



EUROPEAN  
COURT  
OF AUDITORS

Report on the annual accounts of the Electronic Components and Systems for  
European Leadership Joint Undertaking for  
the financial year 2017

Together with the Joint Undertaking's reply

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## **INTRODUCTION**

### ***Establishment of the ECSEL Joint Undertaking***

1. The Electronic Components and Systems for European Leadership (ECSEL) Joint Undertaking, located in Brussels, was set up in May 2014<sup>1</sup> for the period up to 31 December 2024. The ECSEL Joint Undertaking replaced and succeeded the ENIAC and ARTEMIS Joint Undertakings, which closed on 26 June 2014. The ECSEL Joint Undertaking started working autonomously on 27 June 2014.
2. The ECSEL Joint Undertaking is a public-private partnership in nano-electronics and embedded computing systems research. The founding members of the Joint Undertaking are the European Union (EU), represented by the Commission, the ECSEL Participating States<sup>2</sup>, 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.

### ***Governance***

3. The governance structure of the ECSEL Joint Undertaking includes the Governing Board, the Executive Director, the Public Authorities Board, and the Private Members Board.
4. The Governing Board is composed of representatives of the members of the Joint Undertaking. It has overall responsibility for the strategic orientation and operations of the ECSEL Joint Undertaking and supervises the implementation of its activities. The Executive Director is responsible for the day-to-day management of the Joint Undertaking.
5. The Public Authorities Board is composed of one representative of the Commission and one for each ECSEL Participating State. It decides on the allocation of public funding to

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<sup>1</sup> Council Regulation (EU) No 561/2014 of 6 May 2014 establishing the ECSEL Joint Undertaking (OJ L 169, 7.6.2014, p. 152).

<sup>2</sup> 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 and the United Kingdom.

selected proposals. The Private Members Board is composed of representatives of the private members of the ECSEL Joint Undertaking and draws up its draft strategic research and innovation agenda.

### **Objectives**

6. The main objective of the ECSEL Joint Undertaking is to contribute to the development of a strong and globally competitive electronics components and systems industry in the EU. It also aims to ensure the availability of electronic components and systems for key markets and for addressing societal challenges, and to maintain and grow semiconductor and smart system manufacturing capability in Europe. The Joint Undertaking seeks to align strategies between Member States to attract private investment and contribute to the effectiveness of public support by avoiding unnecessary duplication and fragmentation of effort, facilitating the participation of actors involved in relevant research and innovation.

### **Resources**

7. The maximum EU contribution to the activities of the ECSEL Joint Undertaking is 1 185 million euro, to be funded from Horizon 2020<sup>3</sup>. At least a similar amount of contribution should come from the ECSEL Participating States<sup>4</sup>. The contributions from the industry members should be at least 1 657,5 million euro<sup>5</sup>.

8. The administrative costs of the ECSEL Joint Undertaking are to be covered by cash contributions from the members as follows: a maximum of 15,3 million euro from the EU and 1 % of the sum of the total costs of all projects from the industry members (at least 19,7 million euro but not exceeding 48 million euro)<sup>6</sup>.

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<sup>3</sup> Article 3(1) of Regulation (EU) No 561/2014.

<sup>4</sup> Article 4(1) of Regulation (EU) No 561/2014.

<sup>5</sup> Article 4(2) of Regulation (EU) No 561/2014.

<sup>6</sup> Article 16(2) of the Statutes of the ECSEL Joint Undertaking (Annex I of Regulation (EU) No 561/2014). In line with Article 19 of the same Regulation, the following additional contributions to the administrative costs of the ECSEL Joint Undertaking were paid over the period 2014-2017 to complete the actions launched under Council Regulation (EC) No 72/2008

9. In 2017, the final budget of the ECSEL Joint Undertaking was 290,1 million euro (2016: 244 million euro). At 31 December 2017, the Joint Undertaking employed 29 staff (2016: 29)<sup>7</sup>.

### ***The Commission's evaluations***

10. The Commission completed the final evaluation of the Joint Undertaking's FP7 activities and the interim evaluation of its Horizon 2020 activities in June 2017, which was followed by respective action plans prepared by the Joint Undertaking to address the recommendations raised in the evaluations. On this occasion, we include a section related to the Joint Undertaking's Action Plans in response to the evaluations, which is intended only for information purposes and does not form part of our audit opinion or observations.

### **OPINION**

11. We have audited:

- (a) the accounts of the Joint Undertaking which comprise the financial statements<sup>8</sup> and the reports on the implementation of the budget<sup>9</sup> for the financial year ended 31 December 2017, 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).

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setting up the ENIAC Joint Undertaking (OJ L 30, 4.2.2008, p. 21) and Council Regulation (EC) No 74/2008 on the establishment of the ARTEMIS Joint Undertaking (OJ L 30, 4.2.2008, p. 52): (a) 2 050 000 euro by the EU; (b) 1 430 000 euro by the AENEAS Association; (c) 975 000 euro by the ARTEMISIA Association.

<sup>7</sup> Further information on the Joint Undertaking's activities is available on its website: [www.ecsel-ju.eu](http://www.ecsel-ju.eu).

<sup>8</sup> 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.

<sup>9</sup> The reports on implementation of the budget comprise the reports which aggregate all budgetary operations and the explanatory notes.

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

12. In our opinion, the accounts of the Joint Undertaking for the year ended 31 December 2017 present fairly, in all material respects, the financial position of the Joint Undertaking at 31 December 2017, 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.

***Opinion on the legality and regularity of revenue underlying the accounts***

13. In our opinion, revenue underlying the accounts for the year ended 31 December 2017 is legal and regular in all material respects.

***Basis for a qualified opinion on the legality and regularity of payments underlying the accounts***

14. The ECSEL Joint Undertaking has taken over the FP7 projects of the ARTEMIS and ENIAC Joint Undertakings. The payments made for these projects by the ECSEL Joint Undertaking in 2017, against certificates of acceptance of costs issued by the national funding authorities (NFAs) of the ECSEL Participating States, amounted to 76,4 million euro (2016: 118 million euro), which represents 32 % (2016: 54 %) of the total operational payments made by the Joint Undertaking in 2017.

15. Administrative agreements concluded by the ARTEMIS and ENIAC Joint Undertakings with the NFAs have continued to apply since those Joint Undertakings were merged to form the ECSEL Joint Undertaking. Under these agreements, the NFAs perform ex-post audits of FP7 project payments on behalf of the Joint Undertaking. The ARTEMIS and ENIAC Joint Undertakings' ex-post audit strategies relied heavily on the NFAs to audit project cost claims<sup>10</sup>.

16. The ECSEL Joint Undertaking 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 on the legality and regularity of transactions. However, the significant variation in the methodologies and procedures used by the

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<sup>10</sup> According to the ex-post audit strategies adopted by ARTEMIS and ENIAC, the Joint Undertaking 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 executed transactions.

NFAs does not allow the ECSEL Joint Undertaking to calculate a single reliable weighted error rate or a residual error rate.

17. Therefore, the Court is not in a position to conclude whether ex-post audits are functioning effectively and whether this key control provides sufficient assurance as to the legality and regularity of the underlying transactions for FP7 projects<sup>11</sup>.

18. This issue concerning the variation in the methodologies and procedures used by the NFAs is not relevant for the implementation of Horizon 2020 projects, as the Common Audit Service (CAS) of the Commission is responsible for the ex-post audit<sup>12</sup>. In 2017, the Joint Undertaking - together with the Common Audit Service (CAS) of DG RTD - launched the first ex-post audit of a random sample of Horizon 2020 interim cost claims of which the results, however, will only be reported in in the Joint Undertaking's annual activity report 2018.

***Qualified opinion on the legality and regularity of payments underlying the accounts***

19. In our opinion, except for the possible effects of the matters described in paragraphs 14 to 18, payments underlying the accounts for the year ended 31 December 2017 are legal and regular in all material respects.

***Responsibilities of management and those in charge of governance***

20. In accordance with Articles 310 to 325 of the TFEU and the Joint Undertaking's Financial Regulation, management is responsible for the preparation and presentation of the 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 control 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. The Joint Undertaking's management bears the ultimate responsibility for the legality and regularity of the transactions underlying the accounts.

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<sup>11</sup> See also Chapter X of the ECSEL Joint Undertaking 2017 Annual Activity Report.

<sup>12</sup> Article 13(2) of Council Regulation (EU) No 561/2014.



21. In preparing the accounts, management is responsible for assessing the Joint Undertaking's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting.

22. Those charged with governance are responsible for overseeing the entity's financial reporting process.

***Auditor's responsibilities for the audit of the accounts and underlying transactions***

23. Our objectives are to obtain reasonable assurance about whether the accounts of the Joint Undertaking are free from material misstatement and the transactions underlying them are legal and regular and, on the basis of our audit, to provide the European Parliament and the Council or other respective discharge authorities with a statement 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.

24. An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the accounts and the legality and the regularity of the transactions underlying them. The procedures selected depend on the auditor's judgment, including an assessment of 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. In making those risk assessments, internal control relevant to the preparation and fair presentation of the accounts and legality and regularity of underlying transactions is considered 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 internal control. An audit also includes evaluating the appropriateness of accounting policies used, the reasonableness of accounting estimates made by the management and the overall presentation of the accounts.

25. For revenue, we verify the subsidy received from the Commission and assess the Joint Undertaking's procedures for collecting fees and other income.

26. 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) at the point they are made.

27. In preparing this report and Opinion, we considered the audit work of the independent external auditor performed on the Joint Undertaking's accounts as stipulated in Article 208(4) of the EU Financial Regulation<sup>13</sup>.

28. The comments which follow do not call the ECA's opinions into question.

## **BUDGETARY AND FINANCIAL MANAGEMENT**

### ***Implementation of the 2017 budget***

29. The final 2017 budget included commitment appropriations of 183,9 million euro and payment appropriations of 290,1 million euro. The implementation rates for commitment and payment appropriations were 98 % and 83 % respectively.

### ***Multiannual budget implementation under FP7***

30. By their closure in June 2014, the ARTEMIS and ENIAC Joint Undertakings had made commitments of 623 million euro (ARTEMIS 181 million euro and ENIAC 442 million euro) for operational activities to be funded under FP7. The related payments recorded in the ECSEL Joint Undertaking's accounts amounted to 488 million euro (ARTEMIS 148 million euro and ENIAC 340 million euro) by the end of 2017.

### ***Multiannual budget implementation under Horizon 2020***

31. Out of the maximum of 1 185 million euro of Horizon 2020 funds allocated to the ECSEL Joint Undertaking over its life span, by the end of 2017, the EU contributed in cash a total amount of 377 million euro.

32. The 28 ECSEL Participating States are required to make financial contributions of at least 1 170 million euro to the operational activities of the ECSEL Joint Undertaking. At the end of 2017, the Participating States taking part in the 2014, 2015 and 2016 calls for proposals – 19, 21, and 24 States respectively – had made commitments amounting to 404 million euro and

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<sup>13</sup> Regulation (EU, Euratom) No 966/2012 of the European Parliament and of the Council (OJ L 298, 26.10.2012, p. 1).

payments of 150,5 million euro (13 % of the total required contributions). Notwithstanding the early stage of implementation of the Horizon 2020 projects, the apparently low level of Participating States' contributions is related to the fact that some Participating States only recognise and report costs at the end of the projects they support.

33. Out of the 1 657,5 million euro of contributions to be made by industry members to the activities of the Joint Undertaking, at the end of 2017, the Joint Undertaking estimated that the industry members had made in-kind contributions of 421 million euro.

34. Consequently, by the end of 2017, the total contributions from the industry members amounted 421 million euro, compared to the EU cash contribution of 377 million euro.

35. Out of the maximum operational and administrative budget for the ECSEL Joint Undertaking of 1 204,7 million euro<sup>14</sup>, by the end of 2017, the Joint Undertaking made commitments of 455 million euro and payments of 314 million euro, mostly pre-financing payments for the first wave of Horizon 2020 projects.

## **INTERNAL CONTROLS**

### ***Administrative procedures***

36. In 2017, we noticed significant shortcomings in the management of the procurement procedures for administrative services (e.g. selection of inappropriate procurement procedure, incomplete definition of services to be provided, late signature of amendments).

37. In addition, in 2017 the Joint Undertaking had not properly documented in its register of exceptions management overrides of controls nor 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.

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<sup>14</sup> This amount includes the maximum EU cash contribution to the Joint Undertaking's operational and administrative costs (1 185 million euro) and the industry members' cash contribution to the Joint Undertakings' administrative costs (19,7 million euro).

## **OTHER ISSUES**

### ***Leverage of contributions from industry members***

38. One of the main objectives of the Joint Undertaking is to leverage contributions from industry members in the area of its activities. The minimum leverage factor to be achieved according to the Joint Undertaking's founding regulation is 1,42<sup>15</sup>. If all public funding – stemming from both the Horizon 2020 and the Participating States - is taken together, the minimum leverage factor is 0,7<sup>16</sup>.

## **INFORMATION ON THE COMMISSION'S EVALUATIONS**

39. The Commission's Final Evaluation on ARTEMIS and ENIAC Joint Undertakings operating under FP7 covered the period between 2008 and 2013<sup>17</sup>, while the Interim Evaluation on ECSEL Joint Undertaking operating under H2020 covered the period from 2014 to 2016<sup>18</sup>. The evaluations were carried out with the assistance of independent experts as foreseen in the Joint Undertakings' Council Regulations<sup>19</sup>, and covered the performance of the Joint Undertakings in terms of relevance, efficiency, effectiveness, coherence, and EU added value, with additional consideration of openness and transparency and research quality. The

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<sup>15</sup> The minimum in-kind contributions of the industry members to the operational activities of the Joint Undertaking (1 657,5 million euro) divided by the maximum EU cash contribution to the Joint Undertaking (1 185 million euro).

<sup>16</sup> The minimum in-kind contributions of the industry members to the operational activities of the Joint Undertaking (1 657,5 million euro) divided by the total of EU and Participating States contributions to the Joint Undertaking (2 355 million euro).

<sup>17</sup> Final evaluation of the ARTEMIS and ENIAC Joint Undertakings operating under FP7.  
<https://ec.europa.eu/research/evaluations/pdf/artemis-eniac.pdf>

<sup>18</sup> Interim evaluation of the ECSEL Joint Undertaking (2014-2016) operating under Horizon 2020.  
<https://ec.europa.eu/research/evaluations/pdf/ecsel.pdf>

<sup>19</sup> Commission statutory evaluations in application of Articles 11 of Council Regulation (EU) No 74/2008 on ARTEMIS Joint Undertaking, Council Regulation (EU) No 72/2008 on ENIAC Joint Undertaking, and Council Regulation (EU) No 561/2014 establishing the ECSEL Joint Undertaking.

results of the evaluations were taken into account in the report that the Commission sent to the European Parliament and Council in October 2017<sup>20</sup>.

40. In response to the recommendations raised by the evaluators<sup>21</sup>, the Joint Undertaking prepared an Action Plan that was adopted by the ECSEL Joint Undertaking's Governing Board in April 2018. The action plan includes a wide set of actions to be implemented by the Joint Undertaking<sup>22</sup>, for which a certain number of activities have already been initiated<sup>23</sup>, the majority should be implemented in 2018 and 2019, while some of them were considered beyond the scope of the ECSEL Joint Undertaking<sup>24</sup>.

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<sup>20</sup> Commission Staff Working Document. Interim Evaluation of the Joint Undertakings operating under Horizon 2020 {SWD(2017) 339 final}.

<sup>21</sup> Recommendations raised by the evaluators include: the need to clearly define a long-term research development and innovation strategy in Electronic Components and Systems; to achieve a greater integration of the three ECSEL industry associations; to promote selection of projects emphasizing a vertical integration of the research activities; to increase SMEs participation and explore synergies with other Joint Undertakings; to reduce administration and concentrate on strategy; to streamline the review and reporting processes; to encourage Member States to commit to multi-annual funding of ECSEL activities; to develop appropriate metrics to measure project execution and impact and to facilitate traceability and re-use of project results.

<sup>22</sup> Specific actions raised in the action plan in response to the evaluator's recommendations include: to promote the use of pilot lines by new actors, in particular SMEs; to promote vertically integrated proposals with an emphasis on the value added in terms of innovation, impact and implementation; to encourage and support more ECSEL participating states to provide more multiannual funding commitments; to collaborate with other Joint Undertakings; to analyse efficient approaches to evaluate project impacts and to identify relevant key performance indicators.

<sup>23</sup> Activities already initiated include: the preparation of the new Electronic and Components System Strategic Research Agenda (SRA) and the Multiannual Strategic Research and Innovation Agenda (MASRIA) and the organisation of the next European Forum for Electronic Components and Systems with the active participation of the three ECSEL associations planned for November 2018.

<sup>24</sup> In particular, the ECSEL Joint Undertaking considered that the evaluator's recommendation to harmonise the Member States' participation rules and national reimbursement rates is beyond its remit.

This Report was adopted by Chamber IV, headed by Mr Neven MATES, Member of the Court of Auditors, in Luxembourg at its meeting of 2 October 2018.

*For the Court of Auditors*

Klaus-Heiner LEHNE

*President*

Follow-up of previous years' comments

Year	The ECA's comment	Status of corrective action (Completed / Ongoing / Outstanding)
	<b><i>Anti-Fraud Strategy</i></b>	
<b>2015</b>	<p>The Joint Undertaking Financial Rules state that the Joint Undertaking'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<sup>1</sup>.</p> <p>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<sup>2</sup>. The Research Anti-Fraud Strategy includes an action plan to be implemented by the research Joint Undertakings.</p> <p>Internal control procedures are already in place at the ECSEL Joint Undertaking 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>	<b>Ongoing</b>
	<b><i>Conflicts of interest</i></b>	
<b>2016</b>	The ECSEL Joint Undertaking has adopted rules on the prevention and management of conflicts of interest to mitigate the risks related to its governance structure. However, the	<b>Ongoing</b>

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	Joint Undertaking did not consistently comply with the requirements set out in the Governing Board decision GB.2015.41.	
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<sup>1</sup> Article 12 of the ECSEL Joint Undertaking Financial Rules.

<sup>2</sup> For example, the setting-up of a Common Support Centre, with a centralised audit service and harmonised business processes for EU research bodies.



### THE ECSEL JU'S REPLY

16. The ECSEL JU would like to underline that this issue is related to the legal framework of the Seventh Framework Programme (FP7) and thus not caused by the Joint Undertaking's performance.

Like for the exercise 2016, the Joint Undertaking conducted in January an extensive assessment of the national assurance systems for the year 2017, taking into account 2085 End of Project Certificates and 990 Audit Certificates received from the National Funding Authorities (NFAs) for projects funded under FP7. Furthermore, the ECSEL JU has invited from January 2018 the National Authorities to provide it with an annual declaration of assurance. The ECSEL JU has received 20 declarations (out of 25) from the NFAs, which represent 98,54% of funding, and concluded that the audit report and declaration provide a reasonable protection of the financial interests of its members.

34. In particular, for the calls 2014 to 2016, we would like to highlight that according with the awarding decisions and the H2020 rules, private beneficiaries committed 1 096 million euro of which 841 are commitments from members of the industry associations (IKOP) and 256 million euro are commitments from non-members of the industry associations.

36. In order to ensure effective management of the procurement procedures for all administrative services, a Budget, Procurement and Contracts Assistant has been nominated. The role of the Budget, Procurement and Contracts Assistant will ensure a coordinated approach and will centralise the procurement procedures and contracts management; including monitoring and follow up of contractual obligations and performance management. Furthermore, specific awareness sessions with relevant units were organised.

37. The ECSEL JU has taken actions to ensure properly documentation in its register of exception management overrides of controls and deviations from established processes and procedures, in particular the revision of Internal Control Standard 8 on processes and procedures with clear description of roles and responsibilities, including the communication of all exceptions to the Internal Control and Audit Manager. The Register of exceptions is kept centrally and maintained regularly. A training session took place with all ECSEL JU Staff in April 2018 on the procedures to follow. These actions support the management's ability to ensure the effectiveness of the internal control processes and to mitigate quickly procedural shortcomings.