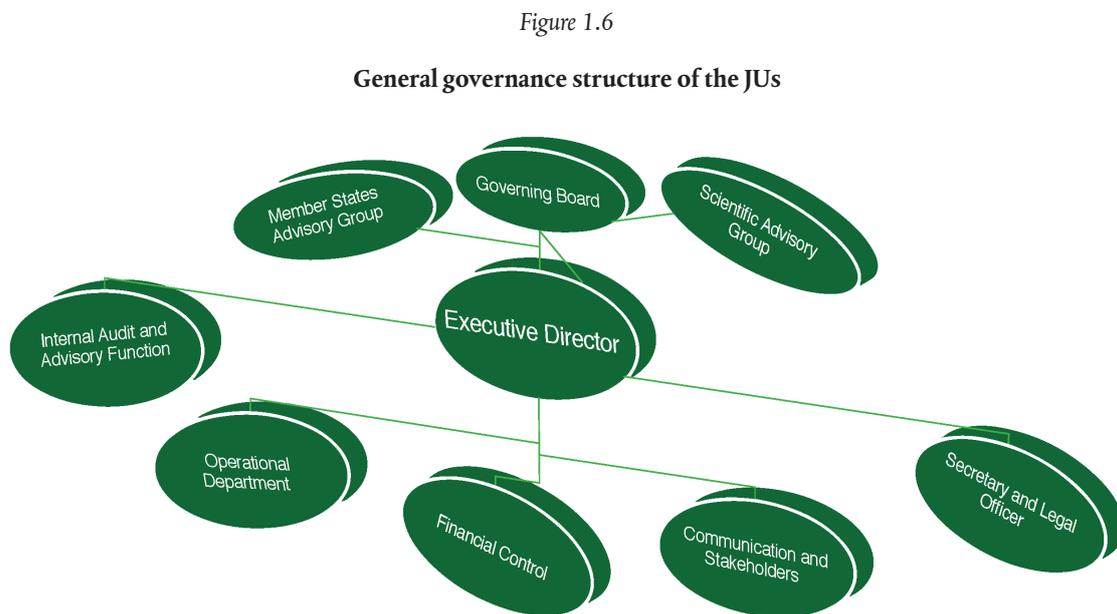
Joint Undertakings in the European Union

Source: ECA.

JUs follow bipartite or tripartite governance models

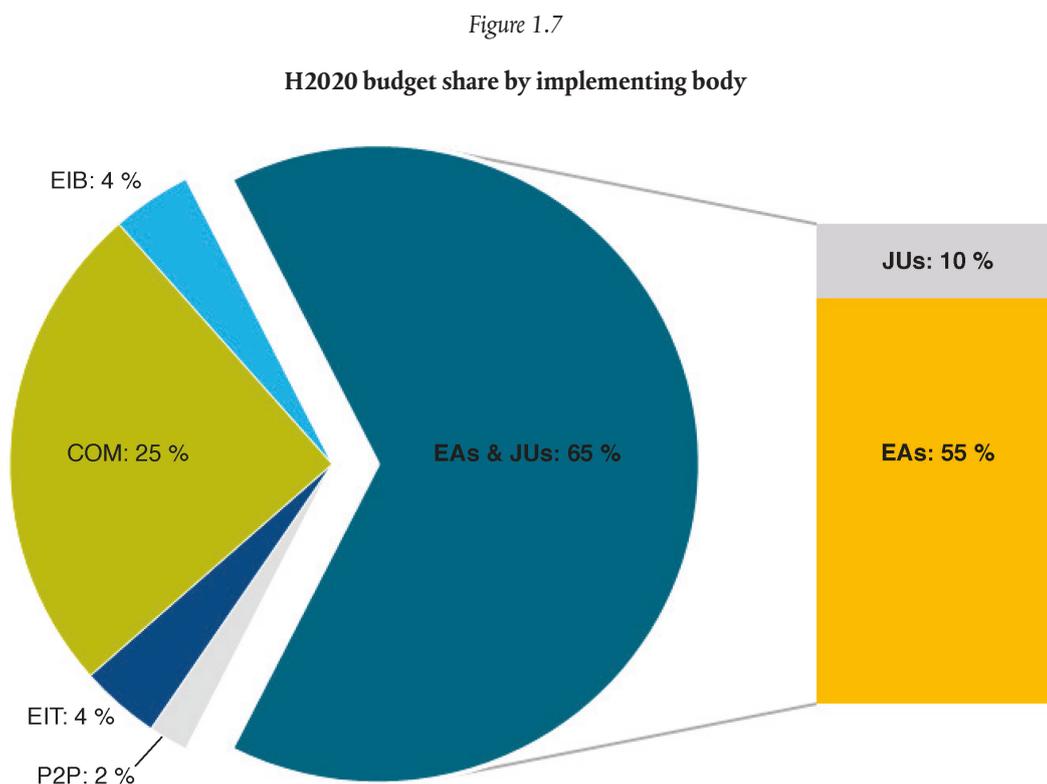
1.27. Despite having the same legal structure, each JU has specific characteristics due to the fact that they deal with innovation and research in different sectors that are built around different markets. Most follow a bipartite model, with the Commission and industry (in some cases also research) represented on a governing board and contributing to the JU's activities (SESAR, CS, IMI, FCH, BBI and S2R). The remainder follow a tripartite model in which the Member States, the Commission and industry participate in the governing board and contribute to the JU's activities (ECSEL and EuroHPC).

1.28. Figure 1.6 presents the general governance structure of the JUs.



Source: ECA.

1.29. For the duration of the multiannual financial framework (MFF), JUs manage around 10 % or 7,2 billion euro of the global H2020 budget as illustrated in Figure 1.7. The EU funding of 7,2 billion euros, however, leverages about 17 billion euros of research and innovation projects in the H2020 areas delegated to JUs.



Source: ECA based on EC data.

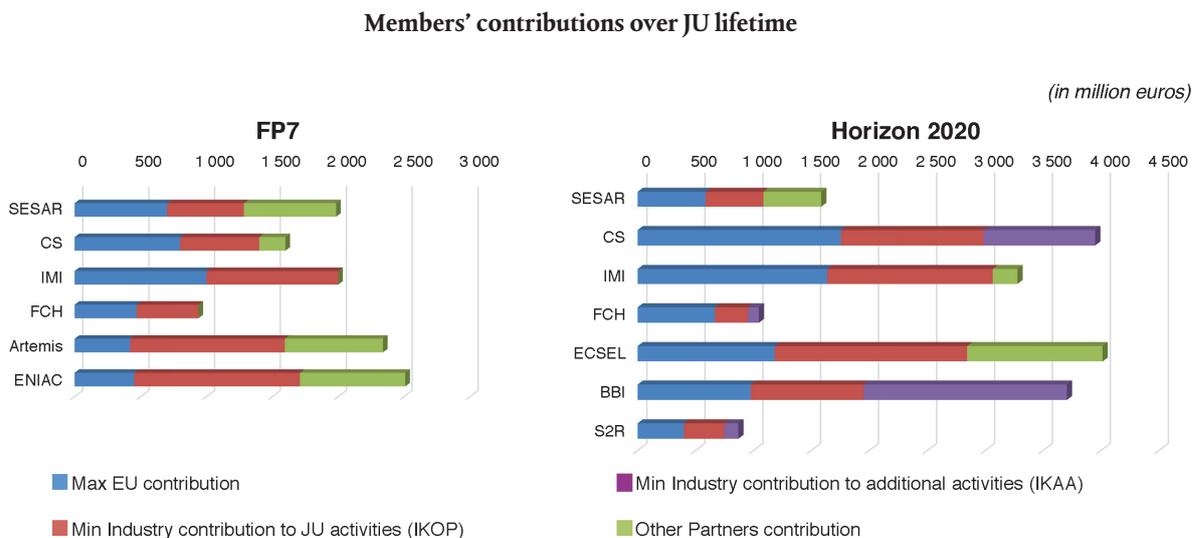
JUs’ research activities are financed by both the EU and the industry and research partners

1.30. All members contribute to the funding of the JUs’ research and innovation activities. On the one hand, the Commission provides cash funds from FP7 and the H2020 for the EU co-funding of the JUs’ research and innovation projects. SESAR also receives funding from the Trans-European Transport Network (TEN-T) programme. On the other hand, the industry and research partners provide in-kind contributions by implementing the JUs’ research and innovation projects. Both the Commission and private partners provide equal cash contributions to finance the JUs’ administrative costs.

1.31. For the JUs’ FP7 activities, the amount of in-kind contributions to be provided by the industry partners has to equal the amount of EU co-financing of FP7 research and innovation projects.

1.32. For the JUs’ H2020 activities, the respective JU founding regulations define the amount of both EU cash contributions and private members’ in-kind contributions for H2020 research and innovation projects, as shown in *Figure 1.8*.

Figure 1.8



Source: ECA.

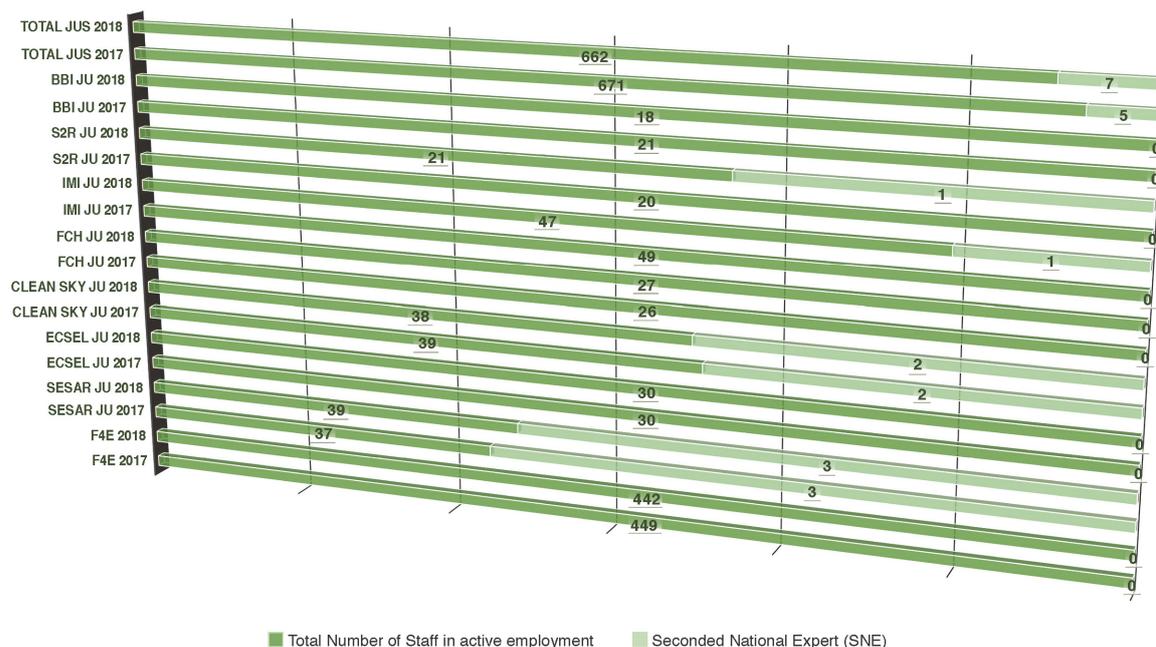
1.33. There are two types of industry members’ contributions: For all JUs the industry members have to contribute a minimum amount to the total costs of the JU research and innovation projects. The contribution is defined as the difference between the total project costs and the EU co-funding. In the case of four JUs (CS, FCH, BBI and S2R), the private members also have to provide a minimum amount of in-kind contributions which consist of ‘additional activities’ performed outside the JUs’ work programmes but falling within the scope of the JUs’ objectives.

1.34. For 2018, the total payments budget of the seven JUs implementing research programme activities was 1,2 billion euros (2017: 1,2 billion euros), and 0,8 billion euros for F4E (2017: 0,85 billion euros).

1.35. At the end of 2018, JUs operating under H2020 employed 220 staff (officials, temporary and contract agents) and seven seconded national experts (SNEs) (2017: 222 staff and five SNEs). F4E employed 442 staff (2017: 449 staff). The number of staff posts filled at the JUs in 2017 and 2018 is illustrated in Figure 1.9.

Figure 1.9

Number of staff posts actually filled at the JUs (2017 and 2018)



Source: ECA.

The Commission performs interim and final evaluations

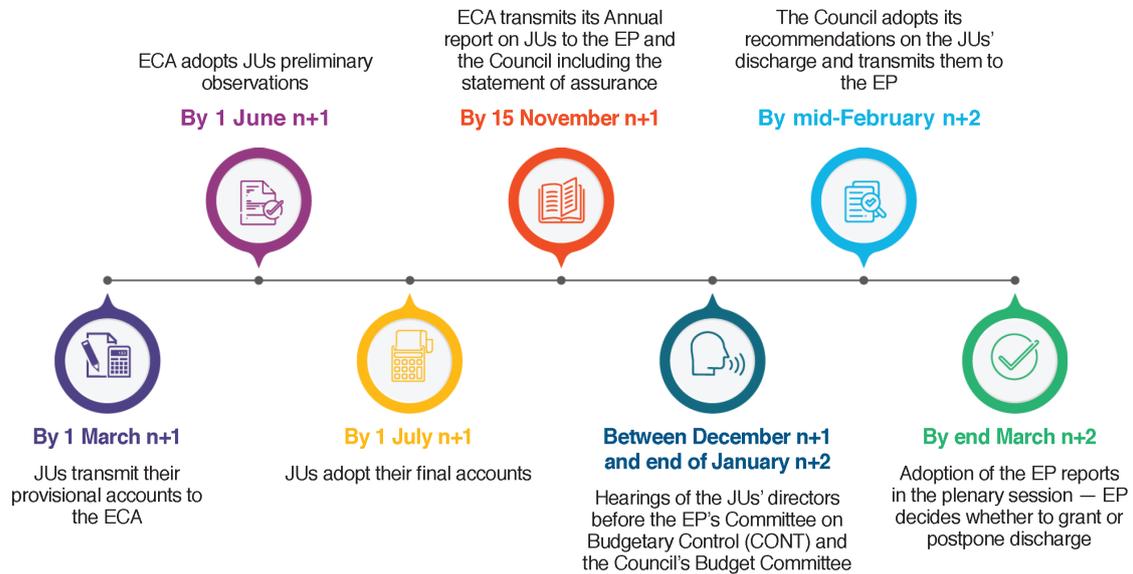
1.36. As required by the Council regulations setting up the JUs, in 2017 the Commission performed the final evaluation of the JUs' performance under FP7 and mid-term evaluations of their performance under H2020.

1.37. The results of these evaluations show important achievements, including the integration of European research, increased cross-border and cross-sector/interdisciplinary collaboration, better use of the available funding, and better availability of research results.

Budgetary and discharge arrangements are similar for all JUs

1.38. For JUs, the European Parliament and the Council are responsible for the annual budgetary and discharge procedures. The timeline of the discharge procedure is shown in Figure 1.10.

Figure 1.10

Annual discharge procedure

Source: ECA.

OUR AUDIT***Our mandate covers the audit of the JU's annual accounts and transactions***

1.39. As required by Article 287 of the Treaty on the Functioning of the European Union (TFEU), we have audited:

- (a) the accounts of all eight JUs for the financial year ended 31 December 2018; and
- (b) the legality and regularity of the transactions underlying those accounts.

1.40. On the basis of the results of our audit, we provide the European Parliament and the Council with one statement of assurance per JU on the reliability of the JUs' accounts and the legality and regularity of the underlying transactions. Where appropriate, we supplement the statements of assurance with significant audit observations (see *Chapter 3*).

1.41. In line with Articles 208(4) and 209(2) of the EU Financial Regulation, the audit of the reliability of the accounts for all JUs is outsourced to independent external audit firms. In accordance with the International Auditing Standards, we reviewed the quality of the work done by these external audit firms and obtained sufficient assurance that we could rely on their work in formulating our audit opinions on the reliability of the JUs' 2018 annual accounts.

Our audit singles out and addresses the key risks identified

1.42. All our audits are designed in such a way that they try to address the key risks identified. The 2018 annual audit of the JUs' accounts and underlying transactions was carried out in response to our risk assessment, which is briefly presented below.

Risk to the reliability of accounts is low to medium

1.43. Overall we consider the risk to the reliability of the accounts to be low. However, due to an important change in accounting policy in 2018, the risk for F4E was reassessed as medium. The JUs' accounts are established by applying the accounting rules adopted by the Commission's accounting officer. These are based on internationally accepted accounting standards for the public sector. The number of material errors found in the past was small.

Risk to the legality and regularity of revenue is low overall

1.44. The JUs' revenue in 2018 mainly consisted of financial contributions from the Commission's H2020 and Euratom budgets. As laid down in the JU regulations, budgets and resulting revenues are agreed with the budgetary authorities during the annual budget process.

Risk to the legality and regularity of staff and administrative payments is low

1.45. The risk related to the legality and regularity of payments was considered to be low for staff and administrative payments. Salaries are administered by the Commission's Office for Administration and Payment of individual entitlements (PMO), which we audit within the framework of its specific assessments of administrative expenditure. We have found no material errors in relation to staff expenditure in recent years. The risk to the legality and regularity of recruitment procedures was low in general, but medium for JUs with high staff turnover.

Risk to the legality and regularity of operational payments is medium overall

1.46. For grant payments, the risk was assessed to be medium in general because, for operational H2020 interim payments, certificates on financial statements (CFS) are only required from the beneficiary for final payments (trust principle).

1.47. For contract payments and public procurement procedures, given the limited number of such procedures run by the JUs, the risk was assessed to be low in general, but medium for F4E, which mainly operates complex procurement procedures for high-value contracts.

Risk to budget management is medium to high

1.48. The risk was considered to be medium in general because research grants are high-value and multiannual, and high for F4E due to the complexity of the ITER project, multiple contract amendments, and shortcomings in 2017 budget planning and monitoring.

Risk to sound financial management (SFM) is medium overall

1.49. The risk was considered to be medium in general, and was mainly identified in the areas of grant selection and public procurement.

CHAPTER 2

OVERVIEW OF AUDIT RESULTS

INTRODUCTION

2.1. This chapter presents an overview of the results of our annual audits of the European Research JUs for the financial year 2018 as well as other JU-related audit work we carried out in the course of 2018.

Statements of assurance (audit opinions) on the reliability of the JUs' accounts and the legality and regularity of the transactions underlying these accounts, as well as all matters and observations not calling into question these opinions, are provided in Chapter 3 of this report.

THE RESULTS OF OUR ANNUAL AUDIT OF THE JOINT UNDERTAKINGS FOR THE 2018 FINANCIAL YEAR ARE POSITIVE OVERALL

2.2. Overall, our audit of the annual accounts of the JUs for the financial year ended 31 December 2018 and the underlying transactions confirmed the positive results we reported in previous years.

'Clean' opinions on the reliability of the accounts for all JUs

2.3. We issued *unqualified ('clean') audit opinions* on the accounts of all JUs. In our opinion, these accounts present fairly, in all material respects, the JUs' financial positions as of 31 December 2018 and the results of their operations and their cash flows for the year then ended, in accordance with the provisions of the applicable financial regulations and the accounting rules adopted by the Commission's Accounting Officer.

Emphasis of matter relating to the EU contribution to ITER

2.4. As in previous years, our audit opinion on the 2018 annual accounts of F4E is accompanied by an emphasis of matter ⁽¹⁾ to draw attention to the following.

2.5. ITER is a pioneering project to build and operate an experimental facility to demonstrate the specific viability of fusion as a future sustainable energy source. In November 2016, the ITER Council ⁽²⁾ approved a revised ITER project baseline setting the achievement of First Plasma ⁽³⁾ and the start of the operational phase in 2025 with the completion of the construction phase in 2035. The new baseline is considered to be the earliest possible technically achievable date ⁽⁴⁾. The previous 2010 baseline had estimated that the construction phase would be completed in 2020 ⁽⁵⁾.

2.6. F4E recalculated its contribution to the project construction phase at 12 billion euros (in 2008 values), up from the 6,6 billion euros (in 2008 values) approved by the EU Council in 2010 ⁽⁶⁾.

2.7. The estimates do not include contingencies, even though the Commission suggested that a contingency of up to 24 months in terms of an implementation timetable and 10-20 % additional funding in terms of budget would be appropriate ⁽⁷⁾.

⁽¹⁾ An emphasis of matter is used to draw attention to a matter, which is not materially misstated in the accounts, but is of such importance that it is fundamental to the users' understanding of the accounts.

⁽²⁾ The ITER Council is the governing body supervising the work of the ITER Organisation. It has the authority to appoint senior staff, amend regulations and decide on the total budget for the ITER project and the participation of additional members in the project. The ITER Council comprises representatives of the seven members — EU, China, India, Japan, South Korea, Russia and the United States.

⁽³⁾ First Plasma represents the stage in the construction of the fusion machine that will allow testing the essential components of the machine; it is also the point where the operation phase starts.

⁽⁴⁾ As stated in the fifth annual assessment by an independent Review Group (31 October 2016) and in the report by the F4E Joint Undertaking's Head of Project Management to the Governing Board in December 2016.

⁽⁵⁾ COM(2010) 226 final of 4.5.2010.

⁽⁶⁾ Council conclusions on ITER status of 7 July 2010 (Ref. 11902/10).

⁽⁷⁾ COM(2017) 319 final of 14.6.2017 (accompanied by Commission Staff Working Document SWD(2017) 232 final of 14.6.2017), chapter V 'ITER: the way forward'.

2.8. On 29 March 2017, the United Kingdom notified the European Council of its decision to withdraw from the EU and Euratom. This may have a significant effect on the post-2020 activities of the F4E JU and the ITER project. The current agreement on the UK's withdrawal from the EU only guaranteed Euratom-related funding (including ITER) until the end of 2020. After 2020, in the event of a 'no deal' scenario, the UK will no longer be a member of F4E, and UK businesses will not be able to bid for ITER contracts through F4E unless there is a bilateral agreement between the UK and the EU regarding post-2020 cooperation on ITER and F4E funding.

2.9. In April 2018 ⁽⁸⁾, the Council of the EU mandated the Commission to approve the revised ITER baseline on behalf of Euratom and reaffirmed the commitment to make resources available within the limits of the next MFF, but without prejudice to any subsequent MFF negotiations to determine the details of future funding.

2.10. While F4E has taken positive steps to improve the management and control of its contribution to the project construction phase, there remains a risk of further cost increases and delays in project implementation beyond the current baseline. In addition, F4E has not yet estimated its contributions after 2035 to the operational phase of the project.

'Clean' opinions on the legality and regularity of the revenue underlying all JU accounts

2.11. For all JUs, we issued *unqualified ('clean')* audit opinions on the legality and regularity of the revenue underlying the annual accounts for the year ended 31 December 2018. In our opinion, transactions were legal and regular in all material respects.

'Clean' opinions on the legality and regularity of the payments underlying all JU accounts

2.12. For all JUs, we issued *unqualified ('clean')* audit opinions on the legality and regularity of the payments underlying the annual accounts for the year ended 31 December 2018. In our opinion, transactions were legal and regular in all material respects.

2.13. Figure 2.1 gives an overview of the evolution of our annual audit opinions on the JUs' annual accounts, revenue and payments from 2016 to 2018.

Figure 2.1

Evolution of ECA's opinions on JUs from 2016 to 2018



Source: ECA.

Our observations address areas for improvement

2.14. Without calling our opinions into question, we make various observations and comments to highlight matters of importance and indicate areas for improvement. These observations, the details of which can be found in Chapter 3, are summarised below. They concern budgetary and financial management issues, in-kind contributions, the internal control and monitoring framework, grant procedures, sound financial management, and staff turnover. In addition, this chapter presents the results of the analysis we made on synergy among JUs in the course of 2018.

⁽⁸⁾ The amount of 6,6 billion euros (in 2008 values) adopted by the Council of the EU in 2010 currently serves as a ceiling for the Joint Undertaking's spending up to 2020.

Shortcomings remain in the annual planning of payments

2.15. The JUs' multiannual budget planning process for important research grants and complex projects (F4E) was the main reason for persistent shortcomings in the budget planning of payment appropriations.

2.16. Due to serious shortcomings in the budget planning process in previous years, F4E had to significantly increase the value of payment appropriations in the initial budget by around 160 million euro, or 25 %, to cover its actual payment needs in 2018.

2.17. In two cases (SESAR and ECSEL), the implementation rate for payment appropriations in 2018 was significantly lower than expected. For SESAR this was caused by conservative budget planning, which allowed for the risk of delayed receipt of annual financial implementation agreements, and by the fact that unused payment appropriations carried over from previous years had not been fully taken into account for the 2018 budget. For ECSEL, the low rate of budget implementation was due both to the delay by national funding authorities (NFAs) in providing end-of-project certificates for ongoing FP7 activities, and to an additional H2020 contribution of 20 million euro received in December 2018.

Actions to be taken 1

When planning for new payment appropriations, the JUs are encouraged to consider the accumulated amount of unused payment appropriations from previous years re-entered into the current year's budget, and the amount of recovered payment appropriations (internal assigned revenue).

JUs' implementation rate and private members' activities are an area for further improvement

JUs achieved an implementation rate of 89 % under the 2007-2013 MFF

2.18. In 2018, the implementation of the JUs' FP7 and TEN-T actions was in its closing phase.

2.19. The JUs implementing activities under the FP7 and TEN-T programmes are SESAR, CS, IMI, FCH, and ECSEL. Table 2.1 presents an overview of the members' contributions to these JUs at the end of 2018. On average, these contributions represented 89 % of the contribution targets set by the JUs' founding regulations by the end of the programme period.

Table 2.1

FP7 and TEN-T Members' contributions

(in million euro)

Members' contributions (as per Founding Regulation)			JUs under FP7	Members' contributions (as at 31.12.2018)			Implementation rate
EU	Other members	Total		EU	Other members	Total	
700,0	1 284,3	1 984,3	SESAR 1	634,1	1 099,8	1 733,9	87 %
800,0	600,0	1 400,0	CS 1	800,0	608,5	1 408,5	101 %
1 000,0	1 000,0	2 000,0	IMI 1	916,0	735,8	1 651,8	83 %
470,0	470,0	940,0	FCH 1	421,3	442,5	863,8	92 %
655,5	1 784,4	2 439,9	ECSEL (for Artemis/Eniac)	655,5	1 495,4	2 150,9	88 %
3 625,5	5 138,7	8 764,2	Total	3 426,9	4 382,0	7 808,9	89 %

Source: Data provided by the JUs.

JUs show also some delays under the 2014-2020 MFF

2.20. In 2018, in the middle of implementation of their H2020 activities, some JUs did not achieve the expected programme progress and were therefore falling behind the contribution targets set by their respective founding regulations.

2.21. The seven JUs implementing H2020 activities are SESAR, CS, IMI, FCH, ECSEL, BBI, and S2R. Table 2.2 presents an overview of their contributions to these activities at the end of 2018. By the middle of the programme period, these JUs had implemented on average 39 % of their H2020 and related additional activities, and 31 % if the additional activities are not accounted for.

Table 2.2
Horizon 2020 — Members' contributions

(in million euro)

Members' contributions (as per Founding Regulation)				JUs under Horizon 2020	Members' contributions (as at 31.12.2018)						
EU	Other members' IKOP ⁽¹⁾	Other members' IKAA ⁽²⁾	Total		EU	IKOP validated	IKOP reported not validated	IKAA	Total	Implementation rate with IKAA	Implementation rate without IKAA
585,0	1 000,0	N/A	1 585,0	SESAR 2020	216,9	128,6	120,2	N/A	465,7	29 %	29 %
1 755,0	1 228,6	965,3	3 948,9	CS2	816,7	288,0	157,6	801,7	2 064,0	52 %	42 %
1 638,0	1 425,0	N/A	3 063,0	IMI2	241,9	144,0	83,9	N/A	469,8	15 %	15 %
665,0	95,0	285,0	1 045,0	FCH2	318,8	5,4	7,7	636,3	968,2	93 %	44 %
1 185,0	1 657,5	N/A	2 842,5	ECSEL	512,0	11,3	694,1	N/A	1 217,4	43 %	43 %
975,0	975,0	1 755,0	3 705,0	BBI	264,6	21,2	36,8	699,9	1 022,5	28 %	17 %
398,0	350,0	120,0	868,0	S2R	158,9	28,2	63,7	160,4	411,2	47 %	34 %
7 201,0	6 731,1	3 125,3	17 057,4	Total	2 529,8	626,7	1 164,0	2 298,3	6 618,8	39 %	31 %

⁽¹⁾ In-kind contributions to the JU's operational activities

⁽²⁾ In-kind contributions to additional activities outside of the JU's work plan

Source: Data provided by the JUs.

Industry members mainly contribute to activities outside JUs' work programmes but contributing to the JUs' objectives

2.22. In the case of four JUs (CS, FCH, BBI, S2R) the respective founding regulation provides for in-kind contributions by private members in the form of additional activities performed outside the JUs' work programmes and sets a minimum level to be contributed by the end of the programme. As shown in Table 2.2, by the end of 2018 the contributions of the industry members mainly consisted in the declaration of costs for these activities.

2.23. By the end of 2018, the industry and research partners of the JUs implementing H2020 activities had contributed 4 billion euros, or 41 % percent, of the agreed total contributions of 9,8 billion euros. This amount comprised 1,7 billion euros ⁽⁹⁾ of in-kind contributions to the JUs' own H2020 operational activities (42 %) and 2,3 billion euros of in-kind contributions to activities outside the JUs' work programmes (57 %). As at the end of 2018, the implementation rate for in-kind contributions for operational activities was 25 %, while that for in-kind contributions to additional activities was close to 75 %. Despite the importance of additional activities, there is no obligation to disclose the corresponding contributions in the annual accounts and we are not allowed to audit them ⁽¹⁰⁾. Consequently, we cannot provide an opinion on the nature, quality and quantity of these contributions in respect of CS, FCH, BBI and S2R (see Boxes 2.1 and 2.2).

⁽⁹⁾ Of this amount only 0,6 billion euros (35 %) approximately was certified at the end of 2018.

⁽¹⁰⁾ Article 4(4) of the respective JU founding regulations.

*Box 2.1***In-kind contributions to additional activities (CS, FCH, BBI, S2R)**

As provided for in common Article 4(2)(b) of the founding regulations of these JUs, 'additional activities' are in-kind contributions to activities that fall outside the work programme and the budget of the given JU but that contribute to its general objectives. The corresponding activities should be set out in an annual additional activities plan indicating the estimated value of contributions. In line with Article 4(4) of the founding regulations, the costs of additional activities must be certified by an independent external auditor and are not subject to audit by the ECA or by any other EU body.

*Box 2.2***In-kind contributions to the JUs' operational activities**

As provided for in the JUs' founding regulations, JUs' operational costs should be covered through both a financial contribution by the EU and in-kind contributions by industry members. The in-kind contributions of industry members consist of the costs incurred by them in implementing JU research and innovation actions, less the contribution of the JU and any other EU contribution to those costs.

2.24. In addition, with regard to the BBI, although its founding regulation was expressly amended in 2018 to enable industry members to account for their cash contributions at project level, a high risk still remains that the industry members will not achieve the minimum required amount of operational cash contributions of 182,5 million euros by the end of the BBI programme. As a result, the Commission (DG RTD) decided at the end of 2018 to reduce the JU's 2020 budget of 205 million euros by 140 million euros.

Actions to be taken 2

Where a JU founding regulation requests operational financial contributions from the JU members, a clear and commonly agreed financial contribution system that ensures that the required amount will be achieved by the end of the programme should be agreed by all founding members and be reflected in the regulation.

Internal controls in respect of payments were generally effective

2.25. The JUs have set up reliable ex-ante control procedures based on financial and operational desk reviews. For FP7 interim and final payments, independent external audit firms contracted by the JUs perform ex-post audits at beneficiaries. For H2020 cost claims the Commission's Common Audit Service (CAS) is responsible for these audits, although it contracts out around three quarters of these to external audit firms. All JUs effectively used these key controls to assess the legality and regularity of their payments.

2.26. For FP7 grant payments, the JUs (with the exception of ECSEL) reported residual error rates below the materiality threshold of 2 %, based on the ex-post audit results at the end of 2018. We confirmed this result by our substantive testing of final grant payments. Where ECSEL is concerned, the significant variation in the methodologies and procedures used by NFAs does not allow the JU to calculate a single residual error rate for FP7 payments. For these payments we applied the residual error rate established by DG RTD for the whole FP7 programme, which was 3,36 % at the end of 2018. As a result, given the low percentage of FP7 payments in 2018, the residual error rate for ECSEL's total operational payments in that year is to be below the materiality threshold.

2.27. For H2020 grant payments, at the end of 2018 all JUs implementing H2020 projects reported a residual error rate below the materiality threshold of 2 %, based on the ex-post audit results at the end of 2018. Our reviews of the audit work of the CAS and external audit firms, as well as selected re-performance tests at beneficiaries, confirmed this result. However, our review also showed similar findings to those in paragraphs 5.31-5.34 of our 2018 annual report, where we reported on weaknesses found in the ex-post audit work.

Weaknesses in sound financial management put at risk the JUs' operational effectiveness

2.28. Our annual financial and compliance audit also revealed important sound financial management weaknesses in the areas of project and grant management.

2.29. For years, we and external experts have been united in suggesting that F4E implements an earned value management (EVM) system⁽¹¹⁾ to measure performance based on technical project progress coupled with the cost incurred for that progress. However, in 2018 F4E continued to use the ITER credit system to monitor the progress of its project.

2.30. In 2018, for the first time, S2R launched a pilot call with a lump-sum funding scheme restricted to its members. During the evaluation process, the financial experts came across some material discrepancies between the financial proposals and the beneficiaries' historical financial data.

2.31. For BBI, due to the design of its 2018 call for proposals and the management of the ranking system for proposals, one of two flagship topics in the call remained unfunded despite there being eligible and highly evaluated proposals for both topics. For SESAR, weaknesses in the design of the 2018 call for proposals for Connecting Europe Facility (CEF) funds resulted in overlaps and inconsistencies among award criteria, which put at risk the overall effectiveness of the grant evaluation process.

Actions to be taken 3

F4E is encouraged to implement an EVM system to allow project progress to be monitored on the basis of both costs incurred and the achievement of technical milestones.

Actions to be taken 4

To ensure the efficiency and effectiveness of lump-sum funding, the JUs are encouraged to base the financial evaluation of proposals on a strong beneficiary database with reliable financial data covering several years.

The JUs' evaluations add value, but timing needs to be reconsidered

2.32. At the end of 2017, the Commission informed the European Parliament and the Council of the results of the final statutory evaluations of the JUs set up under the FP7 programme (SESAR, IMI, FCH, CS, Artemis, ENIAC) and the interim statutory evaluations of the JUs set up under H2020 (SESAR, IMI2, CS2, FCH2, ECSEL, S2R, BBI). The evaluations were carried out with the assistance of independent experts and covered the JUs' performance in terms of relevance, efficiency, effectiveness, coherence and EU added value, with additional consideration given to openness, transparency and research quality.

2.33. Whilst the evaluators considered the JUs' performance in general to be positive, they recommended:

- increasing the participation of industry members, Member States, SMEs and other stakeholders;
- improving coordination with other EU and national research programmes;
- increasing the participation of the new Member States; further developing an accountable performance measurement framework with key performance indicators to better assess the JUs' impacts and socio-economic benefits;
- improving dissemination and exploitation of the JU project results.

2.34. In response, each JU prepared an action plan which it started implementing in 2018. During our 2018 financial audit, we reviewed the implementation of these action plans.

⁽¹¹⁾ EVM helps project managers to measure project performance. It is a systematic project monitoring process used to find deviations in project progress based on the comparison of work performed and work planned. It is used on the cost and time schedule control and to provide quantitative data for project decision-making. The project baseline is an essential component of EVM and serves as a reference point for all EVM-related activities.

2.35. Whilst the interim evaluation for each JU was completed in accordance with the precise timeframe set in the respective legal framework, we believe that the evaluation was not scheduled at the best time to contribute to the decision-making of newly created JUs under H2020 (BBI, S2R, ECSEL). As they had to set up their administrative structure in 2014 and 2015, these JUs were still at an early operational stage at the time of the interim evaluation.

Actions to be taken 5

Given that the final evaluations are not scheduled until 2024, there is a need to supplement the interim evaluations of the new JUs at a later (midway) stage when they have done enough work to allow an adequate measure of performance and recommendations that are useful and effective.

Several JUs have experienced high staff turnover rates

2.36. Several JUs (IMI, CS, S2R) had a very high staff turnover rate in 2018; consequently their use of interim staff increased significantly.

2.37. The JUs explained that their small size relative to other EU institutions and bodies (on average they have 30 members of staff), places them at a disadvantage when hiring and retaining staff.

2.38. In 2018, we observed that the use of interim staff and consultants was of particular importance for some EU agencies not in compliance with the legal framework ⁽¹²⁾. We will analyse the same issue with regard to the JUs in 2019.

Actions to be taken 6

The JUs are encouraged, in cooperation with the Commission, to find ways of avoiding the excessive use of interim staff.

Synergies among JUs have been exploited for support services but remain limited for research activities

2.39. The JUs are already collaborating on procurement in various administrative areas. Joint procurement is recommended for purchases that are not specifically linked to the JU's respective operational activities and not covered by interinstitutional framework contracts. Joint procurement is particularly advantageous in the areas of IT and data management, HR, consultancy services and buildings management. Several joint framework contracts already exist in these areas or were concluded in 2018 to meet new needs, such as the implementation of the new Data Protection Regulation.

2.40. Additionally, the outsourcing by JUs of their accounting function to DG BUDG in 2016 contributed to the harmonised presentation of the JUs' accounts.

2.41. Overall, the JUs agree that joint procurement significantly increases the efficiency, effectiveness and consistency of the services concerned, and has allowed for substantial economies of scale and the reduction of resources.

2.42. In 2018, due to an insufficient needs and cost-benefit analysis when launching joint procurement procedures, some JUs encountered problems including:

- insufficient and over-priced joint framework contracts,
- delayed development and implementation of JU-specific features in the Commission's H2020 IT tools,
- the Commission's common support services reaching their limits, for example, the centralised ex-post audit service in DG RTD, the accounting service in DG Budget, and Commission framework contracts for interim staff services.

⁽¹²⁾ See the Annual report on EU Agencies for the financial year 2018 (OJ C 417, 11.12.2019, p. 1).

2.43. The JUs' corporate services are streamlined, reflecting their rather similar needs for administrative service and supply contracts. On the other hand, joint operational activities among JUs are rather limited because of the specificity of their research and innovation areas and work programmes. In 2018, only one study was launched jointly — by FCH and S2R on the use of fuel cell hydrogen in the railway environment. Several JUs saw more operational synergies with EU decentralised agencies operating in their respective areas of research and innovation: for example, SESAR and the European Union Aviation Safety Agency (EASA) collaborated on drones.

Action to be taken 7

Before launching procurement, the JUs need to assess whether they could join an ongoing procedure or an existing framework contract. The European Union Agencies Network (EUAN) hosts a joint procurement portal that JUs could consult regularly to identify joint procurement opportunities.

Any planned collaboration or synergy in important areas should be based on a prior cost-benefit analysis considering, among other things, the identification of needs, gains in efficiency and simplification, loss of flexibility, the resources needed for coordination and controls and the impact on human resources.

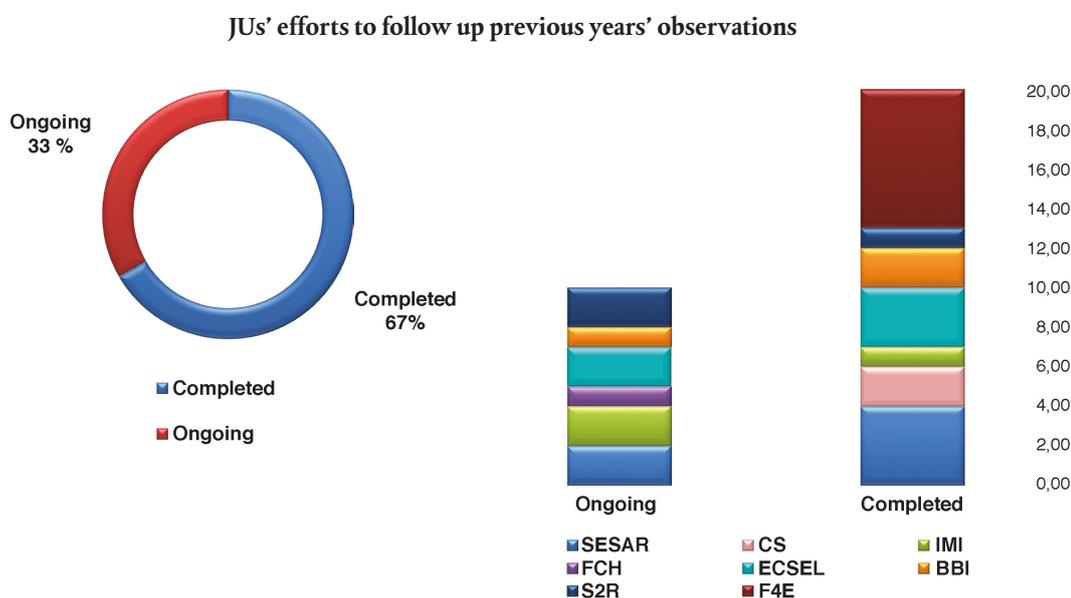
JUs are encouraged to explore further opportunities for cooperation and joint action with regard to their operational activities.

JUs are following up on previous years' audit findings

2.44. In most cases, the JUs have taken corrective action to follow up the observations and comments in our specific annual reports from previous years. Details can be found in the annexes to our opinions in Chapter 3.

2.45. Figure 2.2 shows that, for the 30 observations not addressed at the end of 2017, corrective action had been taken in 2018 so that 20 observations (67 %) could be completed while 10 observations (33 %) remained ongoing at the end of 2018.

Figure 2.2



Source: ECA.

AUDIT RESULTS FROM OTHER RECENT ECA PRODUCTS FOCUSING ON THE JUS

2.46. Apart from the annual audit report related to the JUs' annual accounts, in the course of 2018 we also issued special audit reports, which referred to JUs (see *Figure 2.3*).

Figure 2.3

Audit results from other JU-related products recently issued by ECA



ECA special report 28/2018:
The majority of simplification measures brought into Horizon 2020 have made life easier for beneficiaries, but opportunities to improve still exist

Horizon 2020 provides funding to researchers, research institutes, universities, private companies and public bodies, either individually or in consortia as part of collaborative research projects. With a budget of 76,4 billion euro for the period from 2014 to 2020, it ranks as the world's largest public research and innovation programme.

Our audit examined whether the changes introduced with Horizon 2020 have been effective in reducing the administrative burden for beneficiaries. We concluded that the majority of the simplification measures have been effective, although not all actions produced the desired result and opportunities to improve still exist. Beneficiaries need more user-friendly guidance and tools, and the Commission has to test further the appropriateness and usability of new funding schemes. Stability in the rules is also important and, while beneficiaries are able to adapt to complexity, frequent modifications to guidance can cause confusion and uncertainty.

The details on the audit conclusions, related recommendations and the auditee's reply can be consulted on the ECA website eca.europa.eu



ECA special report 11/2019:
The EU's regulation for the modernisation of air traffic management has added value – but the funding was largely unnecessary – SESAR - deployment

In 2005, the EU launched a programme known as SESAR to harmonise and modernise air traffic management (ATM) systems and procedures across Europe. These systems have traditionally been developed at a national level. Overall, the EU has committed €3,8 billion to SESAR between 2005 and 2020, of which 2,5 billion euro was earmarked to support the deployment of such systems and procedures.

In this audit, we reviewed the EU's intervention in the deployment phase of SESAR, the technological pillar of the EU's Single European Sky (SES) initiative. We concluded that the EU's regulatory intervention in the form of common projects has added value. However, we also found that EU funding in support of ATM modernisation was largely unnecessary, and that the management of the funding is affected by some shortcomings. We also made a number of recommendations to the European Commission to help improve its support for ATM modernisation.

The details on the audit conclusions, related recommendations and the auditee's reply can be consulted on the ECA website eca.europa.eu



Landscape review 2018:
Towards a successful transport sector in the EU: challenges to be addressed

This landscape review describes and analyses what the EU does in the field of transport. We focus on infrastructure investments funded from the EU budget and present cross-cutting themes that we identified in recent audits in the five main modes of transport: road, rail, air, inland waterways and maritime.

We found the EU had made progress in infrastructure development and the opening of the internal transport market, but we also warn the EU needs to address six key challenges on the road towards improved mobility within the Union. These include matching objectives and priorities with resources, better planning, infrastructure maintenance, effective enforcement, shifting goods traffic off roads and ensuring EU added value.

By providing clear and accessible information to stakeholders and interested parties, this landscape review aims to encourage stakeholders to improve actions and/or co-ordinate them better in order to add value to the EU's efforts to meet its transport policy objectives.

The details on the audit conclusions, related recommendations and the auditee's reply can be consulted on the ECA website eca.europa.eu

Source: ECA.

CHAPTER 3**STATEMENTS OF ASSURANCE OF THE EU JOINT UNDERTAKINGS****3.1. Information in support of the statements of assurance****Basis for opinions**

3.1.1. We conducted our audit in accordance with the IFAC International Standards on Auditing (ISAs) and Codes of Ethics and the INTOSAI International Standards of Supreme Audit Institutions (ISSAIs). Our responsibilities under those standards are further described in the Auditor's responsibilities section of our report. We are independent in accordance with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants (IESBA Code) and the ethical requirements that are relevant to our audit, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of management and those charged with governance

3.1.2. In accordance with Articles 310 to 325 of the TFEU and the JUs' Financial Regulations, the JUs' managements are responsible for the preparation and presentation of their accounts on the basis of internationally accepted accounting standards for the public sector and for the legality and regularity of the transactions underlying them. This responsibility includes the design, implementation and maintenance of internal controls relevant to the preparation and presentation of financial statements that are free from material misstatement, whether due to fraud or error. Management is also responsible for ensuring that the activities, financial transactions and information reflected in the financial statements are in compliance with the authorities which govern them.

3.1.3. In preparing the accounts, management is responsible for assessing the JU's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting, unless management either intends to liquidate the entity or to cease operations, or has no realistic alternative but to do so.

3.1.4. Those charged with governance are responsible for overseeing the JUs' financial reporting process.

The auditor's responsibilities for the audit of the accounts and underlying transactions

3.1.5. Our objectives are to obtain reasonable assurance about whether the accounts of the JUs are free from material misstatement and the transactions underlying them are legal and regular, and to provide, on the basis of our audit, the European Parliament and the Council with statements of assurance as to the reliability of the accounts and the legality and regularity of the transactions underlying them. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit will always detect a material misstatement or non-compliance when it exists. These can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these accounts.

3.1.6. For revenue, we verify the contributions received from the Commission, other partners or participating countries and assess the JUs' procedures for collecting other income, if any.

3.1.7. For expenditure, we examine payment transactions when expenditure has been incurred, recorded and accepted. This examination covers all categories of payments (including those made for the purchase of assets) other than advances at the point they are made. Advance payments are examined when the recipient of funds provides justification for their proper use and a JU accepts the justification by clearing the advance payment, whether in the same year or later.

3.1.8. In accordance with ISAs and ISSAIs, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the accounts and of material non-compliance of the underlying transactions with the requirements of the legal framework of the European Union, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinions. The risk of not detecting a material misstatement or non-compliance resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the overriding of internal controls.
- Obtain an understanding of internal controls relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal control.

- Evaluate the appropriateness of the accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on a JU's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the accounts or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause an entity to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the accounts, including the disclosures, and whether the accounts represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the JUs to express an opinion on the accounts and transactions underlying them. We are responsible for the direction, supervision and performance of the audit. We remain solely responsible for our audit opinions.
- Consider the audit work of the independent external auditor performed on the JUs' accounts as stipulated in Article 208(4) of the EU Financial Regulation ⁽¹³⁾, where applicable.

3.1.9. We communicate with the management regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal controls that we identify during our audit.

3.1.10. From the matters on which we communicated with the JUs, we determine those matters that were of most significance in the audit of the accounts of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

⁽¹³⁾ Regulation (EU, Euratom) No 966/2012.

JOINT UNDERTAKINGS IMPLEMENTING EU FRAMEWORK PROGRAMMES

3.2. The Single European Sky Air Traffic Management Research Joint Undertaking (SESAR)

3.2.1. The Single European Sky Air Traffic Management Research (SESAR) JU, located in Brussels, was set up in February 2007 for a period of eight years ⁽¹⁴⁾ (SESAR 1). In June 2014, the Council amended the founding regulation and extended the lifetime of the JU up to 31 December 2024 ⁽¹⁵⁾ (SESAR 2020).

3.2.2. The SESAR JU is a public-private partnership for the development and deployment of modernised air traffic management (ATM) in Europe. The founding members are the European Union (EU), represented by the Commission (DG Move), and the European Organisation for the Safety of Air Navigation (Eurocontrol) ⁽¹⁶⁾. Following a call for expressions of interest in 2015, 19 public and private entities from the aviation sector became members of the JU. They comprise aircraft manufacturers, ground and airborne equipment manufacturers, air navigation service providers, and airport services providers

3.2.3. Table 1 presents key figures for the JU ⁽¹⁷⁾.

Table 1

Key figures for the JU

	2018	2017
Budget in payment appropriations (million euros)	94,8	90,9
Budget in commitment appropriations (million euros)	129,5	109,9
Available payment budget (million euros) ⁽¹⁾	166,3	213
Available commitment budget (million euros) ⁽¹⁾	175,9	130,9
Total staff as at 31 December ⁽²⁾	42	40

⁽¹⁾ Available budget includes unused appropriations of previous years, which the JU re-entered in the budget of the current year, and assigned revenues.

⁽²⁾ Staff includes officials, temporary and contract agents and seconded national experts.

Source: Data provided by the JU.

OPINION

3.2.4. We have audited:

- (a) the accounts of the JU which comprise the financial statements ⁽¹⁸⁾ and the reports on the implementation of the budget ⁽¹⁹⁾ for the financial year ended 31 December 2018, and
- (b) the legality and regularity of the transactions underlying those accounts, as required by Article 287 of the Treaty on the Functioning of the European Union (TFEU).

⁽¹⁴⁾ Council Regulation (EC) No 219/2007 of 27 February 2007 on the establishment of a Joint Undertaking to develop the new generation European air traffic management system (SESAR) (OJ L 64, 2.3.2007, p. 1).

⁽¹⁵⁾ Council Regulation (EU) No 721/2014 of 16 June 2014 amending Regulation (EC) No 219/2007 on the establishment of a Joint Undertaking to develop the new generation European air traffic management system (SESAR) as regards the extension of the Joint Undertaking until 2024 (OJ L 192, 1.7.2014, p. 1).

⁽¹⁶⁾ Eurocontrol is an international organisation owned by 41 member states. The EU has delegated parts of its Single European Sky regulations to Eurocontrol, making it the central organisation for coordination and planning of air traffic control for all of Europe. The EU itself is a signatory of Eurocontrol and all EU Member States are members of Eurocontrol.

⁽¹⁷⁾ More information on the JU's competences and activities is available on its website: www.sesarju.eu

⁽¹⁸⁾ The financial statements comprise the balance sheet, the statement of financial performance, the cash flow statement, the statement of changes in net assets and a summary of significant accounting policies and other explanatory notes.

⁽¹⁹⁾ The reports on implementation of the budget comprise the reports, which aggregate all budgetary operations and the explanatory notes.

Reliability of the accounts

Opinion on the reliability of the accounts

3.2.5. In our opinion, the accounts of the JU for the year ended 31 December 2018 present fairly, in all material respects, the financial position of the JU at 31 December 2018, the results of its operations, its cash flows, and the changes in net assets for the year then ended, in accordance with its Financial Regulation and with accounting rules adopted by the Commission's accounting officer. These are based on internationally accepted accounting standards for the public sector.

*Legality and regularity of the transactions underlying the accounts***Revenue**

Opinion on the legality and regularity of revenue underlying the accounts

3.2.6. In our opinion, revenue underlying the accounts for the year ended 31 December 2018 is legal and regular in all material respects.

Payments

Opinion on the legality and regularity of payments underlying the accounts

3.2.7. In our opinion, payments underlying the accounts for the year ended 31 December 2018 are legal and regular in all material respects.

3.2.8. The observations which follow do not call the Court's opinion into question.

Observation on the implementation of the SESAR 1 budget

3.2.9. In December 2016, the SESAR 1 programme was formally closed and the last final grant payment was made in December 2017.

3.2.10. Table 2 presents an overview of members' contributions to SESAR 1 at the end of 2018.

Table 2

Members' contributions to SESAR 1*(in million euros)*

Members	Members' contributions (as per Founding Regulation)			Members' contributions (as at 31.12.2018)				
	Operational activities	Additional activities ⁽¹⁾	Total	In cash	In-kind validated	In-kind reported not validated	In-kind to additional activities	Total
EU (DG Move)	700,0	N/A	700,0	634,1	0,0	0,0	N/A	634,1
Eurocontrol	700,0	N/A	700,0	137,8	422,9	0,0	N/A	560,7
Industry members	584,3	N/A	584,3	25,5	513,6	0,0	N/A	539,1
Total	1 984,3	N/A	1 984,3	797,4	936,5	0,0	N/A	1 733,9

⁽¹⁾ Additional activities are outside ECA's audit scope.

Source: Data provided by the JU.

3.2.11. Unused payment appropriations of 40 million euros from previous years were carried over to 2018 for the reimbursement of cash contributions received in excess from the SESAR 1 industry members ⁽²⁰⁾ and for the payment of delayed but still justified cost claims for FP7 and TEN-T projects. At the end of 2018, however, only 1,8 million euros (5 %) of these appropriations could be used for such corrective payments, 20 million euros (50 %) had to be cancelled, and 18,2 million euros (45 %) were carried over to 2019.

3.2.12. At the end of 2018 in the closing phase of the SESAR 1 programme, the JU still showed a large amount of open commitments (payment obligations) of 61,4 million euros. As the programme was closed end 2016 and the last grant payment was made end 2017, these resources allocated to the JU will not be fully used.

Observation on the implementation of the SESAR 2020 budget

3.2.13. Table 3 presents an overview of members' contributions to SESAR 2020 end 2018.

Table 3

Members' contributions to SESAR 2020

(in million euros)

Members	Members' contributions (as per Founding Regulation)			Members' contributions (as at 31.12.2018)				Total
	Operational activities	Additional activities ⁽¹⁾	Total	In cash	In-kind validated	In-kind reported not validated	In-kind to additional activities	
EU (DG Move)	585,0	N/A	585,0	216,9	0,0	0,0	N/A	216,9
Eurocontrol	500,0	N/A	500,0	11,9	59,6	60,1	N/A	131,6
Industry members	500,0	N/A	500,0	2,5	54,6	60,1	N/A	117,2
Total	1 585,0	N/A	1 585,0	231,3	114,2	120,2	N/A	465,7

⁽¹⁾ Additional activities are outside ECA's audit scope.

Source: Data provided by the JU.

3.2.14. At the end of 2018, the JU implemented 81 % and 61 % respectively of the commitment and payment appropriations available for Horizon 2020 projects, and cancelled around 44,6 million euros (35 %) of the available Horizon 2020 payment appropriations.

3.2.15. The low implementation and high cancellation rates for Horizon 2020 payment appropriations available in 2018 were mainly due to the JU's:

- conservative budget planning, considering the risk of delayed reception of the annual financial implementation delegation agreements;
- budget planning and monitoring approach, not fully taking account of the amount of unused payment appropriations from previous years re-entered in the budget of the year.

Observation on internal controls

3.2.16. The JU has set up reliable ex-ante control procedures based on financial and operational desk reviews. For FP7 interim and final payments, the JU performs ex-post audits at the beneficiaries whilst for Horizon 2020 payments the Commission's Common Audit Service is responsible for the ex-post audits. The residual error rates for the ex-post audits reported by the JU at the end of 2018 were 1,29 % for FP7 and 1,33 % for Horizon 2020 ⁽²¹⁾.

⁽²⁰⁾ Article 13 and 25 of the statutes of the SESAR JU, annexed to Regulation (EC) No 219/2007 as amended by Regulation (EU) No 721/2014 and Article 4 of the JU's individual agreements with industry members.

⁽²¹⁾ SESAR JU 2018 Annual Activity Report, points 173 and 176.

Observation on sound financial management and performance

3.2.17. Following the DG Move delegation agreement, the SESAR JU launched in January 2018 an open call for proposals for studies and demonstrations on drone traffic management in Europe (U-Space Call). The maximum grant amount of 9,5 million euros was funded through the Commission's CEF fund. Whilst the award criteria of the call respected in general the orientations laid down in the CEF regulation, we observed several overlaps and inconsistencies among award criteria and their sub-criteria. This may put at risk the overall effectiveness of the grant evaluation process and needs to be addressed at the call design and preparation phase.

Follow-up of previous years' observations

3.2.18. An overview of the corrective action taken in response to the Court's observations from previous years is provided in the *Annex*.

ANNEX

Follow up of previous years' observations

Year	Court's comments	Status of corrective action (Completed / Ongoing / Outstanding / N/A)
2017	<p>The implementation rates for the SESAR 1 commitments and payment appropriations were 11 % and 68 % respectively. The following factors caused the low implementation rates for SESAR 1:</p> <ul style="list-style-type: none"> — In December 2016, the SESAR I programme was formally closed and the last payment was made in December 2017. Nevertheless, the JU had to ensure by the end of 2017 sufficient FP7 funds for the reimbursement of cash contributions received in excess from the SESAR 1 industry members and for the payment of delayed but still justified cost claims for on-going FP7 projects. — When planning and monitoring its need of new commitment and payment appropriations for the SESAR 1 budget, the JU took a conservative approach and did not consider the expected assigned revenue of around 17 million euros, stemming from recoveries for SESAR I projects (i.e. ex-post audit error corrections, outstanding open pre-financing, etc.). 	Completed
2017	At the end of 2017, the Commission's common Horizon 2020 grant management and monitoring tools had not finished the specific developments needed for the processing of the JU's in-kind contributions.	Completed
2017	At the end of 2017 in the closing phase of the SESAR 1 programme, the JU had to lapse 30 million euro (19 %) of outstanding commitments due to adjusted or cancelled SESAR I projects. Consequently, at year-end the JU's still open payment obligations for SESAR I grants amounted to about 47 million euros.	Ongoing
2017	In its procurement for support services from civil airspace users regarding SESAR 2020 activities, the JU took as the financial score the simple (arithmetic) average of the financial bids it received for the daily rates of expert categories. The same approach was applied for all lots. In fact, the use of a weighted average for the calculation of the financial score would have been a more competitive and effective solution. The weighting should be based on the most likely number of workdays for each category of experts needed for the specific services of the lot.	Completed
2017	The external auditor of the JU's annual accounts noted shortcomings in the JU's financial control processes. This situation is mainly due to the complex financial regulatory framework under which the JU has to operate, the recent departure of key finance staff and the resulting work overload in the finance department.	Completed
2017	In response to the recommendations raised by the evaluators, the JU's Action Plan was adopted by the SESAR Administrative Board in May 2018. The action plan includes a wide set of actions to be implemented by the JU, for which a certain number of activities have already been initiated, the majority should be implemented in 2018 and the first quarter of 2019, while a number will be taken under consideration for the next programming period.	Ongoing

Reply of the Joint Undertaking

3.2.12. It is important to note in this context that the overall rate of programme implementation of the SESAR 1 programme reaches 89,9 %.

3.2.15. The SESAR JU would like to highlight that the approach taken regarding unused payment appropriations from previous years is a direct consequence of the financial framework in which the JU is obliged to operate.

3.2.17. The SESAR JU would like to highlight that the U-Space call has been organised in full compliance with both CEF-specific requirements and best practices. This was secured by extensive collaboration with INEA during the call preparation. Additionally, any potential risk of non-homogeneous interpretation of evaluation sub-criteria was fully mitigated before the start of the evaluation. Indeed, expert briefings were organised before the evaluation to avoid misunderstandings that could lead to incorrect assumptions and scorings.

3.3. The Clean Sky Joint Undertaking (Clean Sky)

Introduction

3.3.1. The JU for the implementation of the Joint Technology Initiative in Aeronautics (Clean Sky JU), located in Brussels, was set up in December 2007 under the Seventh Research Framework Programme (FP7) for a period of ten years ⁽²²⁾ (Clean Sky 1). On 6 May 2014, the Council extended the lifetime of the JU for the period up to 31 December 2024 ⁽²³⁾ (Clean Sky 2).

3.3.2. The Clean Sky JU is a public-private partnership for aeronautic research and innovation. The founding members of the JU under the new regulation are the European Union (EU), represented by the Commission (DG RTD), and private members consisting of the industrial Leaders and Associates of the Integrated Technology Demonstrators (ITDs), Innovative Aircraft Demonstrator Platforms (IADPs) and Transverse Areas (TAs). In addition, the JU cooperates with industrial 'core partners' selected via open and competitive calls ⁽²⁴⁾. These partners were given private member status under the Clean Sky 2 Founding Regulation.

3.3.3. Table 1 presents key figures for the JU ⁽²⁵⁾.

Table 1

Key figures for the JU

	2018	2017
Budget in payment appropriations (million euros)	336,4	203
Budget in commitment appropriations (million euros)	294,6	201,1
Available payment budget (million euros) ⁽¹⁾	343,8	243,7
Available commitment budget (million euros) ⁽¹⁾	371,1	313,6
Total staff as at 31 December ⁽²⁾	40	41

⁽¹⁾ Available budget includes unused appropriations of previous years, which the JU re-entered in the budget of the current year, and assigned revenues.

⁽²⁾ Staff includes officials, temporary and contract agents and seconded national experts.

Source: Data provided by the JU.

Information in support of the statement of assurance

OPINION

3.3.4. We have audited:

- (a) the accounts of the JU which comprise the financial statements ⁽²⁶⁾ and the reports on the implementation of the budget ⁽²⁷⁾ for the financial year ended 31 December 2018, and
- (b) the legality and regularity of the transactions underlying those accounts, as required by Article 287 of the Treaty on the Functioning of the European Union (TFEU).

⁽²²⁾ Council Regulation (EC) No 71/2008 of 20 December 2007 setting up the Clean Sky Joint Undertaking (OJ L 30, 4.2.2008, p. 1).

⁽²³⁾ Council Regulation (EU) No 558/2014 of 6 May 2014 establishing the Clean Sky 2 Joint Undertaking (OJ L 169, 7.6.2014, p. 77).

⁽²⁴⁾ In 2008, 16 Leaders and 66 Associates joined the first phase of the Clean Sky JU (Clean Sky 1 programme). In line with Article 4(6) of the Statutes annexed to Council Regulation (EU) No 558/2014, Associates under the Clean Sky 1 programme retain their status until completion of their research activities and until 31 December 2017 at the latest. In 2017, after completion of the fourth Call for Core Partners launched in 2016, the JU closed the membership selection and accession procedure with in total over 230 legal entities involved in the Clean Sky 2 programme. It includes the 16 Leaders with their associated entities and linked third parties, and the selected Core Partners with their associated entities and linked third parties.

⁽²⁵⁾ More information on the JU's competences and activities is available on its website: www.cleansky.eu

⁽²⁶⁾ The financial statements comprise the balance sheet, the statement of financial performance, the cash flow statement, the statement of changes in net assets and a summary of significant accounting policies and other explanatory notes.

⁽²⁷⁾ The reports on implementation of the budget comprise the reports, which aggregate all budgetary operations and the explanatory notes.

*Reliability of the accounts***Opinion on the reliability of the accounts**

3.3.5. In our opinion, the accounts of the JU for the year ended 31 December 2018 present fairly, in all material respects, the financial position of the JU at 31 December 2018, the results of its operations, its cash flows, and the changes in net assets for the year then ended, in accordance with its Financial Regulation and with accounting rules adopted by the Commission's accounting officer. These are based on internationally accepted accounting standards for the public sector.

*Legality and regularity of the transactions underlying the accounts***Revenue****Opinion on the legality and regularity of revenue underlying the accounts**

3.3.6. In our opinion, revenue underlying the accounts for the year ended 31 December 2018 is legal and regular in all material respects.

Payments**Opinion on the legality and regularity of payments underlying the accounts**

3.3.7. In our opinion, payments underlying the accounts for the year ended 31 December 2018 are legal and regular in all material respects.

3.3.8. The observations which follow do not call the Court's opinion into question.

Observation on the implementation of Clean Sky 1 budget

3.3.9. Table 2 presents an overview of members' contributions to Clean Sky 1 end 2018.

Table 2

Members' contributions to Clean Sky 1*(in million euros)*

Members	Members' contributions (as per Founding Regulation)			Members' contributions (as at 31.12.2018)				
	Operational activities	Additional activities ⁽¹⁾	Total	In cash	In-kind validated	In-kind reported not validated	In-kind to additional activities	Total
EU (DG RTD)	800,0	N/A	800,0	800,0	0,0	0,0	N/A	800,0
Industry members	600,0	N/A	600,0	14,9	594,1	-0,7	N/A	608,3
Total	1 400,0	N/A	1 400,0	814,9	594,1	-0,7	N/A	1 408,3

⁽¹⁾ Additional activities are outside ECA's audit scope.

Source: Data provided by the JU.

3.3.10. The FP7 programme of the JU was formally closed in 2017 with an implementation level of around 100 %. In 2018, the JU still made recoveries of around 0,85 million euros stemming from outstanding pre-financings and ex-post audit results.

Observation on the implementation of Clean Sky 2 budget

3.3.11. Table 3 presents an overview of members' contributions to Clean Sky 2 end 2018.

Table 3

Members' contributions to Clean Sky 2*(in million euros)*

Members	Members' contributions (as per Founding Regulation)			Members' contributions (as at 31.12.2018)				
	Operational activities	Additional activities (1)	Total	In cash	In-kind validated	In-kind reported not validated	In-kind to additional activities	Total
EU (DG RTD)	1 755,0	0,0	1 755,0	816,7	0,0	0,0	0,0	816,7
Industry members	1 228,5	965,3	2 193,8	14,1	273,9	157,6	801,7	1 247,3
Total	2 983,5	965,3	3 948,8	830,8	273,9	157,6	801,7	2 064,0

(1) Additional activities are outside ECA's audit scope.

Source: Data provided by the JU.

3.3.12. The implementation rates for the JU's available 2018 budget in commitment and payment appropriations were high at 99,2 % and 97,3 %, respectively.

Observation on the internal controls

3.3.13. The Clean Sky 2 JU has set up ex-ante control procedures based on financial and operational desk reviews. For FP7 interim and final payments, the JU performs ex-post audits at the beneficiaries whilst for Horizon 2020 project cost claims the Commission's Common Audit Service is responsible for the ex-post audits. The residual error rates for the ex-post audits reported by the JU at the end of 2018 were 1,21 % for FP7 projects and 1,11 % for Horizon 2020 projects ⁽²⁸⁾.

Observation on other issues

3.3.14. The JU's turnover rates were high for both temporary and contract agents in 2017 and 2018. For temporary staff, the turnover rate increased sharply in 2018, up to almost 17 %, as four project officers left the JU. The use of interim staff services almost doubled in 2018.

Follow-up of previous years' observations

3.3.15. An overview of the corrective action taken in response to the Court's observations from previous years is provided in the Annex.

⁽²⁸⁾ Clean Sky JU 2018 draft Annual Activity Report, pages 99-100.

ANNEX

Follow-up of previous years' observations

Year	Court's comments	Status of corrective action (Completed / Ongoing / Outstanding / N/A)
2017	At the end of 2018, the Commission's common Horizon 2020 grant management and monitoring tools did not finish the specific developments needed for the processing of the JU's in-kind contributions.	Completed
2017	In response to the recommendations raised by the evaluators, the JU prepared an Action Plan that was endorsed by the JU Governing Board in April 2018. The action plan includes a wide set of actions to be implemented by the JU, for which a certain number of activities have already been initiated, while the rest are planned to be implemented in 2018, or in the next programming period.	Completed

Reply of the Joint Undertaking

The Joint Undertaking has taken note of the Court's report.

3.4. The Innovative Medicines Initiative Joint Undertaking (IMI)

Introduction

3.4.1. The Initiative on Innovative Medicines (IMI) JU, located in Brussels, was set up in December 2007 ⁽²⁹⁾ for a period of ten years (IMI 1). In May 2014, the Council adopted a new founding Regulation extending the lifetime of the JU to 31 December 2024 ⁽³⁰⁾ (IMI 2).

3.4.2. The IMI JU is a public-private partnership for health research and innovation. The founding members of the JU are the European Union (EU), represented by the Commission (DG RTD), and the pharmaceutical sector, represented by the European Federation of Pharmaceutical Industries and Associations (EFPIA).

3.4.3. Table 1 presents key figures for the JU ⁽³¹⁾.

Table 1
Key figures for the JU

	2018	2017
Budget in payment appropriations (million euros)	179,6	153,4
Budget in commitment appropriations (million euros)	275,6	187,9
Available payment budget (million euros) ⁽¹⁾	235,9	206,4
Available commitment budget (million euros) ⁽¹⁾	485,5	322,4
Total staff as at 31 December ⁽²⁾	48	49

⁽¹⁾ Available budget includes unused appropriations of previous years, which the JU re-entered in the budget of the current year, and assigned revenues.

⁽²⁾ Staff includes officials, temporary and contract agents and seconded national experts.

Source: Data provided by the JU.

Information in support of the statement of assurance

OPINION

3.4.4. We have audited:

- (a) the accounts of the JU which comprise the financial statements ⁽³²⁾ and the reports on the implementation of the budget ⁽³³⁾ for the financial year ended 31 December 2018, and
- (b) the legality and regularity of the transactions underlying those accounts, as required by Article 287 of the Treaty on the Functioning of the European Union (TFEU).

⁽²⁹⁾ Council Regulation (EC) No 73/2008 of 20 December 2007 setting up the Joint Undertaking for the implementation of the Joint Technology Initiative on Innovative Medicines (OJ L 30, 4.2.2008, p. 38).

⁽³⁰⁾ Council Regulation (EU) No 557/2014 of 6 May 2014 establishing the Innovative Medicines Initiative 2 Joint Undertaking (OJ L 169, 7.6.2014, p. 54).

⁽³¹⁾ More information on the JU's competences and activities is available on its website: www.imi.europa.eu

⁽³²⁾ The financial statements comprise the balance sheet, the statement of financial performance, the cash flow statement, the statement of changes in net assets and a summary of significant accounting policies and other explanatory notes.

⁽³³⁾ The reports on implementation of the budget comprise the reports which aggregate all budgetary operations and the explanatory notes.

*Reliability of the accounts***Opinion on the reliability of the accounts**

3.4.5. In our opinion, the accounts of the JU for the year ended 31 December 2018 present fairly, in all material respects, the financial position of the JU at 31 December 2018, the results of its operations, its cash flows, and the changes in net assets for the year then ended, in accordance with its Financial Regulation and with accounting rules adopted by the Commission's accounting officer. These are based on internationally accepted accounting standards for the public sector.

*Legality and regularity of the transactions underlying the accounts***Revenue****Opinion on the legality and regularity of revenue underlying the accounts**

3.4.6. In our opinion, revenue underlying the accounts for the year ended 31 December 2018 is legal and regular in all material respects.

Payments**Opinion on the legality and regularity of payments underlying the accounts**

3.4.7. In our opinion, payments underlying the accounts for the year ended 31 December 2018 are legal and regular in all material respects.

3.4.8. The observations which follow do not call the Court's opinion into question.

Observation on the implementation of the IMI 1 budget

3.4.9. Table 2 presents an overview of members' contributions to IMI 1 end 2018.

Table 2

Members' contributions to IMI1*(in million euros)*

Members	Members' contributions (as per Founding Regulation)			Members' contributions (as at 31.12.2018)				
	Operational activities	Additional activities ⁽¹⁾	Total	In cash	In-kind validated	In-kind reported not validated	In-kind to additional activities	Total
EU (DG RTD)	1 000,0	N/A	1 000,0	916,0	0,0	0,0	N/A	916,0
Industry members	1 000,0	N/A	1 000,0	21,9	633,3	80,6	N/A	735,8
Total	2 000,0	N/A	2 000,0	937,9	633,3	80,6	N/A	1 651,8

⁽¹⁾ Additional activities are outside ECA's audit scope.

Source: Data provided by the JU.

3.4.10. Regarding the JU's 2018 budget available for FP7 projects, the implementation rate for payment appropriations was 88 %.

Observations on the implementation of the IMI 2 budget

3.4.11. Table 3 presents an overview of members' contributions to IMI 2 at end of 2018.

Table 3

Members' contributions to IMI 2*(in million euros)*

Members	Members' contributions (as per Founding Regulation)			Members' contributions (as at 31.12.2018)				
	Operational activities	Additional activities ⁽¹⁾	Total	In cash	In-kind validated	In-kind reported not validated	In-kind to additional activities	Total
EU (DG RTD)	1 638,0	N/A	1 638,0	241,9	0,0	0,0	N/A	241,9
EFPIA	1 425,0	N/A	1 425,0	10,8	128,0	83,9	N/A	222,7
Associated Partners	0,0	N/A	0,0	2,7	2,5	0,0	N/A	5,2
Total	3 063,0	N/A	3 063,0	255,4	130,5	83,9	N/A	469,8

⁽¹⁾ Additional activities are outside ECA's audit scope.

Source: Data provided by the JU.

3.4.12. Regarding the JU's 2018 budget available for Horizon 2020 projects, the implementation rates for commitment and payment appropriations were 100 % and 87 % respectively.

3.4.13. At the end of 2018, the unused payment appropriations carried forward from previous years amounted to 56,1 million euros. Consequently, the JU's Governing Board approved a budget amendment in December 2018 in order to reduce the new payment appropriations of the year by 36,3 million euros ⁽³⁴⁾. Whilst compared to the previous year the situation improved following IMI's implementation of several corrective measures, weaknesses regarding the planning and monitoring of the need for new payment appropriations persisted.

Observation on internal controls

3.4.14. The JU has set up reliable ex-ante control procedures based on financial and operational desk reviews. For FP7 interim and final payments, the JU performs ex-post audits on the beneficiaries' premises, whilst for Horizon 2020 project cost claims the Commission's Common Audit Service is responsible for the ex-post audits. The residual error rates for the ex-post audits reported by the JU at the end of 2018 were 0,87 % for FP7 and 0,67 % for Horizon 2020 ⁽³⁵⁾.

Other issues

3.4.15. In 2018, the JU's staff turnover rate was high at an average of about 21 %, and particularly high for contract agents at about 60 %. The situation worsened due to 8 long-term sick leaves of which 4 were new cases in 2018. As a result, only half of the JU's staff was stable in 2018, which increased the risk that the JU's operational objectives would not be achieved as planned. To overcome the staff situation in 2018, the JU made use of interim staff, which represented 9,6 % of its total staff.

Follow-up of previous years' observations

3.4.16. An overview of the corrective action taken in response to the Court's observations from previous years is provided in the *Annex*.

⁽³⁴⁾ Third amendment of the 2018 budget approved on 5 December 2018.

⁽³⁵⁾ IMI JU 2018 Annual Activity Report, p. 107-108.

ANNEX

Follow-up of previous years' observations

Year	Court's comments	Status of corrective action (Completed / Ongoing / Outstanding / N/A)
2017	At the end of 2017, the Commission's Common Support Centre did not finish specific developments in the Horizon 2020 grant management and monitoring tools to serve the JU's reporting and processing needs for in-kind contributions	Completed
2017	Near the end of 2017, the unused payment appropriations from previous years amounted to 78,7 million euros. Consequently, in July 2017 the JU's Governing Board approved a reduction of the new operational payment appropriations of the year by 56 million euros, and in November 2017 a reduction of the accumulated unused payment appropriations from previous years by 25,8 million euros. This situation shows that, during the last years, there were weaknesses when planning and monitoring the need for new payment appropriations.	Ongoing
2017	In response to the recommendations raised by the evaluators, the JU prepared an Action Plan that was endorsed by the IMI 2 Governing Board in November 2017. The action plan includes a wide set of actions to be implemented by the JU for which a certain number of activities have already been initiated, the majority should be implemented in 2018 and 2019, while a small number will be taken into consideration in the next programming period.	Ongoing

Reply of the Joint Undertaking

The Joint Undertaking has taken note of the Court's Report.

3.5. The Fuel Cells and Hydrogen Joint Undertaking (FCH)

Introduction

3.5.1. The JU for the implementation of the Joint Technology Initiative on Fuel Cells and Hydrogen (FCH JU), located in Brussels, was set up in May 2008 for the period up to 31 December 2017 ⁽³⁶⁾ (FCH 1). In May 2014, the Council extended the lifetime of the JU for the period up to 31 December 2024 ⁽³⁷⁾ (FCH 2).

3.5.2. The FCH JU is a public-private partnership in the field of hydrogen and fuel cells technology research and innovation. The founding members of the JU are the European Union (EU), represented by the Commission, the Industry Grouping (Hydrogen Europe) and the Research Grouping (Hydrogen Europe Research).

3.5.3. Table 1 presents key figures for the JU ⁽³⁸⁾.

Table 1
Key figures for the JU

	2018	2017
Budget in payment appropriations (million euros)	102,4	179,4
Budget in commitment appropriations (million euros)	79,8	98,5
Available payment budget (million euros) ⁽¹⁾	126,5	198,6
Available commitment budget (million euros) ⁽¹⁾	85,5	127,8
Total staff as at 31 December ⁽²⁾	27	26

⁽¹⁾ Available budget includes unused appropriations of previous years, which the JU re-entered in the budget of the current year, and assigned revenues.

⁽²⁾ Staff includes officials, temporary and contract agents and seconded national experts.

Source: Data provided by the JU.

Information in support of the statement of assurance

OPINION

3.5.4. We have audited:

- (a) the accounts of the JU which comprise the financial statements ⁽³⁹⁾ and the reports on the implementation of the budget ⁽⁴⁰⁾ for the financial year ended 31 December 2018, and
- (b) the legality and regularity of the transactions underlying those accounts, as required by Article 287 of the Treaty on the Functioning of the European Union (TFEU).

⁽³⁶⁾ Council Regulation (EC) No 521/2008 of 30 May 2008 setting up the Fuel Cells and Hydrogen Joint Undertaking (OJ L 153, 12.6.2008, p. 1).

⁽³⁷⁾ Council Regulation (EU) No 559/2014 of 6 May 2014 establishing the Fuel Cells and Hydrogen 2 Joint Undertaking (OJ L 169, 7.6.2014, p. 108).

⁽³⁸⁾ More information on the JU's competences and activities is available on its website: www.fch.europa.eu

⁽³⁹⁾ The financial statements comprise the balance sheet, the statement of financial performance, the cash flow statement, the statement of changes in net assets and a summary of significant accounting policies and other explanatory notes.

⁽⁴⁰⁾ The reports on implementation of the budget comprise the reports which aggregate all budgetary operations and the explanatory notes

*Reliability of the accounts***Opinion on the reliability of the accounts**

3.5.5. In our opinion, the accounts of the JU for the year ended 31 December 2018 present fairly, in all material respects, the financial position of the JU at 31 December 2018, the results of its operations, its cash flows, and the changes in net assets for the year then ended, in accordance with its Financial Regulation and with accounting rules adopted by the Commission's accounting officer. These are based on internationally accepted accounting standards for the public sector.

*Legality and regularity of the transactions underlying the accounts***Revenue****Opinion on the legality and regularity of revenue underlying the accounts**

3.5.6. In our opinion, revenue underlying the accounts for the year ended 31 December 2018 is legal and regular in all material respects.

Payments**Opinion on the legality and regularity of payments underlying the accounts**

3.5.7. In our opinion, payments underlying the accounts for the year ended 31 December 2018 are legal and regular in all material respects.

3.5.8. The observations which follow do not call the Court's opinion into question.

Observation on the implementation of the FCH 1 budget

3.5.9. Table 2 presents an overview of members' contributions to FCH 1 end 2018.

Table 2

Members' contributions to FCH 1*(in million euros)*

Members	Members' contributions (as per Founding Regulation)			Members' contributions (as at 31.12.2018)				
	Operational activities	Additional activities ⁽¹⁾	Total	In cash	In-kind validated	In-kind reported not validated	In-kind to additional activities	Total
EU (DG RTD)	470,0	N/A	470,0	402,2	19,1	0,0	N/A	421,3
Industry members	470,0	N/A	470,0	17,9	420,0	4,6	N/A	442,5
Total	940,0	N/A	940,0	420,1	439,1	4,6	N/A	863,8

⁽¹⁾ Additional activities are outside ECA's audit scope.

Source: Data provided by the JU.

3.5.10. Regarding the JU's 2018 budget available for FP7 projects, the implementation rate for payment appropriations was 79,6 % due to delays in submission of cost claims for ongoing FP7 projects.

Observations on the implementation of the FCH 2 budget

3.5.11. Table 3 presents an overview of members' contributions to FCH 2 end 2018.

Table 3

Members' contributions to FCH 2*(in million euros)*

Members	Members' contributions (as per Founding Regulation)			Members' contributions (as at 31.12.2018)				
	Operational activities	Additional activities ⁽¹⁾	Total	In cash	In-kind validated	In-kind reported not validated	In-kind to additional activities	Total
EU (DG RTD)	665,0	0,0	665,0	318,8	0,0	0,0	0,0	318,8
Industry members	95,0	285,0	380,0	3,6	1,8	7,7	636,3	649,4
Total	760,0	285,0	1 045,0	322,4	1,8	7,7	636,3	968,2

⁽¹⁾ Additional activities are outside ECA's audit scope.

Source: Data provided by the JU.

3.5.12. The low level of industry members' in-kind contributions for operational activities is due to the fact that the JU certifies them together with the final cost claims. Therefore, the certification of most of the committed in-kind contributions will happen later in the Horizon 2020 programme when the final payment for the projects is made and the certificates of financial statement (CFS) are due.

3.5.13. Regarding the JU's 2018 budget available for Horizon 2020 projects, the implementation rates for commitment and payment appropriations were 95,8 % and 84,4 %, respectively.

Observations on internal controls

3.5.14. The JU has set up ex-ante control procedures based on financial and operational desk reviews. For FP7 interim and final payments, the JU performs ex-post audits at the beneficiaries, whilst for Horizon 2020 project cost claims the Commission's Common Audit Service is responsible for the ex-post audits.

3.5.15. The residual error rates for the ex-post audits reported by the JU at the end of 2018 were 1,10 % for FP7 and 0,46 % for Horizon 2020 ⁽⁴¹⁾.

Follow-up of previous years' observations

3.5.16. An overview of the corrective action taken in response to the Court's observations from previous years is provided in the *Annex*.

⁽⁴¹⁾ FCH JU 2018 Annual Activity Report, p. 89.

ANNEX

Follow-up of previous years' observations

Year	Court's comments	Status of corrective action (Completed / Ongoing / Outstanding / N/A)
2017	In response to the recommendations raised by the evaluators, the JU prepared an Action Plan that was endorsed by the FCH 2 Governing Board in March 2018. The action plan includes a wide set of actions to be implemented by the JU, for which a certain number of activities have already been initiated, the majority should be implemented in 2018 and 2019, while a small number will be taken under consideration for the next programming period.	Ongoing

Reply of the Joint Undertaking

The Joint Undertaking has taken note of the Court's report.

3.6. The Electronic Components and Systems for European Leadership Joint Undertaking (ECSEL)

Introduction

3.6.1. The Electronic Components and Systems for European Leadership (ECSEL) JU, located in Brussels, was set up in May 2014 ⁽⁴²⁾ for the period up to 31 December 2024. The ECSEL JU replaced and succeeded the ENIAC and Artemis JUs, which closed on 26 June 2014. The ECSEL JU started working autonomously on 27 June 2014.

3.6.2. The ECSEL JU is a public-private partnership in nano-electronics and embedded computing systems research. The founding members of the JU are the European Union (EU), represented by the Commission (DG CONNECT), the ECSEL Participating States ⁽⁴³⁾, and three industry associations (AENEAS, ARTEMISIA and EPoSS) representing companies and research organisations active in the fields of embedded and cyber-physical systems, smart system integration and micro- and nano-electronics.

3.6.3. Table 1 presents key figures for the JU ⁽⁴⁴⁾.

Table 1

Key figures for the JU

	2018	2017
Budget in payment appropriations (million euros)	290,1	287,7
Budget in commitment appropriations (million euros)	187,3	177,3
Available payment budget (million euros) ⁽¹⁾	310,6	290,1
Available commitment budget (million euros) ⁽¹⁾	194,2	183,9
Total staff as at 31 December ⁽²⁾	30	30

⁽¹⁾ Available budget includes unused appropriations of previous years, which the JU re-entered in the budget of the current year, and assigned revenues.

⁽²⁾ Staff includes temporary and contract agents and seconded national experts.

Source: Data provided by the JU.

Information in support of the statement of assurance

OPINION

3.6.4. We have audited:

- (a) the accounts of the JU which comprise the financial statements ⁽⁴⁵⁾ and the reports on the implementation of the budget ⁽⁴⁶⁾ for the financial year ended 31 December 2018, and
- (b) the legality and regularity of the transactions underlying those accounts, as required by Article 287 of the Treaty on the Functioning of the European Union (TFEU).

⁽⁴²⁾ Council Regulation (EU) No 561/2014 of 6 May 2014 establishing the ECSEL Joint Undertaking (OJ L 169, 7.6.2014, p. 152).

⁽⁴³⁾ Austria, Belgium, Bulgaria, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden Switzerland, Turkey and the United Kingdom.

⁽⁴⁴⁾ More information on the JU's competences and activities is available on its website: www.ecsel.eu

⁽⁴⁵⁾ The financial statements comprise the balance sheet, the statement of financial performance, the cash flow statement, the statement of changes in net assets and a summary of significant accounting policies and other explanatory notes.

⁽⁴⁶⁾ The reports on implementation of the budget comprise the reports which aggregate all budgetary operations and the explanatory notes.

Reliability of the accounts

Opinion on the reliability of the accounts

3.6.5. In our opinion, the accounts of the JU for the year ended 31 December 2018 present fairly, in all material respects, the financial position of the JU at 31 December 2018, the results of its operations, its cash flows, and the changes in net assets for the year then ended, in accordance with its Financial Regulation and with accounting rules adopted by the Commission's accounting officer. These are based on internationally accepted accounting standards for the public sector.

*Legality and regularity of the transactions underlying the accounts***Revenue**

Opinion on the legality and regularity of revenue underlying the accounts

3.6.6. In our opinion, revenue underlying the accounts for the year ended 31 December 2018 is legal and regular in all material respects.

Payments

Opinion on the legality and regularity of payments underlying the accounts

3.6.7. In our opinion, payments underlying the accounts for the year ended 31 December 2018 are legal and regular in all material respects.

3.6.8. The observations which follow do not call the Court's opinion into question.

Observations on the implementation of the FP7 budget

3.6.9. At the end of 2018, the EU contributed 637,6 million euros from the FP7 fund for the co-financing of the ECSEL JU's FP7 activities (as taken over from the Artemis and ENIAC JUs), and another 17,9 million euros for the co-financing of the related administrative costs. The cumulated commitment for operational FP7 activities amounted to 606 million euros (Artemis 172 million euro and ENIAC 434 million euros). The related payments amounted to 529 million euros (Artemis 156 million euros and ENIAC 373 million euros). As the programme was closed end 2017, there is a risk that the resources allocated to the JU will not be fully used.

3.6.10. The implementation rate for the JU's 2018 available payment appropriations of 98 million euros for FP7 projects was 42 %. This low implementation rate was mainly due to the National Funding Authorities' (NFA) delays in providing end of project certificates for ongoing FP7 activities.

Observations on the implementation of the Horizon 2020 budget

3.6.11. Table 2 presents an overview of members' contributions to the ECSEL JU at the end of 2018.

Table 2

Members' contributions to ECSEL's Horizon 2020 activities*(in million euros)*

Members	Members' contributions (as per Founding Regulation)			Members' contributions (as at 31.12.2018)				
	Operational activities	Additional activities ⁽¹⁾	Total	In cash	In-kind validated	In-kind reported not validated	In-kind to additional activities	Total
EU (DG CONNECT)	1 185,0	N/A	1 185,0	512,0	0,0	0,0	N/A	512,0
Industry members	1 657,5	N/A	1 657,5	11,3	0,0	694,1	N/A	705,4
Total	2 842,5	N/A	2 842,5	523,3	0,0	694,1	N/A	1 217,4

⁽¹⁾ Additional activities are outside ECA's audit scope.

Source: Data provided by the JU.

3.6.12. The 30 ECSEL Participating States are required to make financial contributions of at least 1 170 million euros to the operational activities of the ECSEL JU ⁽⁴⁷⁾. At the end of 2018, the Participating States taking part in the 2014, 2015, 2016 and 2017 calls for proposals — 19, 21, 24 and 18 States respectively — made commitments amounting to 564 million euros and payments of 178 million euros (15 % of the total required contributions). Notwithstanding the early stage of implementation of the Horizon 2020 projects, the low level of Participating States' contributions is related to the fact that some Participating States only recognise and report their costs to the ECSEL JU at the end of the Horizon 2020 projects they support.

3.6.13. The ECSEL JU can only calculate the actual amount of the industry members' in-kind contributions after it has validated the contributions of the Participating States at the end of the programme.

3.6.14. Regarding the JU's 2018 budget available for Horizon 2020 projects, the implementation rates for commitment and payment appropriations were 100 % and 72 % respectively. The implementation rate for Horizon 2020 payment appropriations deteriorated due to the additional contribution of 20 million euros received by the ECSEL JU in December 2018.

Observations on internal controls

3.6.15. Administrative agreements concluded by the Artemis and ENIAC JUs with the NFAs have continued to apply since those JUs were merged to form the ECSEL JU. Under these agreements, the Artemis and ENIAC JUs' ex-post audit strategies relied heavily on the NFAs to audit project cost claims ⁽⁴⁸⁾. The ECSEL JU has taken steps to assess the implementation of ex-post audits by the NFAs and has obtained written statements from the NFAs declaring that the implementation of their national procedures provides reasonable assurance as to the legality and regularity of transactions. However, the significant variation in the methodologies and procedures used by the NFAs does not allow the ECSEL JU to calculate a single reliable weighted error rate or a residual error rate for FP7 payments.

3.6.16. For FP7 projects, the payments made by the ECSEL JU in 2018 amounted to 41 million euros (2017: 76,4 million euros), which represented 22 % (2017: 32 %) of the total operational payments made by the JU in 2018. For those payments we applied the residual error rate established by the DG RTD for the whole FP7 programme, and which at the end of 2018 was 3,36 %.

3.6.17. For Horizon 2020 payments, the Commission's Common Audit Service is responsible for the ex-post audits ⁽⁴⁹⁾. The residual error rates for the ex-post audits calculated by the JU at the end of 2018 was 1,15 % for Horizon 2020.

3.6.18. In 2018, the final payment for the implementation of the Service Level Agreement (SLA) concluded with one of three industry association members for the provision of communication services and services for the organisation of events, was made without the necessary supporting documentation.

3.6.19. In 2018, the JU detected that cash contributions for administrative costs amounting to above 1 million euros were not invoiced by the ENIAC JU to the industry member AENEAS before the set-up of the ECSEL JU. To cope with the lack of cash for administrative expenditure, the JU received 1 million euros from its members as a 'prepaid cash contribution', of which 320 000 euros from the Commission and 680 000 euros from the industry members. The JU should issue the debit note without further delay.

Observation on other issues

3.6.20. Whilst the interim evaluation of the ECSEL JU was completed in accordance with the precise timeframe fixed in its legal framework, it could not provide the best value-added for the JU's decision making process at this early stage of its activities.

Follow-up of previous years' observations

3.6.21. An overview of the corrective action taken in response to the Court's observations from previous years is provided in the *Annex*.

⁽⁴⁷⁾ Article 4(1) of Regulation (EU) No 561/2014.

⁽⁴⁸⁾ According to the ex-post audit strategies adopted by Artemis and ENIAC, the JUs must assess at least once a year whether the information received from the Member States provides sufficient assurance as to the regularity and legality of the transactions carried out.

⁽⁴⁹⁾ Article 13(2) of Council Regulation (EU) No 561/2014.

ANNEX

Follow-up of previous years' observations

Year	Court's comments	Status of corrective action (Completed / Ongoing / Outstanding / N/A)
2015	<p>The JU Financial Rules state that the JU's budget should be implemented in compliance with effective and efficient internal control standards, including prevention, detection, correction and follow-up of fraud and irregularities. Following the Commission's adoption of an Anti-Fraud Strategy in June 2011, the first common Research Anti-Fraud Strategy was adopted in July 2012 and updated in March 2015 to take account of changes introduced by Horizon 2020. The Research Anti-Fraud Strategy includes an action plan to be implemented by the Research JUs.</p> <p>Internal control procedures are already in place at the ECSEL JU to provide reasonable assurance on the prevention and detection of fraud and irregularities (ex-ante checks on payments, conflict of interest policy, ex-post audits at beneficiaries of grants). The anti-fraud implementation plan of the ECSEL JU has been adopted on 11 November 2016 and is currently being implemented.</p>	Completed
2016	<p>The ECSEL JU has adopted rules on the prevention and management of conflicts of interest to mitigate the risks related to its governance structure. However, the JU did not consistently comply with the requirements set out in the Governing Board decision GB.2015.41.</p>	Completed
2017	<p>In 2017, we noticed significant shortcomings in the management of the procurement procedures for administrative services (e.g. selection of inappropriate procurement procedures, incomplete definition of services to be provided, late signature of amendments).</p>	Ongoing
2017	<p>In 2017, the JU had not properly documented, in its register of exceptions, management overrides of controls, or deviations from established processes and procedures. This situation affects the management's ability to ensure the effectiveness of the internal control processes and to mitigate quickly procedural shortcomings</p>	Completed
2017	<p>In response to the recommendations raised by the evaluators, the JU prepared an Action Plan that was adopted by the ECSEL JU's Governing Board in April 2018. The action plan includes a wide set of actions to be implemented by the JU, for which a certain number of activities have already been completed, the majority should be implemented in 2019, while some of them were considered beyond the scope of the ECSEL JU.</p>	Ongoing

Reply of the Joint Undertaking

The Joint Undertaking has taken note of the Court's report.

3.7. The Bio-based Industries Joint Undertaking (BBI)

Introduction

3.7.1. The Bio-based Industries (BBI) JU, located in Brussels, was set up in May 2014 ⁽⁵⁰⁾ for a period of ten years and started working autonomously on 26 October 2015.

3.7.2. The BBI JU is a public-private partnership in the bio-based industries sector. The founding members are the European Union (EU), represented by the Commission, and industrial partners represented by the Bio-based Industries Consortium (BIC).

3.7.3. Table 1 presents key figures for the JU ⁽⁵¹⁾.

Table 1
Key figures for the JU

	2018	2017
Budget in payment appropriations (million euros)	91,6	88,9
Budget in commitment appropriations (million euros)	119,5	86,3
Available payment budget (million euros) ⁽¹⁾	118,1	91,6
Available commitment budget (million euros) ⁽¹⁾	120,9	92,9
Total staff as at 31 December ⁽²⁾	18	21

⁽¹⁾ Available budget includes unused appropriations of previous years, which the JU re-entered in the budget of the current year, and assigned revenues.

⁽²⁾ Staff includes temporary and contract agents and seconded national experts.

Source: Data provided by the JU.

Information in support of the statement of assurance

OPINION

3.7.4. We have audited:

- (a) the accounts of the JU which comprise the financial statements ⁽⁵²⁾ and the reports on the implementation of the budget ⁽⁵³⁾ for the financial year ended 31 December 2018, and
- (b) the legality and regularity of the transactions underlying those accounts, as required by Article 287 of the Treaty on the Functioning of the European Union (TFEU).

Reliability of the accounts

Opinion on the reliability of the accounts

3.7.5. In our opinion, the accounts of the JU for the year ended 31 December 2018 present fairly, in all material respects, the financial position of the JU at 31 December 2018, the results of its operations, its cash flows, and the changes in net assets for the year then ended, in accordance with its Financial Regulation and with accounting rules adopted by the Commission's accounting officer. These are based on internationally accepted accounting standards for the public sector.

⁽⁵⁰⁾ Council Regulation (EU) No 560/2014 of 6 May 2014 establishing the Bio-based Industries Joint Undertaking (OJ L 169, 7.6.2014, p. 130).

⁽⁵¹⁾ More information on the JU's competences and activities is available on its website: www.bbi-europe.eu

⁽⁵²⁾ The financial statements comprise the balance sheet, the statement of financial performance, the cash flow statement, the statement of changes in net assets and a summary of significant accounting policies and other explanatory notes.

⁽⁵³⁾ The reports on implementation of the budget comprise the reports, which aggregate all budgetary operations and the explanatory notes.

*Legality and regularity of the transactions underlying the accounts***Revenue***Opinion on the legality and regularity of revenue underlying the accounts*

3.7.6. In our opinion, revenue underlying the accounts for the year ended 31 December 2018 is legal and regular in all material respects.

Payments*Opinion on the legality and regularity of payments underlying the accounts*

3.7.7. In our opinion, payments underlying the accounts for the year ended 31 December 2018 are legal and regular in all material respects.

3.7.8. The observations which follow do not call the Court's opinion into question.

Reliability of the accounts

3.7.9. In 2018, the BBI JU carried out a review in order to update the membership status of BIC's constituent entities as the main basis for the validation and recognition of industry members' in-kind contributions to the JU's operational activities. This is considered good practice and should be done on a regular basis.

Observations on the implementation of the Horizon 2020 budget

3.7.10. Table 2 presents an overview of the members' contributions to the JU as at the end of 2018.

Table 2

Members' contributions to BBI activities*(in million euros)*

Members	Members' contributions (as per Founding Regulation)			Members' contributions (as at 31.12.2018)				
	Operational activities	Additional activities ⁽¹⁾	Total	In cash	In-kind validated	In-kind reported not validated	In-kind to additional activities	Total
EU (DG RTD)	975,0	0,0	975,0	264,6	0,0	0,0	0,0	264,6
Industry members	975,0	1 755,0	2 730,0	9,1	12,1	36,8	699,9	757,9
Total	1 950,0	1 755,0	3 705,0	273,7	12,1	36,8	699,9	1 022,5

⁽¹⁾ Additional activities are outside ECA's audit scope.

Source: Data provided by the JU.

3.7.11. Out of the minimum of 182,5 million euros of cash contributions ⁽⁵⁴⁾, only 0,8 million euros were paid by the end of 2018. The BBI Founding Regulation ⁽⁵⁵⁾ was amended to enable industry members to provide their cash contributions at project level — however, there is still a high risk that the industry members will not achieve the minimum amount of operational cash contributions by the end of the BBI programme. As a result, the Commission (DG RTD) decided at the end of 2018 to reduce the JU's 2020 budget of 205 million euros by 140 million euros ⁽⁵⁶⁾.

⁽⁵⁴⁾ Article 12(4) of the Statutes of the Bio-based Industries Joint Undertaking (Annex I of Regulation (EU) No 560/2014).

⁽⁵⁵⁾ Regulation (EU) No 2018/121 of 23 January 2018 amending Regulation (EU) No 560/2014 establishing the Bio-based Industries Joint Undertaking (OJ L 22, 26.1.2018, p. 1).

⁽⁵⁶⁾ This amount includes the announced 2017 budget suspension of 50 million euros and the 2018 budget suspension of 20 million euros.

3.7.12. The implementation rates for the available 2018 commitment and payment appropriations were 99 % and 71 %, respectively. Most of the payment appropriations made by the JU were pre-financing of grant agreements resulting from the 2017 call for proposals and interim payments for projects from the previous calls. The lower implementation rate for payment appropriations was due to delays of some periodic reports and cost declarations significantly below the budget approved in the grant agreements.

Observations on internal controls

3.7.13. The JU has set up reliable ex-ante control procedures based on financial and operational desk reviews. The situation at the end of 2018 showed that the JU had largely implemented the internal control standards.

3.7.14. The Common Audit Service of the Commission is responsible for the ex-post audit of Horizon 2020 project cost claims. Based on the ex-post audit results at the end of 2018, the Joint the Undertaking reported a residual error rate of 0,01 % for Horizon 2020 projects ⁽⁵⁷⁾.

Observation on sound financial management and performance

3.7.15. Due to the design of the 2018 call for proposals and the management of the ranking system for the proposals, one out of two flagship topics of the call remained unfunded despite having received eligible and highly evaluated proposals for both topics.

Observations and other issues

3.7.16. Whilst the interim evaluation of the BBI JU was completed in accordance with the precise timeframe fixed in its legal framework, it could not provide the best value-added for the JU's decision-making process at this early stage of its activities.

Follow-up of previous years' observations

3.7.17. An overview of the corrective action taken in response to the Court's observations from previous years is provided in the *Annex*.

⁽⁵⁷⁾ BBI JU 2018 Annual Activity Report, p. 185. The reported error rate is not fully representative as it is only based on the two first waves of ex-post audits, which are not yet completed.

ANNEX

Follow-up of previous years' observations

Year	Court's comments	Status of corrective action (Completed / Ongoing / Outstanding / N/A)
2017	At the end of 2017, the Commission's common Horizon 2020 grant management and monitoring tools did not finish the specific developments needed for the processing of the JU's in-kind contributions.	Completed
2017	The 2016 call for grant proposals resulted in a relatively low coverage of research and innovation actions (RIA) topics. RIA had a total budget of 50 million euros and contained 12 topics each of which was designed to target the specific challenges arising from the value chain demonstration and realisation activities. All eligible proposals were evaluated against the Horizon 2020 evaluation criteria and ranked for co-financing under the limits of the common budget line. Most of the grant budget, however, focused on three topics out of the six being financed whilst the JU could not finance six RIA topics even though for four of them it had proposals that were eligible for co-financing. To ensure an optimal coverage of the most important topics, the JU should consider limiting the number of proposals per topic by defining an indicative budget at topic level in the call.	Completed
2017	In response to the recommendations raised by the evaluators, the JU prepared an Action Plan that was endorsed by the BBI Governing Board in March 2018. While broadly accepting the recommendations, the JU has already launched the implementation of a certain number of actions aiming to address the main issues raised in the Interim Evaluation. According to the action plan, most of the actions to be taken in response to the recommendations should be implemented in 2018 and 2019.	Ongoing

Reply of the Joint Undertaking

3.7.15. After having analysed the outcome of the evaluation and granting processes of the 2018 call, the BBIJU came to the conclusion that it will be better to have dedicated budget lines in some innovation actions topics (Flagships) in order to ensure a better coverage. This approach has already been integrated into the BBIJU's Annual Work Programme 2019 by means of its amendment of 19 March 2019.

3.8. The Shift2Rail Joint Undertaking (S2R)

Introduction

3.8.1. The Shift2Rail (S2R) JU, located in Brussels, was set up in June 2014 ⁽⁵⁸⁾ for a period of ten years and started working autonomously on 24 May 2016.

3.8.2. The S2R JU is a public-private partnership in the rail sector. The founding members are the European Union (EU), represented by the Commission and rail industry partners (key stakeholders, including rail equipment manufacturers, railway companies, infrastructure managers and research centres). Other entities may participate in the JU as associated members.

3.8.3. Table 1 presents key figures for the JU ⁽⁵⁹⁾.

Table 1

Key figures for the JU

	2018	2017
Budget in payment appropriations (million euros)	69,4	34,5
Budget in commitment appropriations (million euros)	80,9	64,7
Available payment budget (million euros) ⁽¹⁾	71,9	44,1
Available commitment budget (million euros) ⁽¹⁾	84,8	68,6
Total staff as at 31 December ⁽²⁾	22	20

⁽¹⁾ Available budget includes unused appropriations of previous years, which the JU re-entered in the budget of the current year, and assigned revenues.

⁽²⁾ Staff includes temporary and contract agents and seconded national experts.

Source: Data provided by the JU.

Information in support of the statement of assurance

OPINION

3.8.4. We have audited:

- (a) the accounts of the JU which comprise the financial statements ⁽⁶⁰⁾ and the reports on the implementation of the budget ⁽⁶¹⁾ for the financial year ended 31 December 2018, and
- (b) the legality and regularity of the transactions underlying those accounts, as required by Article 287 of the Treaty on the Functioning of the European Union (TFEU).

Reliability of the accounts

Opinion on the reliability of the accounts

3.8.5. In our opinion, the accounts of the JU for the year ended 31 December 2018 present fairly, in all material respects, the financial position of the JU at 31 December 2018, the results of its operations, its cash flows, and the changes in net assets for the year then ended, in accordance with its Financial Regulation and with accounting rules adopted by the Commission's accounting officer. These are based on internationally accepted accounting standards for the public sector.

⁽⁵⁸⁾ Council Regulation (EU) No 642/2014 of 16 June 2014 establishing the Shift2Rail Joint Undertaking (OJ L 177, 17.6.2014, p. 9).

⁽⁵⁹⁾ More information on the JU's competences and activities is available on its website: www.shift2rail.org

⁽⁶⁰⁾ The financial statements comprise the balance sheet, the statement of financial performance, the cash flow statement, the statement of changes in net assets and a summary of significant accounting policies and other explanatory notes.

⁽⁶¹⁾ The reports on implementation of the budget comprise the reports, which aggregate all budgetary operations and the explanatory notes.

*Legality and regularity of the transactions underlying the accounts***Revenue***Opinion on the legality and regularity of revenue underlying the accounts*

3.8.6. In our opinion, revenue underlying the accounts for the year ended 31 December 2018 is legal and regular in all material respects.

Payments*Opinion on the legality and regularity of payments underlying the accounts*

3.8.7. In our opinion, payments underlying the accounts for the year ended 31 December 2018 are legal and regular in all material respects.

3.8.8. The observations which follow do not call the Court's opinion into question.

Observations on the implementation of the Horizon 2020 budget

3.8.9. Table 2 presents an overview of the members' contributions to the JU at the end of 2018.

Table 2

Members' contributions to S2R

(in million euros)

Members	Members' contributions (as per Founding Regulation)			Members' contributions (as at 31.12.2018)				
	Operational activities	Additional activities ⁽¹⁾	Total	In cash	In-kind validated	In-kind reported not validated	In-kind to additional activities	Total
EU (DG Move)	398,0	0,0	398,0	158,9	0,0	0,0	0,0	158,9
Industry members	350,0	120,0	470,0	6,5	21,7	63,7	160,4	252,3
Total	748,0	120,0	868,0	165,4	21,7	63,7	160,4	411,2

⁽¹⁾ Additional activities are outside ECA's audit scope.

Source: Data provided by the JU.

3.8.10. The implementation rates for the available commitment and payment appropriations in 2018 were 100 % and 82,3 % respectively. Most of the payments made by the JU in 2018 were interim payments for the Horizon 2020 projects selected under the 2015 and 2016 calls for proposals, as well as pre-financing payments for Horizon 2020 projects selected under the 2018 call for proposals.

Observations on internal controls

3.8.11. The JU has set up reliable ex-ante control procedures based on financial and operational desk reviews. The situation at the end of 2018 showed that the JU had largely implemented the internal control standards with some actions remaining to be completed in 2019 such as the revision of the key performance indicator model. In 2018, Shift2Rail also reinforced its conflict of interest management framework.

3.8.12. The Common Audit Service of the Commission is responsible for the ex-post audit of Horizon 2020 payments. Based on the ex-post audit results available by the end of 2018, the JU reported a residual error rate of 0,97 % for Horizon 2020 projects ⁽⁶²⁾.

Observations on sound financial management and performance

3.8.13. The JU launched, as a pilot, the 2018 call for proposal for grants restricted to its members, as a lump sum funding scheme. The indicative value for this pilot was 134,1 million euros (86,3 % of the total budget for the 2018 call for proposals). The objective of the exercise was to test the simplification advantage and the feasibility of the lump sum funding scheme.

3.8.14. The financial experts involved in the grant evaluation phase revealed some relevant deviations in the financial proposals from the beneficiaries' historical financial data. The JU used the grant preparation phase to analyse the beneficiaries' explanations for the deviations and to correct the lump sum if justified. To improve further the efficiency and effectiveness of the lump sum funding scheme, the JU needs to continue to strengthen the financial data in its beneficiary database and to disclose important financial experts' comments in the evaluation summary report.

Observations on other issues

3.8.15. When in 2018 one Associated Member became a wholly owned subsidiary of a Founding Member, it was able to maintain its associated membership status and Governing Board seat. Consequently, the Founding Member's representation in the Governing Board actually increased. The provisions of the JU's current legal framework do not sufficiently address corporate acquisitions among the JU's industry members and the implications they might have on the balanced representation of members in the Governing Board.

3.8.16. Whilst the interim evaluation of the S2R JU was completed in accordance with the precise timeframe fixed in its legal framework, it could not provide the best value added for the JU's decision-making process at this early stage of its activities.

3.8.17. The JU's staff turnover rates for the last two years were entirely caused by the rotation of contract agents — and they were relatively high. To cope with this situation of high staff turnover, the JU made use of interim staff services, which represented about 17 % of its total staff.

Follow-up of previous years' observations

3.8.18. An overview of the corrective action taken in response to the Court's observations from previous years is provided in the *Annex*.

⁽⁶²⁾ At 31 December 2018, the S2R JU could base its error rate calculation on four final ex-post audit reports (one related to the risk based audit and three related to the S2R JU's representative sample). See S2R JU's 2018 Annual Activity Report, pages 120-122.

ANNEX

Follow-up of previous years' observations

Year	Court's comments	Status of corrective action (Completed / Ongoing / Outstanding / N/A)
2017	At the end of 2017, the JU had unused payment appropriations from previous years of around 7,6 million euros. This situation shows weaknesses in the budget planning process, which, however, cannot be fully controlled by the JU.	Completed
2017	The situation at end of 2017 showed that the most important internal control standards were largely implemented with some actions remaining to be completed in 2018.	Ongoing
2017	In response to the recommendations raised by the evaluators, the JU prepared an Action Plan adopted by the Governing Board on 28 June 2018. While not all recommendations raised in the Interim Evaluation will be addressed under the current Financial Framework Programme, some actions included in the Action Plan have already been initiated, while others, in accordance with their nature and the current legal framework, are expected to be implemented in the period 2018 to 2020.	Ongoing

Reply of the Joint Undertaking

3.8.14. The Shift2Rail JU confirms that all the conclusions and recommendations of the financial evaluators have been based on reliable financial data, been taken into consideration and addressed individually to each beneficiary (Member) prior to the grant agreement signature and in accordance with the Commission Decision C(2017) 7151 of 27 October 2017 'on authorising the use of reimbursement on the basis of a lump sum for the eligible costs of actions under the Horizon 2020 Framework Programme for Research and Innovation and under the Research and Training Programme of the European Atomic Energy Community (2014- 2018)'.

This first experience in implementing lump sum grants have demonstrated encouraging results with respect to the objective of further simplifying the funding rules and to allow the Shift2Rail JU Members focusing on the technical implementation of the grant agreement as well as preventing and reducing the financial errors. Whilst recognising that the preparation and implementation of the lump sum pilot project is by nature subject to improvements, S2R JU considers that all legal and financial aspects of the Commission Decision have been strictly followed-up. Sound financial management of the lump sum call will be verified later on in the framework of the checks performed in accordance with the S2R regulation. In fact, during the Grant Agreement Preparation phase, the Authorising Officer has ensured that all the comments of the experts, technical and financial, were taken in due consideration. Taking into account the recommendation of the ECA, the overall process will be further enhanced within the Call 2019.

3.8.15. The limitations of the S2R Regulation are recognised although it should be noted that the legal framework established within the S2R JU does not allow an increase in the influence of a Founding Member on the decision-making process and overall governance. The observation of the ECA will be considered in any possible amendment to the S2R regulation.

3.8.16. It is recognised that the evaluation took place early in the life of the S2R JU but, as noted, this was a requirement in compliance with the S2R Regulation and the overall H2020 Programme.

3.8.17. The main reasons behind the S2R JU's high level of turnover stem from the current Staff Establishment Plan structure, which the S2R JU is required to follow, and which does not allow the S2R JU to offer the same favourable contractual conditions as other EU bodies and institutions. Nevertheless, soft measures have been put in place to reduce high levels of turnover. The matter will require to be followed up with the Commission.

JOINT UNDERTAKING OPERATING UNDER EURATOM

3.9. The European Joint Undertaking for ITER and the Development of Fusion Energy (F4E)**Introduction**

3.9.1. The European JU for ITER ⁽⁶³⁾ and the Development of Fusion Energy ('F4E JU') was set up in March 2007 ⁽⁶⁴⁾ for a period of 35 years. While the main fusion facilities were to be developed at Cadarache in France, the JU is located in Barcelona.

3.9.2. The founding members of the JU are Euratom, represented by the Commission, the Euratom Member States and Switzerland, which concluded a cooperation agreement with Euratom.

3.9.3. Table 1 presents key figures for the JU ⁽⁶⁵⁾.

Table 1
Key figures for the JU

	2018	2017
Budget in payment appropriations (million euros)	794,8	847,6
Budget in commitment appropriations (million euros)	649,9	562
Available payment budget (million euros) ⁽¹⁾	847,4	864,9
Available commitment budget (million euros) ⁽¹⁾	706,2	588,9
Total staff as at 31 December ⁽²⁾	442	449

⁽¹⁾ Available budget includes unused appropriations of previous years, which the JU re-entered in the budget of the current year, and assigned revenues.

⁽²⁾ Staff includes temporary and contract agents and seconded national experts.

Source: Data provided by the JU.

Information in support of the statement of assurance**OPINION**

3.9.4. We have audited:

- (a) the accounts of the JU which comprise the financial statements ⁽⁶⁶⁾ and the reports on the implementation of the budget ⁽⁶⁷⁾ for the financial year ended 31 December 2018, and
- (b) the legality and regularity of the transactions underlying those accounts, as required by Article 287 of the Treaty on the Functioning of the European Union (TFEU).

*Reliability of the accounts***Opinion on the reliability of the accounts**

3.9.5. In our opinion, the accounts of the JU for the year ended 31 December 2018 present fairly, in all material respects, the financial position of the JU at 31 December 2018, the results of its operations, its cash flows, and the changes in net assets for the year then ended, in accordance with its Financial Regulation and with accounting rules adopted by the Commission's accounting officer. These are based on internationally accepted accounting standards for the public sector.

⁽⁶³⁾ International Thermonuclear Experimental Reactor.

⁽⁶⁴⁾ Council Decision 2007/198/Euratom of 27 March 2007 establishing the European Joint Undertaking for ITER and the Development of Fusion Energy and conferring advantages upon it (OJ L 90, 30.3.2007, p. 58).

⁽⁶⁵⁾ More information on the JU's competences and activities is available on its website: www.f4e.europa.eu

⁽⁶⁶⁾ The financial statements comprise the balance sheet, the statement of financial performance, the cash flow statement, the statement of changes in net assets and a summary of significant accounting policies and other explanatory notes.

⁽⁶⁷⁾ The reports on implementation of the budget comprise the reports, which aggregate all budgetary operations and the explanatory notes.

*Legality and regularity of the transactions underlying the accounts***Revenue***Opinion on the legality and regularity of revenue underlying the accounts*

3.9.6. In our opinion, revenue underlying the accounts for the year ended 31 December 2018 is legal and regular in all material respects.

Payments*Opinion on the legality and regularity of payments underlying the accounts*

3.9.7. In our opinion, payments underlying the accounts for the year ended 31 December 2018 are legal and regular in all material respects.

Emphasis of matter

3.9.8. Without calling into question the opinions expressed above, we wish to draw attention to the following. In November 2016, the ITER Council ⁽⁶⁸⁾ approved a new ITER project baseline. The new ITER baseline estimates the achievement of First Plasma ⁽⁶⁹⁾ and the start of the operational phase in 2025 with the completion of the construction phase in 2035. The previous 2010 baseline estimated the achievement of the construction phase in 2020 ⁽⁷⁰⁾. The new baseline is considered to be the earliest possible technically achievable date ⁽⁷¹⁾.

3.9.9. The F4E JU recalculated its contribution to the project construction phase to 12 billion euros (in 2008 values), up from the 6,6 billion euros (in 2008 values) approved by the EU Council in 2010 ⁽⁷²⁾. This estimate does not include contingencies, even though the Commission suggested that a contingency of up to 24 months in terms of schedule and 10-20 % in terms of budget would be appropriate ⁽⁷³⁾.

3.9.10. On 29 March 2017, the United Kingdom notified the European Council of its decision to withdraw from the EU and Euratom. This may have a significant effect on the post-2020 activities of the F4E JU and the ITER project.

3.9.11. In April 2018 ⁽⁷⁴⁾, the Council of the EU mandated the Commission to approve the new ITER baseline on behalf of Euratom and reaffirmed the commitment to make resources available within the limits of the next Multiannual Financial Framework (MFF) without prejudice to any subsequent MFF negotiations, which will determine the details of the future funding ⁽⁷⁵⁾.

3.9.12. While positive steps have been taken to improve the management and control of the JU's contribution to the project construction phase, there remains a risk of further cost increases and delays in project implementation compared to the current approved baseline

3.9.13. The observations which follow do not call the Court's opinion into question.

Observations on budgetary and financial management

3.9.14. The final 2018 budget available for implementation included commitment appropriations of 706,2 million euros and payment appropriations of 847,4 million euros. The utilisation rates for commitment and payment appropriations were 98,4 % and 96,1 % respectively.

⁽⁶⁸⁾ 19th ITER Council on 16-17 November 2016. The ITER Council is the governing body of the ITER IO.

⁽⁶⁹⁾ First Plasma represents the stage in the construction of the fusion machine that will allow testing the essential components of the machine; it is also the point where the operation phase starts.

⁽⁷⁰⁾ COM(2010) 226 final of 4.5.2010.

⁽⁷¹⁾ As stated in the fifth annual assessment by an independent Review Group (31 October 2016) and in the report by the F4E JU's Head of Project Management to the Governing Board in December 2016.

⁽⁷²⁾ Council conclusions on ITER status of 7 July 2010 (Ref. 11902/10).

⁽⁷³⁾ COM(2017) 319 final of 14.6.2017 (accompanied by Commission Staff Working Document SWD(2017) 232 final of 14.6.2017), chapter V 'ITER: the way forward'.

⁽⁷⁴⁾ The amount of 6,6 billion euros (in 2008 values) adopted by the Council of the EU in 2010 currently serves as a ceiling for the JU's spending up to 2020.

⁽⁷⁵⁾ Council of the European Union 7881/18 adopted on 12 April 2018.

3.9.15. Due to serious shortcomings in the planning process of the 2017 budget, the payment appropriations finally needed in 2017 and in 2018 significantly exceeded the payment appropriations of the initial budgets. In 2018, the additional payment appropriations needed by the JU amounted to 160,7 million euros (i.e. 25 % above the initial 2018 budget ⁽⁷⁶⁾).

3.9.16. In 2018, the F4E JU made a regularisation payment transferring 1 million euros of already authorised and verified payments relating to staff duty travel costs from the administrative budget (Chapter 1.3 — Mission and Duty Travel) to the operational budget (Chapter 3.4 — Other Operational Expenditures). However, the regularisation payment did not respect the budget principle of specification.

Observations on sound financial management and performance

3.9.17. The Director's decision to change the place of employment of a newly recruited senior manager from Barcelona to Cadarache was not supported by adequate documentation ⁽⁷⁷⁾ to justify the additional salary costs due to the different correction coefficient ⁽⁷⁸⁾.

3.9.18. At the end of 2018, F4E was still using the ITER credit system as a basis to monitor the progress of its project, although the external experts appointed by the F4E Governing Board recommended, in several successive annual assessments, the introduction of an Earned Value Management (EVM) system which reflects technical or physical progress coupled with the cost incurred and expenditure related to such progress. In 2018, the experts underlined again that the key benefit of having an EVM system is that it provides a clear measure of achievements ⁽⁷⁹⁾ and they requested again the implementation of a performance measurement system linked to financial and technical progress instead of ITER credits. As a result, the Governing Board appointed an internal Ad-Hoc Group with the task of reviewing the F4E's performance reporting.

Follow-up of previous years' observations

3.9.19. An overview of the corrective action taken in response to the Court's observations from previous years is provided in the *Annex*.

⁽⁷⁶⁾ The 2018 initial budget of the F4E JU adopted by the Governing Board on 1 December 2017 amounted to 634,1 million euros.

⁽⁷⁷⁾ In December 2018, the Governing Board underlined the F4E JU's need for careful monitoring of administrative costs, in line with the request for cost-containment in the Council conclusions of 12 April 2018 (Council of the European Union 7881/18).

⁽⁷⁸⁾ The correction coefficient in Barcelona is 91,7 % while in Cadarache it is 116,7 %.

⁽⁷⁹⁾ Seventh annual assessment by an independent Review Group (30 November 2018)

ANNEX

Follow-up of previous years' observations

Year	Court's comments	Status of corrective action (Completed / Ongoing / Outstanding / N/A)
2015	In the notes to the financial statements, the table and the information included under heading 4.3.1.1. ITER Procurement Arrangement (ITER IO), reflect the procurement arrangements signed (column 3) and those credited so far (column 4). However, the table does not show the actual degree of advancement of the works in progress. In the 2015 annual accounts, F4E has supplemented this information with an estimate of the work in progress taking into account the total value of spending on contracts linked to PAs, and a chart showing the achievement of milestones for each procurement arrangement signed with ITER IO.	Completed
2015	The system to provide information on the value of the degree of the implementation of activities (Earned Value Management) is under discussion with ITER IO with a view to improving the distribution of credit milestones during the life of a procurement arrangement	Completed
2015	Negotiated procedures constituted 45 % of the 84 operational tendering procedures launched in 2015 (58 % in 2014). Although the JU reduced the percentage of negotiated procedures in 2015, efforts are needed to increase the competitiveness of its operational procurement procedures. For grants, the average number of proposals received was 1,4 per call. Review result: In 2017, negotiated procedures still constituted 47 % of the 47 operational tendering procedures launched in 2017 (2016: 45 %). In 2017, the JU took initiatives to reduce the percentage of negotiated procedures; however, efforts are needed to increase the competitiveness of its operational procurement procedures. For grants, the average number of proposals received was 1 per call.	N/A
2015	The Decision on the implementation of the Fusion for Energy Industrial Policy and the policy on intellectual property rights and dissemination of information were adopted by the JU's Governing Board on 27 June 2013. An impact assessment on the implementation of these policies is being carried out.	Completed
2016	In June 2015, the F4E JU's Governing Board adopted an anti-fraud strategy and corresponding action plan. Most of the actions were implemented in 2016. However, the JU has not set up a specific tool to facilitate the monitoring of its actions in relation to procurement procedures, in particular those related to risk assessment and the evaluation, negotiation and award phases of the procedures.	Completed
2017	The F4E JU did not consistently follow up on the Declarations of Interest from Senior Management.	Completed
2017	Significant shortcomings in the internal communication strategies did not ensure the dissemination of appropriate information on the estimated costs of the decommissioning phase within the organisation. Consequently, the JU disclosed no provision for such liability in the accounts of the previous years.	Completed

Reply of the Joint Undertaking

3.9.15. F4E would like to stress that while the weaknesses in budgetary planning appeared with the budget 2017 and the 2018 shortage of payment appropriations was its continuation, the situation has been corrected in the 2019 budget.

F4E is grateful to Euratom for the additional contribution to the 2018 budget allowing sound and fair cash management all along the year. F4E would also like to report that the lack of payment appropriations would not have had any impact neither risk to cope with the F4E obligations stemming from Article 11 of F4E financial regulation, as 137 million euros were paid to ITER organization as advance on the 2019 in-cash contribution.

The payment forecasting system has been totally redesigned and integrated in the new financial management tool, ECOSYS. This, together with the new organisational structure enhancing the interaction between the Project Teams and the Procurement Unit managing the contracts, ensures a correct budgetary planning is in place and has already been used to determine the revenue of the 2019 Budget.

3.9.16. F4E considers that the payment of regularisation implemented for a global amount and undifferentiated items was not the optimum tool for the assignment of expenditure to chapter 3.4, due to its perceived lack of transparency.

In a spirit of improved transparency and continuous improvement, in the course of 2019 the Commercial Department will:

- Improve first the mission management tool (MiMa) so that the cost of missions identified as being project-related can be booked directly to Title 3.
- Clarify the descriptions under Title 3.4 in the budgetary comments.
- Add to the final Annual Accounts 2018 a description of the expenditure charged against the Budget chapter B034-Other (operational) expenditure, including missions, in order to highlight this change of budgeting method.
- Write a policy on what should be considered as project-related and thus operational missions to fall under Title 3 and what are administrative missions to fall under Title 1.
- Review the F4E commitment and payment processes to reflect the administrative nature of some items under the operational Title 3.4.
- Set up a special report on use of Title 3.4.

3.9.17. F4E recognizes that the decision to change the place of employment of a key member of the management staff from Barcelona to Cadarache was not adequately documented, as it was in the power of Appointing Authority to decide the place of employment on a project need basis, as described and announced in the vacancy notice.

At that time, F4E was facing difficulties with the 200 million euros Poloidal Field (PF) coils project which was a serious risk to the ITER first plasma date with a potential cost risk.

Therefore, the Director decided to ask the chosen candidate to immediately start in Cadarache, to assure its full attention on the PF crisis, including personal presence on site to reassure both the staff of F4E and its industrial partners.

3.9.18. F4E worked extensively with the Ad-Hoc Group (AHG) set up by the Governing Board (GB). The AHG concluded with a proposal for a new Earned Value Management (EVM) System. This proposal was recommended by the Bureau, and was endorsed by the F4E GB in April 2019. This new, more meaningful EVM system:

- Tracks progress on the delivery of F4E's in-kind contributions.
- Provides schedule performance metrics.
- Uses a more granular breakdown of the credit to better track progress.
- Links and compares the expenditure incurred for the progress made.

F4E has implemented the EVM system based on the AHG proposal, the results of which are now being routinely submitted to the GB.

This Report was adopted by Chamber IV, headed by Mr Alex BRENNINKMEIJER, Member of the Court of Auditors, in Luxembourg at its meeting of 24 September 2019.

For the Court of Auditors

Klaus-Heiner LEHNE

President

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