

ECSEL JOINT UNDERTAKING



WORK PLAN 2020

V7_20200214

In accordance with the Statutes of the ECSEL JU annexed to the Council Regulation (EU) No 516/2014, and with Article 31 of the Financial Rules ECSEL GB 2016.67

The annual work plan will be made publicly available after its adoption by the Governing Board.

Decision/Date	Version	Change	Pages
GB 2019.132 26/11/2019	Initial Work plan V1	As accepted by GB	
GB 2019.137 16/01/2020	GB Amendment 1 V2	Changes in: National eligibility rules and budget updated for BE, LU, DK, CH, FI, SK,TR KPI tables completed EPS abbreviation codes, adopted by PAB Precisions for LV, IT, ES	
ED 2020.284 31/01/2020	Amendment through ED decision V3	Updates for Luxembourg	P 110-112
ED 2020.285 04/02/2020	Amendment through ED decision V4	Update for Austria (Annex 3)	P 32
ED 2020.286 07/02/2020	Amendment through ED decision V5	Update for Spain (Annex 3)	P 32, 126
ED 2020.287 12/02/2020	Amendment through ED decision V6	Update for Austria (Chapter 10)	P 73
ED 2020.288 14/02/2020	Amendment through ED decision V7	Correction table KPI	P 34-37

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1. INTRODUCTION

The scope of the work plan is mainly to inform potential beneficiaries in a transparent manner about the Joint Undertaking's intentions to support and fund actions in their specific field of research, in accordance with the legal provisions, in particular:

- COUNCIL REGULATION (EU) No 561/2014 of 6 May 2014 establishing the ECSEL Joint Undertaking (in the following, the ECSEL Regulation)
- REGULATION (EU, EURATOM) No 966/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 25 October 2012 on the financial rules applicable to the general budget of the Union and repealing Council Regulation (EC, Euratom) No 1605/2002, *Article 128*
- REGULATION (EU) No 1290/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2013 laying down the rules for participation and dissemination in "Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020)" and repealing Regulation (EC) No 1906/2006 *Article 2*
- Commission Delegated Regulation (EU) No 110/2014 of 30 September 2013 on the model financial regulation for public-private partnership bodies referred to in Article 209 of Regulation (EU, Euratom) No 966/2012 of the European Parliament and of the Council Article 31. (MAY CHANGE)
- Financial rules of the Joint Undertaking, Decision ECSEL GB 2016.67. (MAY CHANGE)
- The ECSEL Multiannual Strategic Plan (MASP) 2020, Decision ECSEL GB 2019.134.
- The Multiannual Strategic Research and Innovation Agenda (MASRIA) 2020 issued by the Private Members Board
- The Research and Innovation Annual Plan (RIAP) 2020 issued by the Private Members Board.

The “Electronics Components and Systems for European Leadership” Joint Undertaking (ECSEL JU) has the mission to contribute towards keeping Europe at the forefront of the technology development addressing capabilities of essential systemic and strategic importance for each citizen, company and nation in the contemporary world and even more in the future world. The information and communication technology and its applications run on this fabric: no industrial product or system is conceivable today without extensive usage of electronic components and systems (ECS), and the trend will become stronger in the future.

The ECSEL JU has the statutory task to “draw up and implement the work plans for executing the multiannual strategic plan”. Specifically, the Executive Director shall “prepare and submit for adoption to the Governing Board the draft work plan including the scope of the calls for proposals needed to implement the research and innovation activities plan as proposed by the Private Members Board and the corresponding expenditure estimates as proposed by the public authorities”. The work plan shall include the specific reimbursement rates by the Union and by each ECSEL Participating State; the financial commitments reserved for each call for proposals as communicated by the public authorities to the Executive Director; the research and innovation activities plan, the administrative activities and the corresponding expenditure estimates. The work plan shall be adopted by the Governing Board (GB) by the end of the year prior to its implementation and shall be made publicly available. Once the Work Plan is adopted:

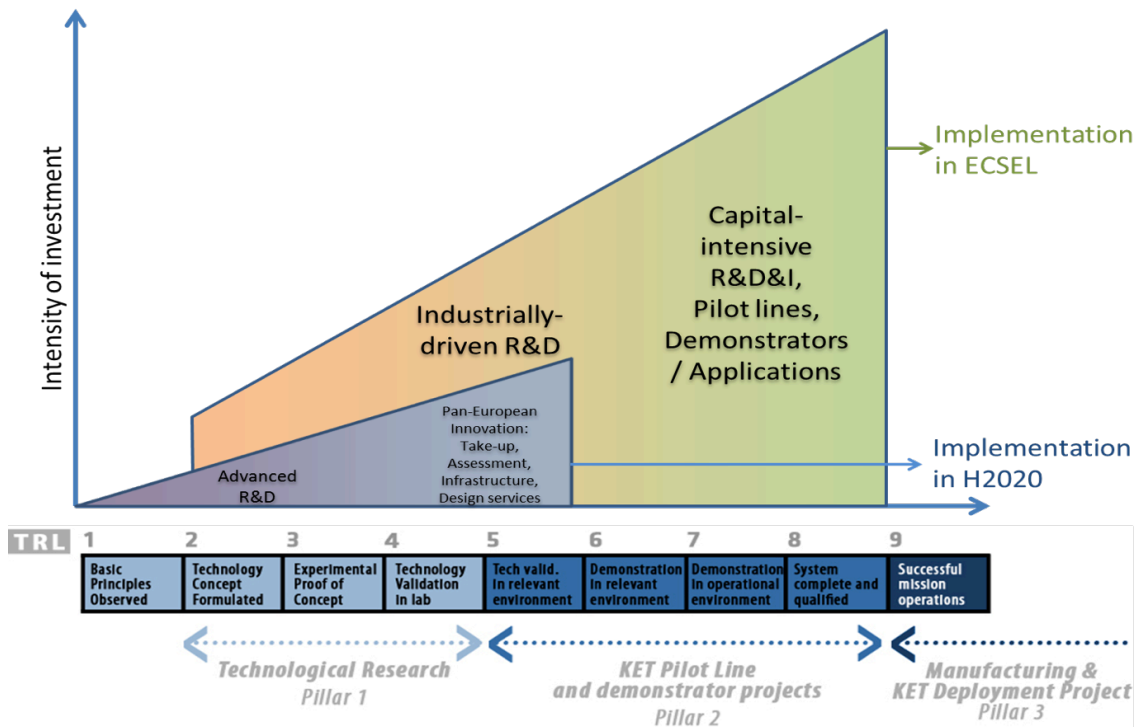
- The Public Authorities Board (PAB) shall approve the launch of calls for proposals, in accordance with the work plan,
- The Executive Director shall manage the calls for proposals as provided for in the work plan,
- The Executive Director shall describe in the annual activity report the progress made by the ECSEL Joint Undertaking in relation to the annual work plan for that year.

This work plan is written using a template provided by the Commission services in charge of Horizon 2020 so that it can be consolidated with the related activities throughout the European Union.

2. MULTI-ANNUAL PROGRAMMING

A. Multi-annual objectives

The Commission proposal for a European strategy in electronic components and systems has been laid out in 2013²



The strategy includes a Joint Technology Initiative implemented as ECSEL JU that “will mainly support capital-intensive actions such as pilot lines or large scale demonstrators at higher Technology Readiness Level up to level 8 as shown above. ... Within the new JTI the Commission will furthermore explore how to simplify and accelerate state aid approvals including through a Project of Common European Interest according to Article 107.3(b) of TFEU.”

The objectives of the ECSEL JU are listed in the Article 2 of its basic act, paraphrased here:

- 1) To contribute to the implementation of Horizon 2020, and to LEADERSHIP IN ENABLING AND INDUSTRIAL TECHNOLOGIES (LEIT).
- 2) To contribute to the development of a strong and competitive Electronic Components and Systems (ECS) industry in the Union.
- 3) To ensure the availability of ECS for key markets and for addressing societal challenges, aiming at keeping Europe at the forefront of the technology development, bridging the gap between research

² COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS. A EUROPEAN STRATEGY FOR MICRO- AND NANOELECTRONIC COMPONENTS AND SYSTEMS, Brussels, 23.5.2013, COM(2013) 298

and exploitation, strengthening innovation capabilities and creating economic and employment growth in the Union.

- 4) To align strategies with Member States to attract private investment and contribute to the effectiveness of public support by avoiding unnecessary duplication and fragmentation of efforts, and easing participation for actors involved in research and innovation.
- 5) To maintain and grow semiconductor and smart system manufacturing capability in Europe, including leadership in manufacturing equipment and materials processing.
- 6) To secure and strengthen a commanding position in design and systems engineering including embedded technologies.
- 7) To provide access for all stakeholders to a world-class infrastructure for the design and manufacture of electronic components and embedded/cyber-physical and smart systems.
- 8) To build a dynamic ecosystem involving Small and Medium-Sized Enterprises (SMEs), thereby strengthening existing clusters and nurturing the creation of new clusters in promising new areas.

B. Multi-annual programme

The Executive Director (ED) has the statutory task to “consolidate and submit for adoption to the Governing Board the draft Multi-Annual Strategic Plan (MASP) composed of the Multi-Annual Strategic Research and Innovation Agenda (MASRIA) as proposed by the Private Members Board and the multiannual financial perspectives from the public authorities”.

The Private Members Board (PMB) submitted their draft MASRIA to the Executive Director on 22/10/2019. The Multi-Annual Strategic Plan 2020 (MASP 2020) has been adopted by the Governing Board (decision ECSEL GB 2019.134). The present Work Plan 2020 is based on this document. A Research and Innovation Action Plan (RIAP) was then submitted by the PMB regarding the topics selection for the 2020 Calls.

The MASP includes five key application areas: Transport and mobility, Health and Well being, Energy, Digital Industry, Digital life and five essential capabilities: Systems and Components; Architecture, Design and Integration; Connectivity and Interoperability; Safety, Security and Reliability; Computing and Storage; Electronics Components & Systems Process Technology, Equipment, Materials and Manufacturing. The MASRIA provides detailed descriptions of the objectives, activities and roadmaps.

The MASP 2020 provides the generic frame for the content of the Calls. The actions to be performed in 2020 have been selected by the Executive Director considering the RIAP as provided by the Private Members. The details are presented in Chapter 3 of this document.

C. Work plan

The Work Plan is the implementation plan for the MASP (Art. 1 of Statutes of the ECSEL JU in Annex 1 of the Council regulation) and should contain the research and innovation activities plan, the administrative activities and the corresponding expenditure estimates (Art. 21 of Statutes of the ECSEL JU in Annex 1 of Council regulation). It should cover among others: the scope of the calls for proposals and the rules for participation and dissemination to the actions funded by ECSEL JU (Art. 17 of the Council Regulation), the reimbursement rates (Art. 18 of Statutes of the ECSEL JU in Annex 1 of the Council regulation), the financial commitment by each public authority reserved for each call (Art. 18 of Statutes of the ECSEL JU in Annex 1 of the Council regulation).

D. Human and financial resource outlook

The ECSEL establishment plan for 2020 is available in the Budget 2020: decision ECSEL GB 2019.133.

3. ANNUAL WORK PLAN 2020

A. Executive Summary

The Annual work plan 2020 foresees the following activities:

Operations:

- In 2020, ECSEL will launch 4 **calls for proposals**:
 - ECSEL Call 2020-1 for Innovation Actions (IA),
 - ECSEL Call 2020-2 for Research and Innovation Actions (RIA).
 - ECSEL Call 2020-3 for Research and Innovation Actions (RIA) or Innovation Actions (IA) aligned with a corresponding call for proposals by the IMI JU towards : a joint activity IMI – ECSEL.
 - ECSEL Call 2020-4 a CSA call
- The **estimated EU expenditure for these calls is 161.00 M€**. The EU contribution is based on the budget foreseen for JTIs in the general Union budget. The amount deriving from the 2020 estimated general Union budget is subject to its adoption by the budgetary authority and may be updated accordingly.
- Annex 3 summarizes both the national budgets and the estimated EU expenditure per action.
- Other operational activities include:
 - the Grant Agreement signature cycle with the start of the projects selected from the Call 2019,
 - the monitoring of the ECSEL projects selected in the calls 2014, 2015, 2016, 2017, 2018,
 - various supporting activities to communication, administration & finance.

Communication:

Noting that the Communications Policy and Strategy – the work of the Communications Working Group set up by the Governing Board in 2017 - is still being implemented. In addition, the last year of operation of the ECSEL JU as such requires heightened focus on publicising its achievements and successes. The communications activities of ECSEL JU in 2020 will continue in the same modes as the previous years, though with strong focus on achievements and successes, with the following key features:

1. Events.
 - a. In June 2020, an ECSEL JU symposium event will be held in Brussels (in a reduced format) in order to address specifically European stakeholders regarding the next phase of the JU. The allocated resources will be limited compared to previous years.
 - b. In addition to the ECSEL JU symposium, some other events will be organised to ensure strong presence of the ECSEL JU on the European scene and complementing the events of the other Members of the JU. A strategy that ensures high attention to the positive impact of ECSEL at all levels will be pursued, capitalising on the successful “Impact visits” that were trialled in 2019, as well as active participation in relevant events organised by various DGs in the EC.
 - c. The cooperation with ECSEL Participating States and their regions will be enhanced by information / brokerage events at national / regional level. This will be carried through to the Permanent Representations to the EU Council in Brussels.

- d. To advertise publicly the Calls for 2020, participation in the Brokerage/Consortium events of the Associations will be organised. This will be followed up with additional Call information sessions using a Webinar format.
- e. Further specific support will be provided for the Lighthouse Initiatives (Industry 4.E, Mobility.E and Health.E) through dedicated actions at events and (digital) publications.

2. Dissemination Support

- a. Provide support to the ECSEL projects in their dissemination activities (project posters and flyers, events, publications).
- b. The EF ECS community event, organised by the private members of the ECSEL JU, may be financially supported through an SLA.
- c. Publications of the JU, using resources available internally, to be augmented, including the next volume of the “Book of Projects” covering projects from Calls 2018 and 2019, plus the selected projects from the 2020 Call.
- d. Specific support to ECSEL JU supported technologies events or clustered/combined projects events, especially in the domain of the Lighthouse Initiatives. These can be in the form of presentations at publicly accessible parts of review meetings (a format to be encouraged), networking opportunities/dinners or lunches, or specific ECSEL JU pitches, awards, or prizes to improve and accelerate the synergies amongst the stakeholders.
- e. Implement Coordinators’ Info day. In addition, a Webinar format will be used, minimising the need to travel and to broaden the audience, easy access and openness.

3. Public Communications

- a. Website: further evolution to implement necessary improvements in the visual aspects and content of the site.
- b. Continued attention to press releases, to be issued timely at key points in the annual calendar.
- c. Social Media primarily via Twitter and LinkedIn.

Administration and Finance:

The budget is established in accordance with the provisions of the Council Regulation (EC) No 561/2014 of 06 May 2014 setting up the ECSEL Joint Undertaking.

The budget includes the description of human and financial resources deployed by the ECSEL JU for the implementation of its programmes and plans in 2020. Budget execution is a key performance indicator on progress towards ECSEL JU’s objectives.

Budget commitments to cover the legal obligations of ECSEL JU in 2020 will amount to :

- 209,045,411.00 € in 2020 : +2.71 % compared to 2019

Budget payments which are dedicated for the main part to payments of participants in the selected running projects and for the minor part to the running costs (including the payments of experts involved in reviews and evaluations) in 2020 will amount (with respect of the follow up of certificates received from the Participating States for the legacy, and in accordance with the rules under H2020 for the new programme) to :

- 223,108,500.00 € in 2020 : -3.88 % compared to 2019

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The running costs required for the administrative expenditure will be reduced (in commitments) from 5,325,000.00 (final adopted budget for 2019) € to 5,150,000.00 € and are reflected as follows in the total budget:

- with regard to **commitments**: 2.46 % of the total 2020 budget
- with regard to **payments**: 2.31 % of the total 2020 budget

Should there be a need not yet identified, the Governing Board will be invited to enter the necessary adjustments for appropriations.

B. Operations

Actions: launch calls and selection of projects

The EU contribution is based on the budget foreseen for JTI in the general Union budget. The total EU contribution for the 2020 ECSEL JU calls is 161,000,000.00 €.

In 2020, the ECSEL JU will launch 4 Calls for Proposals. All details on the actions can be found in the annexes.

The programme is in line with the LEIT: Aiming at new and breakthrough technologies that will contribute to boosting competitiveness, creating jobs and supporting growth.

The first two calls aim at the reinforcement of the industrial competitiveness, by supporting the growth of existing partnerships and/or fostering new partnerships on technologies that already are at a higher TRL level. RIA and IA essentially differ by the Technology Readiness Level (TRL) they focus on and therefore by the reimbursement rates. Projects selected should demonstrate high impact, European wide collaboration between industry with a mixed participation of large enterprises, SMEs and academia. Expected outputs are pilot lines, large scale demonstrators, open platforms, innovative product developments.

Both RIA and IA calls will be executed in parallel and have two phases: a Project Outline (PO) phase and a Full Project Proposal (FPP) phase. The launch of the calls is foreseen for February 2020, the PO phase will close in May 2020 and the deadline for the FPP phase is in September 2020. Selection and award criteria are provided in the Annexes, in particular per call the eligibility criteria, evaluation criteria, weightings, thresholds and EU reimbursement rates.

The third Call for Proposals will be specific for a joint activity between the ECSEL JU and the IMI JU. The call will be timed and tuned to facilitate a close complementary activity between an existing medical consortium “Trials@Home” and a new to be formed ECS consortium working on the next generation of digital technologies for clinical trials. The specific requirements for this activity will be described in Annex 7. This third call will be in one and timing wise aligned with the ongoing IMI project. Selection and award criteria are provided in the annex, in particular the eligibility criteria, evaluation criteria, weightings, thresholds and EU reimbursement rates. IMI experts will be called upon to assist in the evaluation of the received proposals.

The fourth Call for Proposals will be a support action for the ECSEL Digital Reference – the semantic web for semiconductor and supply chains containing semiconductors.

Managing the projects/Dissemination and information on projects

This covers the activities related to the project management: grant agreement signature, amendments, cost eligibility recognition and payments, checks, reporting, monitoring and audits, Information sessions, management of the EPS information exchange.

For the monitoring of the ECSEL projects selected in previous calls, 52 reviews are planned, that will require 104 expert appointments.

Project dissemination will be encouraged and facilitated, through direct help to projects in developing attractive project documentation (posters, project descriptions...) and active support at appropriate community and JU events.

Grant preparation of around 12 projects.

Other activities

- Support to the 3 lighthouse initiatives and their respective CSAs
- Running the programme: portfolio analysis, KPI tracking, audit support, etc.
- Information sessions: coordinator info sessions on cost recognitions, information session towards PAB regarding JU payments, information session for new coordinators, etc.
- Liaising with the different services of the CSC and implementing the Sygma-Compas tools
- Support to audits and audit processes
- Support the other departments: administration, finance and communication as well as the ED

4. Call management rules

The Calls are managed according to the PAB Decision ECSEL PAB 2018.31.

Part L of the General Annexes to the Horizon 2020 Work Programme 2018 – 2020 shall apply *mutatis mutandis* for the actions covered by this Work Plan. Any specificity for ECSEL JU is highlighted in annex 1.

Topics are described in the MASP 2020 (ECSEL GB 2019.134).

Applicants may submit proposals referring to cost items contributing towards the milestones and deliverables of an action that are independently funded by other European sources such as EFSI, ESIF, EIB, Eureka programme, etc. Rules are described in the Guide for Applicants.

5. Support to Operations

A. Communication and events

The following summarises the key elements of the Communications Strategy for the ECSEL JU and gives an indicative guide to the allocation of resources. The Working Group (WG) for Communications of the Governing Board has already indicated that Internal Communications are to be regarded as part of the general management of the Office, though recognises the essential need for communication on operational issues with the participants (mostly, coordinators).

The concrete external communication objectives are to:

1. **Strengthen the public and political awareness** of Electronic Components and Systems (ECS) technologies and their applications as Key Enablers of solutions for pressing societal issues, to achieve wide support of European society;
2. **Facilitate access to support mechanisms at European, National, and Regional level** which are complementary to those offered by the ECSEL JU, including new and additional financial resources;
3. **Expand the outreach of the ECSEL JU** to new public and private audiences and potential partners with the objective of building bridges to other JU's, PPP's, EUREKA clusters and programmes;
4. Attract **appropriate and dedicated political support** to maintain an adequate and effective European regulatory framework for ECS technologies;
5. Ensure that the **communication policies** of all ECSEL JU members are **aligned** wherever possible;
6. Channel the information from the operational group in charge of the projects about the **programme successes** (which is mandatory);
7. Establish a **calendar of actions/events** in alignment with the member organisations.

These objectives can be addressed by continuing to deliver easy-to-understand technical information about:

- ECS,
- ECSEL JU (including the rationale about the tripartite model),
- the projects and their added value induced by the public funding as well as their impact on competitiveness, growth, and quality of daily life.

The following tables describe the potential audiences for external communication activities, the associated topics of interest and suggested media for communication.

	<p>Potential audiences</p> <ul style="list-style-type: none"> - Active and potential participants in ECSEL projects and initiatives; - Industrial associations, European Commission and ECSEL Participating States; - Organisations with a specific interest in the activities and results of the ECSEL programme - RD&I actors not (yet) participating in JU activities, specifically SMEs - Other funding instruments or organisations (e.g. EUREKA, other JUs, H2020 including PPPs, etc.) - National/regional ECSEL mirror organisations (e.g. ECSEL Austria, etc.). 	<p>Possible communication topics</p> <ul style="list-style-type: none"> - Themes to be addressed in future calls; - Brokerage opportunities for active and potential project participants; - How to create or engage in a project consortium; dos and don'ts when drafting an ECSEL proposal; - Creating support for ECSEL at relevant levels through dedicated events e.g. on "Lighthouse initiative(s)" etc.; - Publication of results; - Alignment of messages and coordinated actions between ECSEL public and private stakeholders in order to underline the ECSEL profile and strengthen important communication moments. <p>Examples: joint press releases on call launches and funding decisions or sharing messages at national events.</p>	<p>Possible communication media</p> <ul style="list-style-type: none"> - Website; - Publications; - Workshops, seminars, forum sessions, brokerage events; - Events at national level; - Press releases; - Public appearances of ECSEL stakeholders.
<p>A. Peer groups and ECSEL(potential) stakeholders</p>			

<p>B. Decision makers relevant to ECSEL on European, national and regional level</p>	<p>Potential audiences</p> <ul style="list-style-type: none"> - European Parliament and national Parliaments; - Policy makers and dedicated bodies (European, national and regional); - Sister JUs and other programmes focused on application areas covered by ECSEL; - Civil society organisations. 	<p>Possible communication topics</p> <ul style="list-style-type: none"> - Demonstration of results of projects and, in particular, the societal relevance of the “communication toolbox” items, in terms of new solutions to problems or economic benefits etc.; The justification of the public funding of the project should be specifically highlighted; - Underlining the unique tripartite nature of the ECSEL concept and the (pan-European) synergies it creates on various policy fields; - The combination of European and national priorities and interests and ECSEL’s capability to mobilise and combine substantial European, national and regional funds; - Interaction with relevant organisations on societal issues and possible technology solutions e.g. in the areas of health, automotive, energy, IoT, environment etc.; - Opportunities for cooperation and for joint initiatives. - (...) 	<p>Possible communication media</p> <ul style="list-style-type: none"> - Website; - Factsheets, Position documents; - Active dissemination of project results by the consortium partners; - Participation of ECSEL stakeholders at relevant events organised by user communities, public authorities or civil society organisations; - (...) -
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	<p>Potential audiences</p> <ul style="list-style-type: none"> - Interested public; - Dedicated groups: students; technology adopters; special interest groups, NGO's; 	<p>Possible communication topics</p> <ul style="list-style-type: none"> - Key application areas: mobility, society, energy, health, security and the solutions that ECSEL-generated technology can offer; - (...) 	<p>Possible communication media</p> <ul style="list-style-type: none"> - Website; - Daily newspapers; technical Press, "Brussels-EC-press"; - Television, notably programmes that address science and technology for a broader audience; - Social media; - Dedicated information packages e.g. for schools.
<p>C. Interested public and specific audiences not related to ECSEL</p>			

* The Working Group (WG) for Communications of the Governing Board has already indicated that Internal Communications are to be regarded as part of the general management of the Office, but it is noted here for completeness. The reference descriptions in the above table will in future be updated to reflect the further outcome of the WG's recommendations. However, it is expected that the major audiences identified will remain unchanged.

In 2020 the following events and publications are proposed

ECSEL JU Events 2020:

A. MAJOR “ECSEL JU” branded events for communication and dissemination

1. ECSEL JU will actively participate in the Brokerage sessions organised by the PMB organisations, giving information and guidance about the Calls for Proposals for 2020. The event is planned to be in Brussels on 14+15/01/2020. This will be followed up with additional information sessions via Webinars.
2. ECSEL JU will present successes from its programme to Members of the European Parliament, though an event to be set up in the EP (Brussels or Strasbourg, to be confirmed). Other JUs have expressed possible interest in organising a collaborative event, as has successfully been done before. However, ECSEL JU will set up an event in any case.
3. A slimmed down version of the ECSEL JU Symposium, to be held in Brussels in June 2020. Targetted audience: Regional, National and European policy makers, in cooperation with the ECSEL JU members. The main theme will be on **opinion-building and foresight** for/with ECS policy-makers, National/Regional funding authorities and industry/RTO representatives, with a strong identification with the ECSEL JU programme.
4. It has become common practice for the Associations (in their role as PMB) to organise a specific event that incorporates the function of ECSEL JU Stakeholders’ Forum : EF ECS (the European Forum for Electronic Components and Systems) – an industry-wide event to be held in Berlin in November 2020, designed to:
 - **set strategic technical priorities of relevant industries** and technical innovation pathways.
 - **network across the whole ECS Community:** EF ECS brings together all the partners in the ECS value chain ecosystem, from end users to raw materials, forming the basis for the next generation of collaborative activities.
 - **brokerage event for ECS projects**The ECSEL JU may financially support this relevant ECS community event.
5. Some other events will be organised to ensure stronger presence of the ECSEL JU, complementing the events of the other Members of the JU, in particular with active participation in relevant events organised by various DGs in the EC.

B. ECSEL JU events on specific topics

1. ECSEL JU Programme Dissemination Support events. As the ECSEL JU clearly has an obligation to facilitate the dissemination of the programme results (and by analogy the projects it funds) and has also called into life the Lighthouse Initiatives which further support this strategy, support, and facilitation of appropriate dissemination activities, such as workshops, seminars, or similar events, is to be foreseen. To that end, ECSEL JU will assist all running LIs in organising their (ad-hoc) events.
2. Coordinator’s Day. This is to provide updates, training, and general information of specific use to project coordinators. To be organised in close collaboration with the Operations unit and making use of Webinars as a low-threshold tool for reaching an expanding audience.
3. The ECSEL JU office will facilitate and support, together with the industrial and public-sector stakeholders, a number of politically-focussed events related to preparing the next phase of the JU (see also C. below); timing, location, scope and audience to be confirmed.
4. Ad-hoc: PAB / NFA events to clarify administrative arrangements through tutorials, workshops, etc... for NFA administrations.

C. Specific events for communication with Institutions (Commission, Parliament, Council)

Noting that the decision process for future initiatives (JUs, ...) that are particularly relevant for the community of stakeholders in ECSEL JU will be a high-profile activity that will be closely monitored, with appropriate follow-up, by the ECSEL JU stakeholders and supported where necessary by the ECSEL JU Communications team.

1. Breakfast Sessions with MEPs / Cabinets of important Working Groups.
2. Presence and active participation in working-group meetings of the various committees: (non-exhaustive) EESC, Round Tables of EC Commissioners, political working-groups, EC Agencies Forum, ...
3. Participation in exhibition / promotion events at the relevant EU institutions (for example in conjunction with other JUs sharing common interest).
4. As a continuation of the 2019 (Eindhoven, Graz/Villach) activities, further ECSEL JU impact visits with important Public-sector representatives. To maximise the visibility of project results, selected site visits will be organised, engaging the relevant representatives of EU Institutions.

D. Support to Community-building and road-mapping facilitation

1. Support, through Service Level Agreements and/or “Sponsoring”, of events organised by Members Industrial Associations, where these are directly relevant for the ECSEL JU or where they contribute to Dissemination and Exploitation of ECSEL JU project results or Lighthouse Initiative actions.
2. Support by direct participation in relevant events organised by the European Commission.
3. Support by direct participation to events set up by National and/or Regional authorities to promote ECSEL participation in their area. (ECSEL-JU frequently and pro-actively request such meetings ad-hoc, with specific National/Regional or other relevant authorities).

PUBLICATIONS

Annual Activity Report (AAR)

As in preceding years, ECSEL JU will publish its statutory AAR as an attractive book, that serves not only to catalogue the activities but also as an aid to publicising the positive impact of ECSEL JU to a wide audience.

Flyers/Brochures:

ECSEL JU will publish informative brochures / flyers on relevant topics for general promotion of the programme. Specific instruments of this type that are relevant for participants in the programme will be developed. These instruments shall be foreseen for primarily digital distribution but shall also be printable as needed. Other promotional materials (“Merchandising”) will be prepared, as supporting tools for the Events.

ECSEL JU will also help the projects in achieving the levels of active dissemination required by the Dissemination and Exploitation Strategy of H2020 by providing for preparation of basic materials such as an exhibition poster and project summary information, professionally edited and produced to assure clear and concise communication to a broad public.

Website and Social Media:

ECSEL JU's reworked public website has greatly facilitated the timely publication of news and other public announcements. In 2020 – after 2 years on-line and essentially unchanged – the web-site is due for review of some of its content and functionalities, in response to user feedback and the evolution of the programme's needs. The hosting transfer to internal DG-DIGIT services (once completed) will offer such opportunity. The design reflects the subject matter and goals of the ECSEL JU programme, with attractive features for facilitating information dissemination and for integrating Social Media exposure: these features need to be kept up to date, and traffic monitoring for measuring the site's KPIs needs to be added, in order that the web-site continues to fulfil its important role. ECSEL JU will maintain and expand the web-site and highlight the use of the Twitter account (the LinkedIn page will be kept open, though it is not gaining traction in the community and will continue to be evaluated along with other options).

Press releases

In addition to press releases independently published by members, ECSEL JU can foresee approximately 4 press releases, distributed by the JU using its own means, covering, but not limited to, the following key events:

- ECSEL JU Call 2020 launch.
- Event relevant for the constituents and JU Members.
- Key events relevant for the Institutions.
- Outcome of the ECSEL JU Calls 2020 (funding decisions).

Service-Level Agreements (SLAs)

Effective Dissemination and Communication requires specialist resources, many of which are already available within Members of the ECSEL JU. Therefore, execution of parts of the ECSEL JU Communications and Events and related actions may be implemented by means of Service Level Agreements (SLA) with relevant member organisations, though bearing in mind that clear, individual branding of ECSEL JU must remain a priority.

B. Procurement and contracts

Procurement and contracts are managed in accordance with the provisions of the Financial Rules adopted by the Governing Board of ECSEL and updated in 2016 (Decision GB 2016.67).

In order to reach its objectives and adequately support its operations and infrastructures, ECSEL JU will allocate funds to procure the necessary services and supplies. In order to make tender and contract management as effective and cost-efficient as possible, ECSEL JU concludes Service Level Agreements (SLAs) with relevant Commission Services as well as its private members and makes use of inter-institutional framework contracts (FWC). In 2020, ECSEL JU foresees to run several procurement procedures mainly for low-value contracts³, as well as certain open procedures.

³ According with Article 33 of the ECSEL JU Financial Rules, for contracts with a value between EUR 60,000.00 and the thresholds laid down in Article 118 of Regulation (EU, Euratom) No 966/2012 (Article 175 of the new Financial Regulation 2018) the procedure set out for contracts with a low value not exceeding EUR 60,000.00 may be used.

Supply/service	Max. indicative expenditure (EUR)	Type of procedure	Indicative schedule
Trainings	50,000.00	Low value contracts or specific contracts/order forms implementing FWC or negotiated procedure for low value contracts	Q1, Q2, Q3 and Q4 2020
IT services and equipment	310,000.00	Low value contracts or specific contracts/order forms implementing FWC or negotiated procedure for low value contracts	Q1, Q2, Q3 and Q4 2020
Office furniture	3,000.00	Low value contracts or specific contracts/order forms implementing FWC or negotiated procedure for low value contracts	Q1, Q2, Q3 and Q4 2020
Catering services	40,000.00	Low value contracts or specific contracts/order forms implementing FWC or negotiated procedure for low value contracts	Q1, Q2, Q3 and Q4 2020
Communication and event organisation	114,000.00	Open procedure or low value contracts or specific contracts/order forms implementing FWC or negotiated procedure for low value contracts	Q1, Q2, Q3 and Q4 2020
Legal and audit services	66,000.00	Low value contracts or specific contracts/order forms implementing FWC or negotiated procedure for low value contracts	Q1, Q2, Q3 and Q4 2020

This list shall be considered indicative, but non-exhaustive, as other procurement procedures may be launched within the budgetary limits approved by the Governing Board. The Executive Director shall report to the Governing Board about the procedures launched as part of the AAR 2020.

C. IT and logistics

At present, six Joint Undertakings are sharing the housing location in the building “White Atrium”, Brussels Belgium: Clean Sky, FCH, IMI, BBI, S2R, and ECSEL.

The arrangements for the facilities are subject to a common contract for both the office space and the IT management of equipment, maintenance and help desk.

The 6 Joint Undertakings have jointly developed a common IT work programme and a common IT Security Policy. They also developed joint Business Continuity and Disaster Recovery Plans (BCP+DRP). The common IT programme includes a roadmap and a timeline, in order to be able to cope with business needs and required updates of networks and equipment.

In accordance with the principles of economy, efficiency and effectiveness, ECSEL as well as the other JUs are also using and paying for tools and applications developed by the Commission, namely for finance (ABAC and SAP), for evaluation and grant management under H2020 (SYGMA and COMPASS) and administration (Sysper, ARES, web hosting, ...).

D. JU Executive Team – HR matters

The number of staff employed by ECSEL JU in 2020 will be kept at 31 statutory staff.

These limited human resources are to be considered as a challenge for ECSEL JU, which manages two programmes at the same time (FP7 and H2020) and running with different rules. In this context trainees and interim solutions have proven necessary and are expected to remain needed in 2020.

Details on the staff establishment plan can be found in ECSEL budget 2020 (decision ECSEL GB 2019.133).

E. Administrative Budget and Finance

The administrative budget of ECSEL JU will be reduced to 5,150,000.00 € for 2020 (-3.29 % with regard to 2019 commitment appropriations for administrative budget).

Funding sources for the budget of ECSEL are at present limited to:

- The EU budget for the operational costs and a part of the running costs,
- The Private Members for the remaining part of the running costs.

The part of the running costs on the total budget is kept at a very low level (less than 2.50 % with regard to both commitments and payments), which is to be considered as an indicator for efficiency.

The part of **administrative costs** in the total budget will be as follows:

- with regard to Commitment Appropriations: 2.46 %
- with regard to Payment Appropriations: 2.31 %

Accounting tasks have been transferred to European Commission's DG BUDG, which has been formally appointed ECSEL JU's accountant as of 1 July 2018. Interface with ECSEL JU is ensured through an "accounting correspondent" function within the JU.

F. Data protection and conflicts of interest

- Data protection

European Regulation (EU) N°2018/1725 of the European Parliament and of the Council of 23 October 2018 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies on the free movement of such data ("EUI-GDPR") has been implemented by ECSEL JU with the support of an external contractor.

This has resulted in a complete review of the protection of personal data by the Joint Undertaking's staff and an update of the general privacy policy. Specific privacy policies have been drafted to cover the specific following fields (available on the website):

- Applicants privacy policy in the context of selection and recruitment
- Access to documents
- Events
- External experts
- Grant management
- Procurement procedures.

The JU staff has received tailored training regarding the main characteristics of the GDPR, on how to ensure compliance, avoid data breaches and refer to the data protection officer for any issue involving personal data.

- Conflicts of interest

The Governing Board has adopted comprehensive rules on the prevention and management of conflicts of interest in June 2015 (ECSEL GB 2015.41). It addresses all actors involved in the Joint Undertaking activities, including staff, PAB and GB members, experts involved in projects reviews and evaluations, participants in procurement and recruitment committees

6. Governance

Governance of the Joint Undertaking includes the following bodies:

- The **Governing Board** has overall responsibility for the strategic orientation and the operations of the ECSEL Joint Undertaking and supervises the implementation of its activities. The Chair is Mrs. Sabine Herlitschka.
- The **Executive Director** is the chief executive responsible for the day-to-day management of the ECSEL Joint Undertaking in accordance with the decisions of the Governing Board. Mr. Bert De Colvenaer is the Executive Director of ECSEL JU since January 2016.
- The **Public Authorities Board** is competent for matters related to calls for proposals and allocation of public funding. Its Chair is Mr. Ben Ruck until 25 November 2019; as from 26 November, Ms. Doris Vierbauch is elected as PAB Chair.
- The **Private Members Board** is responsible for drawing up the draft multiannual strategic research and innovation agenda and the draft research and innovation activities plan. It consists of the three industry associations, AENEAS, ARTEMISIA and EPoSS. Its Chair is Mr. Jean-Luc di Paola-Galloni.

7. Internal Control framework

A. Financial procedures

1. Legacy projects (ARTEMIS and ENIAC)

The financial procedures of ENIAC and ARTEMIS projects have been harmonised. Despite the intrinsic similarities, some adjustments in the internal procedures (check-lists, work-flows, etc.) were implemented taking into account best practices of both programmes. The bulk of the process remains the same with payments based on certificates provided by Participating States in both cases.

2. ECSEL projects

The financial procedure for projects under H2020 depends on the H2020 IT tools developed by the European Commission. These IT tools encompass the full cycle of the process, including work-flows, check-lists, etc.

B. Ex-ante and ex-post controls

The internal control processes and methods have been subject, from the first days of existence of ECSEL JU, to a decision of the Governing Board (ECSEL GB 2014.15 of 03 July 2014) adopting the internal control standards for efficient management.

With regard to financial matters, ex-ante and ex-post controls are organised in accordance with the Financial Rules of the ECSEL JU (Decision ECSEL GB 2016.67, in particular its articles 18 and 19).

1. Legacy projects (ARTEMIS and ENIAC)

The ECSEL JU continues to operate under the stipulations previously defined under FP7 for the former organisations ARTEMIS and ENIAC. The procedures have been updated to ensure a high level of quality, in close cooperation with the national funding authorities issuing certificates for payments.

2. ECSEL projects

The current developments for the electronic management of calls and selected projects shall be complemented in cooperation with the Common Support Service of the Commission, in charge of the applications, and in due consideration of the specificities of the tripartite model of the ECSEL JU.

C. Audits

Audits are organised both on an internal and external basis:

C1 Internal audits are operated by the internal auditor of the JU (the competent service of the Commission) and by the staff member appointed by the Governing Board for performing the internal audit capability, in accordance with the provisions of Chapter 5 of the Financial rules of the ECSEL JU.⁴

⁴ Decision ECSEL GB 2016.67

C2 External audits are operated by the European Court of Auditors, reporting to the European Parliament and the Council, responsible for the discharge procedure.

C3 Ex-post audits of beneficiaries are also operated by or on behalf of the ECSEL JU, with methods which are adapted to the specificities of the programmes:

1. Legacy projects (ARTEMIS and ENIAC)

In accordance with the financial rules applying to the projects previously managed by the ARTEMIS and ENIAC JUs, the National Authorities of the Participating States are entrusted with the ex-post audit of the beneficiaries. The role of the JU is, in accordance with the ex-post audit strategy defined under FP7, to assess the means and outputs of the audits operated by the National Funding Authorities. A key request in this respect is for the issuance by the latter of a declaration of assurance on a yearly basis.

2. ECSEL projects

Under the regime of H2020 ECSEL JU has defined the needs and methods for the ex-post audits, in close cooperation with the Common Support Centre of the European Commission, in view of a coordinated approach of audits of beneficiaries. A common audit plan for all EU services involved in the programme H2020 will be implemented by the CSC of the Commission, acting on behalf of the ECSEL JU. The first audits of the CSC on behalf of the ECSEL JU have been launched in 2017.

8. ANNEXES

Annex 1: General Annexes for the ECSEL Calls 2020-1 to 2020-4

The general annexes for H2020 apply, with some exceptions detailed below. The general annexes can be found under:

http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-ga_en.pdf

The following elements are specific for the ECSEL Calls 2020-1 to 2020-4.

- Regarding Annex “*B. Standard admissibility conditions for grant proposals, and related requirements*”, the page limits as mentioned under the different call descriptions in the WorkPlan 2020 are applicable as well as in the Guide for Applicants regarding the format.
- Regarding Annex “*D. Types of action specific provisions and funding rates*”, the call specific annexes contain the provisions and funding rates applicable to the ECSEL calls.
- Regarding Annex “*G. Technology readiness levels*”, the table below emphasizes the differences between the different levels as well as the difference between hardware and software related actions.
- Regarding Annex “*K Actions involving financial support for third parties*”, financial support to third parties is limited to grants (not prizes).

TRL	Definition	Hardware description	Software description	Exit criteria
1	Basic principles observed and reported.	Scientific knowledge generated underpinning hardware technology concepts/applications.	Scientific knowledge generated underpinning basic properties of software architecture and mathematical formulation.	Peer reviewed publication of research underlying the proposed concept/application.
2	Technology concept and/or application formulated.	Invention begins, practical application is identified but is speculative, no experimental proof or detailed analysis is available to support the conjecture.	Practical application is identified but is speculative, no experimental proof or detailed analysis is available to support the conjecture. Basic properties of algorithms, representations and concepts defined. Basic principles coded. Experiments performed with synthetic data.	Documented description of the application/concept that addresses feasibility and benefit.
3	Analytical and experimental critical function and/or	Analytical studies place the technology in an appropriate context and laboratory demonstrations,	Development of limited functionality to validate critical properties and predictions using non-integrated software	Documented analytical/experimental results validating

	characteristic proof of concept.	modelling and simulation validate analytical prediction.	components., modelling and simulation	predictions of key parameters.
4	Technology validation in laboratory environment.	A low fidelity system/component breadboard is built and operated to demonstrate basic functionality and critical test environments, and associated performance predictions are defined relative to the final operating environment.	Key, functionally critical, software components are integrated, and functionally validated, to establish interoperability and begin architecture development. Relevant Environments defined and performance in this environment predicted.	Documented test performance demonstrating agreement with analytical predictions. Documented definition of relevant environment.
5	Technology validated in relevant environment. (industrially relevant environment in the case of key enabling technologies)	A medium fidelity system is built and operated to demonstrate overall performance in a simulated operational environment with realistic support elements that demonstrates overall performance in critical areas. Performance predictions are made for subsequent development phases.	End-to-end software elements implemented and interfaced with existing systems/simulations conforming to target environment. End-to-end software system, tested in relevant environment, meeting predicted performance. Operational environment performance predicted. Prototype implementations developed.	Documented test performance demonstrating agreement with analytical predictions. Documented definition of scaling requirements.
6	Technology demonstrated in relevant environment (industrially relevant environment in the case of key enabling technologies)	A high fidelity system/component prototype that adequately addresses all critical scaling issues is built and operated in a relevant environment to demonstrate operations under critical environmental conditions.	Prototype implementations of the software demonstrated on full-scale realistic problems. Partially integrate with existing hardware/software systems. Limited documentation available. Engineering feasibility fully demonstrated.	Documented test performance demonstrating agreement with analytical predictions.

7	System prototype demonstration in an operational environment.	A high fidelity engineering unit that adequately addresses all critical scaling issues is built and operated in a relevant environment to demonstrate performance in the actual operational environment and platform.	Prototype software exists having all key functionality available for demonstration and test. Well integrated with operational hardware/software systems demonstrating operational feasibility. Most software bugs removed. Limited documentation available.	Documented test performance demonstrating agreement with analytical predictions.
8	Actual system completed and qualified through test and demonstration.	The final product in its final configuration is successfully demonstrated through test and analysis for its intended operational environment and platform	All software has been thoroughly debugged and fully integrated with all operational hardware and software systems. All user documentation, training documentation, and maintenance documentation completed. All functionality successfully demonstrated in simulated operational scenarios. Verification and Validation (V&V) completed.	Documented test performance verifying analytical predictions.

- Regarding Annex “*H. Evaluation rules*”, the call specific annexes contain the rules applicable to the ECSEL call evaluations. The “DECISION OF THE PUBLIC AUTHORITIES BOARD OF THE ECSEL JOINT UNDERTAKING ON THE EVALUATION AND SELECTION PROCEDURES RELATED TO CALLS FOR PROPOSALS” (ECSEL PAB 2018.31), including the rules on conflicts of interest is of application. This document is available on ECSEL JU website at: <https://www.ecsel.eu/documents>
- Regarding Annex “*I. Budget flexibility*” this does not apply to ECSEL JU. The budget is the responsibility of the ECSEL Governing Board.

Annex 2: ENTRUSTING FOR THE CALLS 2020

The two modes of entrusting the ECSEL Joint Undertaking from the ECSEL Participating States are:

- A. ECSEL Participating States entrusting the implementation and/or the payment of their national contribution to ECSEL JU (**Article 17.1** of the Statutes of Council Regulation 561/2014). There are two possibilities:
- Entrusting implementation only,
 - Entrusting implementing and payment.
- B. ECSEL Participating States not entrusting the implementation of their national contribution to ECSEL JU (**Article 17.2** of the Statutes of Council Regulation 561/2014)

ECSEL Participating States	EPS code	Delegation Mode	ECSEL Participating States	EPS code	Delegation Mode
Austria	AT	17.2	Malta	MT	-
Belgium-Brussels	BE-BXL	17.2	Netherlands-RVO	NL-RVO	17.2
Belgium-Flanders	BE-FL	17.2	Netherlands-TKI	NL-TKI	17.2
Bulgaria	BG	-	Norway	NO	17.2
Czech Republic	CZ	17.2	Poland	PL	17.1 a)
Denmark	DK	17.2	Portugal	PT	17.1 a)
Finland	FI	17.2	Romania	RO	-
France	FR	17.2	Slovak Republic	SI	17.2
Germany	DE	17.2	Spain	ES	17.2
Greece	EL	17.2	Sweden	SE	17.2
Hungary	HU	17.2	Switzerland	CH	17.2
Ireland	IE	17.2	Turkey	TR	17.2
Israel	IL	17.2	United Kingdom	UK	17.2
Italy	IT	17.2			
Latvia	LV	17.2			
Luxemburg	LU	17.2			

Annex 3: National Budgets and the EU estimated expenditure for the Calls 2020-1 to 2020-4.

EPS	Call 2020-1 IA	Call 2020-2 RIA	Call 2020-3 RIA IMI – ECSEL joint activity	Call 2020-1, Call 2020-2 or Call 2020-3	ESIF	Total (M€)
AT ⁴				11.0		11.0
BE BXL				1.0		1.0
BE FL				12.0		12.0
BG						
CH ¹				2.5MCHF		2.301
CZ	1.5	1.5	0			3.0
DE				32.0		32.0
DE Saxony	8.0	4.0	0			12.0
DE Thuringia				0.8		0.8
DK				2.0		2.0
EL						
ES MINIUN				1.3		1.3
ES MINECO				10.0		10.0
FI				7.0		7.0
FR				35.0		35.0
HU				1.0		1.0
IE				2.0		2.0
IL				7.0		7.0
IT MISE						To be defined
IT MUR ³				2.5		2.5
LV ²				0.42		0.420
LU				2.0		2.0
NL				19.636		19.636
NO				2.2		2.2
PL				1.5		1.5
PT						
RO				0	0	0
SE				4.5		4.5
SK				0.8		0.8
TR				5.0		5.0
UK	0	0	0			0
Total						177.957

¹ - 2.500.000 CHF/ Exchange rate of 02.01.2020 CHF 1=EUR 0.9204

² - ESIF complementary funding up to € 80 000 available

³ - Only for calls 2020-2 and 2020-3

⁴ - subject to final approval of financial authorities

Action			Estimated EU Expenditure ⁵ (M€)
Call 2020-1 IA	General according to MASP	2 Phase	93.0 M€
Call 2020-2 RIA	General according to MASP	2 Phase	61.0 M€
Call 2020-3 RIA IMI – ECSEL joint activity	Joint activity complementing the Trials @ Home IMI project	1 phase Sep – Dec	5.0 M€
Call 2020-4 CSA	Digital reference	1 Phase	2.0 M€
		Total	161.0 M€

⁵ Pending the corresponding financing decisions to be adopted by the European Commission for 2020 ~~and 2020~~.

Annex 4: Key Performance Indicators

KPI-guidelines included below.

Operational performance

KPI	Definition	Baseline	Objective for year 2020
OP-1	% New participating entities	33%	>40%
OP-2	Success rate %	17%	>25%
OP-3	Budget % of selected projects along value chain	not yet defined	not yet defined
OP-4	Time to grant % below maximum time	100%	100%
OP-5	Time to payments % Late	2%	<2%
OP-6	% Projects achieving insufficiently (Monitoring)	5%	<5%
OP-7	Lighthouse activity	5	>5
OP-8	Ethics: projects not complying	2%	<2%
OP-9	Redress requested	0	0
OP-10	Gender (%women in projects)	Under study	Under study
OP-11	Participants from non-EU state	5%	7%
OP-12	Error rate: % common representative errors	0%	0%
OP-13	Events/Communication	10	>10

KPI	Definition	Description
OP-1	% New participating entities	Percentage of entities (identified by using PIC number) to total that are participating in one of the submitted proposals at the FPP stage and that have not participated in any of the proposals at FPP stage in the 3 preceding years.
OP-2	Success rate %	Percentage of selected and funded proposals to all eligible submitted proposals at FPP stage
OP-3	Budget % of selected projects along value chain	To allow a proper measure for this we need a reliable portfolio analysis. The portfolio analysis is in progress.
OP-4	Time to grant % below maximum time	Percentage of grants that are signed in time (that is within the 8 months from the FPP deadline)
OP-5	Time to payments % Late	Percentage of payments (operational and administrative) that are past deadline
OP-6	% Projects achieving insufficiently (Monitoring)	Percentage of the project under monitoring that are assessed as insufficient at yearly review
OP-7	Lighthouse activity	Number of events attended or organised
OP-8	Ethics: projects not complying	Percentage of projects that at review show insufficient on the ethics part.
OP-9	Redress requested	Redress requested in any of the workflows
OP-10	Gender (%women in projects)	The SYGMA system does not allow to automatically extract the gender proportion per project.
OP-11	Participants from non-EU state (associated or third country)	Percentage of participants in selected projects from non-EU countries
OP-12	Error rate: % common representative errors	% common representative errors
OP-13	Events/Communication	Number of: presentations given by ECSEL staff at non ECSEL events, publications, organised events by ECSEL.

Programme performance KPI

KPI	Definition	Baseline	Objective for year 2020
PP-1	Number of projects	10	>12
PP-2	National Funding / EU Funding per year	0.92	0.95
PP-3	Private partners / Public partners	1.5	2.0
PP-4	Average Size of project RIA	27M€ H2020 Cost 30 Beneficiaries	27M€ H2020 Cost 30 Beneficiaries
PP-5	Average Size of project IA	80M€ H2020 Cost 40 Beneficiaries	80M€ H2020 Cost 40 Beneficiaries
PP-6	EU-countries without national funding	5	<5
	Countries participating in the call	20	>20
PP-7	Oversubscription	2.0	2.0
PP-8	Number of patents per 10MEuro of EU funding	3	>3
PP-9	Participation of SME to the programme	25%	>25%
PP-10	Publications	Under study	Under study

KPI	Definition	Description
PP-1	Number of projects	Number of selected projects
PP-2	National Funding / EU Funding per year	Ratio for the selected projects of the total national funding to the total EU funding
PP-3	Private partners / Public partners	Ratio for the selected projects of the total participation of private entities (Large enterprises and SMEs) to the public entities
PP-4	Average Size of project RIA	Average H2020 cost for selected project and Average number of beneficiaries for selected project

PP-5	Average Size of project IA	Average H2020 cost for selected project and Average number of beneficiaries for selected project
PP-6	EU-countries without national funding Countries participating in the call	Number of EU countries without national funding in the call but with beneficiaries in the selected calls All countries participating in the selected projects of the call
PP-7	Oversubscription	Average of EU and national oversubscription. Oversubscription is calculated as the requested funding for the eligible proposals submitted at the FPP divided by the total amount that is committed by the funding authority
PP-8	Number of patents per 10MEuro of EU funding	Number of patents for all finished ECSEL projects divided by the total EU funding for those projects (per 10M€)
PP-9	Participation of SME to the programme	Proportion of SMEs participating in the selected projects of the calls of that year.
PP-10	Publications	Number of publications in one year as published by the projects under review

Impact KPI

Will be defined according to the lines of the KIP defined for the Horizon Europe programme.

Annex 5: Call 2020-1, IA specific details

Scope and objectives

The call will be open to the following topics:

Topics and Major Challenges		Open/ Closed
Transport & Smart Mobility		
	Major Challenge 1: Developing clean, affordable and sustainable propulsion	Open
	Major Challenge 2: Ensuring secure connected, cooperative and automated mobility and transportation	Open
	Major Challenge 3: Managing interaction between humans and vehicles	Open
	Major Challenge 4: Implementing infrastructure and services for smart personal mobility and logistics	Open
Health and Wellbeing		
	Moving healthcare from hospitals into our homes and daily life requiring preventive and patient centric care	Open
	Restructuring healthcare delivery systems, from supply-driven to patient-oriented	Open
	Engaging individuals more actively in their own health and wellbeing	Open
	Ensuring affordable healthcare for the growing amount of chronic, lifestyle related diseases and an ageing population	Open
	Developing platforms for wearables/implants, data analytics, artificial intelligence for precision medicine and personalised healthcare and wellbeing	Open
Energy		
	Major Challenge 1: Ensuring sustainable power generation and energy conversion	Open
	Major Challenge 2: Achieving efficient community energy management	Open
	Major Challenge 3: Reducing energy consumption	Open
Digital Industry		
	Major Challenge 1: Developing digital twins, simulation models for the evaluation of industrial assets at all factory levels and over system or product life-cycles	Open
	Major Challenge 2: AI-enabled cognitive, resilient, adaptable manufacturing	Open
	Major challenge 3: Developing digital platforms, application development frameworks that integrate sensors/actuators and systems	Open
	Major Challenge 4: Human-centred manufacturing	Open
	Major Challenge 5: Sustainable manufacturing in a circular economy	Open

Digital Life		
	Major Challenge 1: Ensuring safe and secure spaces	Open
	Major Challenge 2: Ensuring healthy and comfortable spaces	Open
	Major Challenge 3: Ensuring anticipating spaces	Open
	Major Challenge 4: Ensuring sustainable spaces	Open
Systems and Components: Architecture, Design and Integration		
	Major Challenge 1: Managing critical, autonomous, cooperating, evolvable systems	Open
	Major Challenge 2: Managing Complexity	Open
	Major Challenge 3: Managing Diversity	Open
	Major Challenge 4: Managing Multiple Constraint	Open
	Major Challenge 5: Integrating features of various technologies and materials into miniaturised smart components	Open
	Major Challenge 6: Effectively integrating modules for highly demanding environments	Open
	Major Challenge 7: Increasing compactness and capabilities by functional and physical systems integration	Open
Connectivity and Interoperability		
	Major Challenge 1: Strengthening the EU position on differentiated technologies and enabling it to capture higher value by moving to system/module level	Open
	Major Challenge 2: Autonomous interoperability translation for communication protocol, data encoding, security and information semantics	Open
	Major Challenge 3: Architectures and reference implementations of interoperable, secure, scalable, smart and evolvable IoT and SoS connectivity	Open
Safety, Security and Reliability		
	Major Challenge 1: Safety, security and privacy by design	Open
	Major Challenge 2: Reliability and Functional Safety	Open
	Major Challenge 3: Secure, safe and trustable connectivity and infrastructure	Open
	Major Challenge 4: Privacy, data protection and human interaction	Open
Computing and Storage		
	Increasing performance at acceptable costs	Open
	Making computing systems more integrated with the real world	Open
	Making "intelligent" machines	Open
	Developing new disruptive technologies	Open
Process Technology, Equipment, Materials and Manufacturing for Electronic Components & Systems		

	Major Challenge 1: Develop advanced logic and memory technology for nanoscale integration and application-driven performance	Open
	Major Challenge 2: Develop Technology for Heterogeneous System-on-Chip (SoC) Integration	Open
	Major Challenge 3: Develop technology for Advanced Packaging and Heterogeneous System-in-Package (SiP) integration	Open
	Major Challenge 4: Extend world leadership in Semiconductor Equipment, Materials and Manufacturing solutions	Open
Long-term vision		
	New computing paradigms ('Beyond CMOS').	Open
	Process technology, equipment and materials	Open
	Systems and components: architecture, design and integration	Open
	Health & wellbeing	Open
	Energy	Open
	Digital Industry	Open
	Transport and smart mobility	Open
	Connectivity and interoperability	Open
	Data science and Artificial Intelligence	Open

- For the Call 2020, proposals supporting specific aspects of 'edge computing' are encouraged as described in the textbox that follows
- Aspects of ECS value chain integration are important for the ECSEL programme and the whole European ECS sector, across applications and across capabilities. Consortia are encouraged to submit proposals that take this aspect into account.
- Proposals that cut across disciplines, support platform building, interoperability, establishment of open standards are particularly encouraged; even outside the regular ECS sector.
- Description of important challenges as proposed by the LIASEs of the ECSEL Lighthouse Initiatives in the topics of Mobility, Digital industry and Health, and the European Commission in the topic Energy are provided in annex 9; these challenges are of special relevance and proposals for the Call 2020 supporting these topics are encouraged.

EDGE COMPUTING driving KEY DIGITAL TECHNOLOGIES

Recent evolution on computing architectures, artificial intelligence and cybersecurity are having an impact on the way data analytics and decisions are made in autonomous applications. Systems intelligence is moving towards the edge of the network within a distributed approach as compared to classical cloud-based solutions.

The overall trend of 'Edge computing' cuts across the three areas bringing benefits in terms of latency, safety/security and energy efficiency. Data capture, processing and decision making (and actuation in some cases) in a local, restricted environment would allow the fast adoption of AI by applications within a broad range of requirements (performance, energy, cost). Edge computing would drive the development of key technologies including low-power processor manufacturing, smart sensing systems, safety critical CPS and embedded software, connectivity, security and AI.

The ultimate goal is the development of hardware and software environments that will allow users to define architectures tailored to their specific needs. These architectures will support and make possible the introduction of artificial intelligence in a very large number of applications.

Proposals should encompass the design and manufacturing aspects and provides flexibility to accommodate to a broad scope of cases of edge computing and cover one or more of the aspects described in the non-exhaustive list below:

- Test and experimentation of innovative computing architectures suitable for embedded and autonomous operation. Of particular interest, computing approaches supporting Artificial Intelligence techniques.
- Automated and semi-automated tools, possibly based on Artificial Intelligence techniques, to simplify the development of systems and applications at the edge of the network, and guarantee their quality while reducing the skill level required to the developer.
- Techniques and tools to guarantee secure (including privacy aspects), safe and time-critical behaviour in complex and heterogeneous computing architectures for edge computing, while guaranteeing interoperability with the environment.
- Innovative integration of hardware and software components for efficient operation in embedded edge applications with very limited energy budget.

Note that National priorities may be applicable to specific topics (refer to Chapter 9 "COUNTRY SPECIFIC ELIGIBILITY RULES").

Objectives of each topic can be found in the MASP 2020 (decision ECSEL GB 2019.134).

Specific Conditions

Mode: 2 phases: Project Outline (PO) and Full Project Proposal (FPP)

Publication date: 5 February 2020

Deadline PO phase: at 17:00:00 Brussels time on 5 May 2020

Deadline FPP phase: at 17:00:00 Brussels time on 16 September 2020

Type of action: ECSEL Innovation Action

An ECSEL Innovation Action (IA) primarily consists of activities aiming at pilot lines, test beds, demonstrators, innovation pilots and zones of full-scale testing. These activities produce plans and arrangements or designs for new, altered or improved products, processes, methods and tools or services. For this purpose they may include prototyping, testing, demonstrating, piloting, large-scale product validation and market replication.

A 'technology or method introduction' aims at the development, testing, and implementation of new technologies, tools or methods, which are a critical element of innovative products, which will be created in subsequent projects.

A 'demonstration or pilot' aims to validate the technical and economic viability of a new or improved technology, product, process, service or solution in an operational (or nearly operational) environment, whether industrial or otherwise, involving, where appropriate, a larger scale prototype or demonstrator.

A 'market replication' aims to support the first application/deployment in the market of an innovation that has already been demonstrated but not yet applied/deployed in the market due to market failures/barriers to uptake. 'Market replication' does not cover multiple applications in the market of an innovation that has already been applied successfully once in the market. 'First' means new at least to Europe or new at least to the application sector in question. Often such projects involve a validation of technical and economic performance at system level in real life operating conditions provided by the market.

The activities have their centre of gravity at the TRL 5-8. An IA proposal in ECSEL JU is characterized by:

- Execution by an industrial consortium that may consist of large and SM enterprises but also including universities, institutes, public organizations;
- Using innovative technology;
- Developing and demonstrating innovative solutions in relation with the ECSEL Strategic Thrusts as outlined in the ECSEL MASP;
- Establishment of a new and realistic innovation environment connected with an industrial environment, such as:
 - a pilot line facility capable of manufacturing
 - a zone of full-scale testing;
 - a development of new processes or tools and their introduction in several domains;
 - the development of frameworks or platforms together with the usage of these frameworks or platforms in innovative products.
- Having a deployment plan leading to short to mid term economic value creation in Europe.
- In order to maximize effective implementation of the ECSEL top-level objectives, the list of IA proposals to be retained for public funding should constitute a balanced portfolio of projects applying innovative technologies (as defined in the MASP in the essential technology section) and applying them in different domains as defined in the MASP. The domains represent the demand side of technologies, and the development of new technologies represents the supply side of technologies.

Admissibility and Eligibility conditions:

Admissibility conditions: Refer to Annex 1

Eligibility conditions

All proposals must comply with the conditions set out in the **Rules for Participation contained in Regulation (EU) No 1290/2013 of 11 December 2013**. A proposal will only be considered eligible if:

- its content corresponds, wholly or in part, to the topic description for which it is submitted;
- it complies with the eligibility conditions set out below, depending on the type of action.

Type of action	Conditions for participation & eligibility for funding
ECSEL Innovation Action	At least three legal entities. Each of the three must be established in a different Member State or associated country. All three legal entities must be independent of each other. ⁶

Specific rules apply for eligibility for funding by ECSEL Participating State (refer to Annex 9). Other specific eligibility rules for this call applicable at the FPP phase (proposals not respecting those maxima will be rejected, ie not evaluated):

Duration limit

The maximum duration of the project is 3 years.

Size limit

The maximum size of the project is 90 participants.

Capping

The EU contribution per project is capped at 25M€ and the maximum contribution per partner in a project is limited to 50% of the total EU funding for the project.

Page Limit

Page Limits at the PO phase for RIA and IA ECSEL actions

- The page limit for the chapter on EXCELLENCE is 60 pages
- The page limit for the chapter on IMPACT is 60 pages
- The page limit for the chapter on IMPLEMENTATION is 60 pages

Page Limits at the FPP phase for RIA and IA ECSEL actions

- The page limit for the chapter on EXCELLENCE is 60 pages
- The page limit for the chapter on IMPACT is 100 pages
- The page limit for the chapter on IMPLEMENTATION is 100 pages.

The application of those page limits (font size etc) is further described in the Guide for Applicants. The selected proposals maybe required to submit further information regarding the IMPLEMENTATION after selection.

Pages in excess of those maxima will not be considered in the evaluation.

Evaluation criteria, scoring and threshold

⁶ Please see also the REGULATION (EU) No 1290/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2013 laying down the rules for participation and dissemination in "Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020)" and repealing Regulation (EC) No 1906/2006, OJ L 347/81, 20.12.2013.; particularly Articles 9 and 10 stipulating detailed conditions for participation and eligibility for funding.

Evaluation procedure

The decision ECSEL PAB 2018.31 contains further elements on the evaluation and selection of processes.

Award criteria

The proposals will be evaluated along the following three evaluation criteria:

1. **Excellence**: The following aspects will be taken into account, to the extent that the proposed work corresponds to the relevant work plan topic description in the ECSEL MASP:
 - a. Clear reference to the topics and main challenges to which this proposal contributes;
 - b. Clarity and pertinence of the objectives and the expected results of the proposed work; with quantified objectives and results and reference baseline.
 - c. Credibility (soundness) of the concept (*what*), including inter-disciplinary considerations, where relevant, and where relevant use of stakeholders knowledge and gender dimension in research and innovation content (if the proposal addresses the gender dimension);
 - d. Credibility (soundness) of the proposed methodology (*how*);
 - e. Extent to which the proposed work is ambitious, is beyond the state of the art and demonstrates innovation potential (e.g. ground-breaking objectives, novel concepts and approaches, new products, services or business and organisational models).
2. **Impact**: The extent to which the outputs of the project should contribute at the European and/or International level to:
 - a. The creation and exploitation of market potential and the gain of a competitive technology advantage (*Impact from participant perspective*);
 - b. Enhancing innovation capacity and integration of new knowledge (*Impact from participant perspective*);
 - c. Creating economic value in Europe (by future employment and industrial investment), including industrial end-user leverage (*Impact from EU perspective*);
 - d. Strengthening Europe and the competitiveness and growth of companies by developing innovations that meet the needs of European and global markets; and by delivering such innovations to the markets or introducing new technologies/processes/tools to the European industry (*Impact from EU perspective*);
 - e. The exploitation of project results per participant and where relevant at project level; management of IPR and where relevant management of the research data (for proposals that do not opt out of the pilot on open research data)
 - f. The dissemination of project results, the communication of the project; the contribution of standards, where appropriate.
3. **Quality and efficiency of the implementation**: The following aspects will be taken into account:
 - a. Quality and effectiveness of the work plan, including extent to which the resources assigned to work packages are in line with their objectives and deliverables
 - b. Significant coverage of the value chain, including industrial end-users, and/or different sectors where relevant;
 - c. Complementarity of the participants and the extent to which the consortium as a whole brings together the necessary expertise
 - d. Adequate participation of large enterprises, SMEs, universities and research institutes. Appropriateness of the allocation of tasks ensuring that all participants have a valid role and adequate resources in the project to fulfil that role
 - e. Appropriateness of the management structures and procedures, including risk and innovation management.

Scoring

PO Phase: The scores will be given using - half marks.

Criteria	Range	Weight (**)	Threshold (*)
Excellence	0-5		2.5
Impact	0-5		2.5
Quality and efficiency of the implementation	0-5		2.5
Total	0-15		11

(*) threshold applies to unweighted score

(**) at PO phase proposals are not ranked

FPP Phase: The scores will be given with a resolution of one decimal. Only proposals which successfully passed the PO phase are eligible to the FPP phase.

Criteria	Range	Weight (**)	Threshold (*)
Excellence	0-5	1.0	3
Impact	0-5	1.5	3
Quality and efficiency of the implementation	0-5	0.7	3
Total	0-15		11

(*) threshold applies to unweighted score

(**) the weight is only used to establish the ranking of the proposals

Selection criteria

Only in the FPP Phase

- *Financial capacity*: In line with the Financial Regulation and the Rules for Participation. At the full project proposal stage, coordinators will be invited to complete a self-assessment using an on-line tool.
- *Financial capacity*: Participants declared by their national authority in crisis according to the State-Aid rules as defined by EU regulation 651/2014 will not be eligible for EU funding
- *Operational capacity*: As a distinct operation, carried out during the evaluation of the award criterion 'Quality and efficiency of the implementation', experts will indicate whether the participants meet the selection criterion related to operational capacity, to carry out the proposed work, based on the competence and experience of the individual participant(s).

Priority order for proposals with the same score

PO Phase: No priority order is required at this stage

FPP Phase:

Unless the call conditions indicate otherwise, the following method will be applied. As part of the evaluation by independent experts, a panel review will recommend a ranked list for the proposals under evaluation, following the scoring systems indicated above. A ranked list will be drawn up for every indicative budget shown in the call conditions. If necessary, the panel will determine a priority order for proposals which have been awarded the same score within a ranked list. The following approach will be applied successively for every

group of *ex-aequo* proposals requiring prioritisation, starting with the highest scored group, and continuing in descending order:

- Proposals will be prioritised per the scores they have been awarded for the criterion impact. When these scores are equal, priority will be based on scores for the criterion excellence.
- Then proposals that address topics not otherwise covered by more highly-ranked proposals will be considered to have the highest priority.
- Further *ex-aequo* are discussed by the panel of experts and scored on the merit of the proposal to fulfil the objectives of ECSEL JU considering elements such as the enhancement of the quality of the project portfolio through synergies between projects, balance between the type of partners, SME participation, and gender balance. These factors will be documented in the report of the Panel.
- In the case of two projects with the similar score the PAB can decide to rank the project with the highest ratio: national funding to EU funding; before the other.

Indicative timetable for evaluation and grant agreement

Information on the outcome of the evaluation	Indicative date for the signing of grant agreements
Maximum 5 months from the final date for submission	Maximum 8 months from the final date for submission

Consortium agreement

In line with the Rules for Participation and the ECSEL JU Model Grant Agreement, participants are required to conclude a consortium agreement.

Reimbursement rate for establishing the EU contribution

Reimbursement rates as percentages of the eligible cost according to H2020.

Type of beneficiary	EU Contribution as % of the Eligible Cost according to H2020 (*)
Large Enterprise (for profit non SME)	20 %
SME (for profit SME)	25 %
University/Other (not for profit)	35 %

(*) beneficiaries may ask for a lower contribution

SMEs

SMEs should be encouraged to participate to the proposals in a significant way.

International visibility

Partners are encouraged to create visibility to promote the developed technologies outside of Europe creating the basis for European impact on future international markets.

Reimbursement rates for establishing national contributions

Please refer to Chapter 9 “COUNTRY SPECIFIC ELIGIBILITY RULES”

Contribution to the Council Regulation (Article 4.1)

The consortia proposing projects will strive for a ratio of the total national funding to the EU funding larger than 1.20.

Financial support to third parties

ED 2020.288

- Applicable for this call.
- Financial support to third parties is capped (limited to) 3% of the EU funding requested by the proposal.

Estimated expenditures

See Annex 3

Annex 6: Call 2020-2, RIA**Scope and objectives**

The call will be open to the following topics:

Topics and Major Challenges		Open/ Closed
Transport & Smart Mobility		
	Major Challenge 1: Developing clean, affordable and sustainable propulsion	Open
	Major Challenge 2: Ensuring secure connected, cooperative and automated mobility and transportation	Open
	Major Challenge 3: Managing interaction between humans and vehicles	Open
	Major Challenge 4: Implementing infrastructure and services for smart personal mobility and logistics	Open
Health and Wellbeing		
	Moving healthcare from hospitals into our homes and daily life requiring preventive and patient centric care	Open
	Restructuring healthcare delivery systems, from supply-driven to patient-oriented	Open
	Engaging individuals more actively in their own health and wellbeing	Open
	Ensuring affordable healthcare for the growing amount of chronic, lifestyle related diseases and an ageing population	Open
	Developing platforms for wearables/implants, data analytics, artificial intelligence for precision medicine and personalised healthcare and wellbeing	Open
Energy		
	Major Challenge 1: Ensuring sustainable power generation and energy conversion	Open
	Major Challenge 2: Achieving efficient community energy management	Open
	Major Challenge 3: Reducing energy consumption	Open
Digital Industry		
	Major Challenge 1: Developing digital twins, simulation models for the evaluation of industrial assets at all factory levels and over system or product life-cycles	Open
	Major Challenge 2: AI-enabled cognitive, resilient, adaptable manufacturing	Open
	Major challenge 3: Developing digital platforms, application development frameworks that integrate sensors/actuators and systems	Open
	Major Challenge 4: Human-centred manufacturing	Open
	Major Challenge 5: Sustainable manufacturing in a circular economy	Open

Digital Life		
	Major Challenge 1: Ensuring safe and secure spaces	Open
	Major Challenge 2: Ensuring healthy and comfortable spaces	Open
	Major Challenge 3: Ensuring anticipating spaces	Open
	Major Challenge 4: Ensuring sustainable spaces	Open
Systems and Components: Architecture, Design and Integration		
	Major Challenge 1: Managing critical, autonomous, cooperating, evolvable systems	Open
	Major Challenge 2: Managing Complexity	Open
	Major Challenge 3: Managing Diversity	Open
	Major Challenge 4: Managing Multiple Constraint	Open
	Major Challenge 5: Integrating features of various technologies and materials into miniaturised smart components	Open
	Major Challenge 6: Effectively integrating modules for highly demanding environments	Open
	Major Challenge 7: Increasing compactness and capabilities by functional and physical systems integration	Open
Connectivity and Interoperability		
	Major Challenge 1: Strengthening the EU position on differentiated technologies and enabling it to capture higher value by moving to system/module level	Open
	Major Challenge 2: Autonomous interoperability translation for communication protocol, data encoding, security and information semantics	Open
	Major Challenge 3: Architectures and reference implementations of interoperable, secure, scalable, smart and evolvable IoT and SoS connectivity	Open
Safety, Security and Reliability		
	Major Challenge 1: Safety, security and privacy by design	Open
	Major Challenge 2: Reliability and Functional Safety	Open
	Major Challenge 3: Secure, safe and trustable connectivity and infrastructure	Open
	Major Challenge 4: Privacy, data protection and human interaction	Open
Computing and Storage		
	Increasing performance at acceptable costs	Open
	Making computing systems more integrated with the real world	Open
	Making "intelligent" machines	Open
	Developing new disruptive technologies	Open
Process Technology, Equipment, Materials and Manufacturing for Electronic Components & Systems		

	Major Challenge 1: Develop advanced logic and memory technology for nanoscale integration and application-driven performance	Open
	Major Challenge 2: Develop Technology for Heterogeneous System-on-Chip (SoC) Integration	Open
	Major Challenge 3: Develop technology for Advanced Packaging and Heterogeneous System-in-Package (SiP) integration	Open
	Major Challenge 4: Extend world leadership in Semiconductor Equipment, Materials and Manufacturing solutions	Open
Long-term vision		
	New computing paradigms ('Beyond CMOS').	Open
	Process technology, equipment and materials	Open
	Systems and components: architecture, design and integration	Open
	Health & wellbeing	Open
	Energy	Open
	Digital Industry	Open
	Transport and smart mobility	Open
	Connectivity and interoperability	Open
	Data science and Artificial Intelligence	Open

- Aspects of ECS value chain integration are important for the ECSEL programme and the whole European ECS sector, across applications and accorss capabilities. Consortia are encouraged to submit proposals that take this aspect into account.
- Along the lines of the previous bullet, proposals that cut across disciplines, support platform building, interoperability, establishment of open standards are particularly encouraged; even outside the regular ECS sector.
- Description of the important topics as proposed by the LIASEs of the ECSEL Lighthouse Initiatives and by DG-Energy in the fields of Mobility, Digital industry, Health and Energy are provided in annex 9; these topics are of special relevance and proposals for the Call 2020 supporting these topics are encouraged.
- For the Call 2020, proposals supporting specific aspects of 'edge computing' are encouraged as described in the below textbox.

EDGE COMPUTING driving KEY DIGITAL TECHNOLOGIES

Recent evolution on computing architectures, artificial intelligence and cybersecurity are having an impact on the way data analytics and decisions are made in autonomous applications. Systems intelligence is moving towards the edge of the network within a distributed approach as compared to classical cloud-based solutions.

The overall trend of ‘Edge computing’ cuts across the three areas bringing benefits in terms of latency, safety/security and energy efficiency. Data capture, processing and decision making (and actuation in some cases) in a local, restricted environment would allow the fast adoption of AI by applications within a broad range of requirements (performance, energy, cost). Edge computing would drive the development of key technologies including low-power processor manufacturing, smart sensing systems, safety critical CPS and embedded software, connectivity, security and AI.

The ultimate goal is the development of hardware and software environments that will allow users to define architectures tailored to their specific needs. These architectures will support and make possible the introduction of artificial intelligence in a very large number of applications.

Proposals should encompass the design and manufacturing aspects and provides flexibility to accommodate to a broad scope of cases of edge computing and cover one or more of the aspects described in the non-exhaustive list below:

- Test and experimentation of innovative computing architectures suitable for embedded and autonomous operation. Of particular interest, computing approaches supporting Artificial Intelligence techniques.
- Automated and semi-automated tools, possibly based on Artificial Intelligence techniques, to simplify the development of systems and applications at the edge of the network, and guarantee their quality while reducing the skill level required to the developer.
- Techniques and tools to guarantee secure (including privacy aspects), safe and time-critical behaviour in complex and heterogeneous computing architectures for edge computing, while guaranteeing interoperability with the environment.
- Innovative integration of hardware and software components for efficient operation in embedded edge applications with very limited energy budget.

Note that National priorities may be applicable to specific topics (refer to Chapter 9 “COUNTRY SPECIFIC ELIGIBILITY RULES”).

Objectives of each topic can be found in the MASP 2020 (decision ECSEL GB 2019.134).

Specific Conditions

Mode: 2 phases: Project Outline (PO) and Full Project Proposal (FPP)

Publication date: 5 February 2020

Deadline PO phase: at 17:00:00 Brussels time on 5 May 2020

Deadline FPP phase: at 17:00:00 Brussels time on 16 September 2020

Type of action: ECSEL Research and Innovation Action

An ECSEL Research and Innovation Action (RIA) primarily consists of activities aiming to establish new knowledge and/or to explore the feasibility of a new or improved technology, product, process, service, method, tool or solution. For this purpose they may include applied research, technology development and/or method/tool and integration, testing and validation on a small-scale prototype in a laboratory or simulated environment. The activities have their centre of gravity at TRL 3-4.

Projects on particular topics such as the ones discussed in the Long Term Vision chapter of the MASP naturally have activities in the lower TRLs.

A RIA proposal is characterised by:

- Execution by a consortium that may consist of SMEs, large enterprises, universities, institutes, public organizations;
- Developing innovative technologies and/or using them in innovative ways;
- Targeting demonstration of the innovative approach in a relevant product, service or capability, clearly addressing the applications relevant for societal challenges in relation with the ECSEL Strategic Thrusts as outlined in the ECSEL MASP;
- Demonstrating value and potential in a realistic lab environment reproducing the targeted application;
- Having a deployment plan showing the valorisation for the ECSEL ecosystem and the contribution to the ECSEL goals and objectives.
- In order to maximize effective implementation of the ECSEL top-level objectives, the list of RIA proposals to be retained for public funding shall constitute a balanced portfolio of projects developing innovative technologies (as defined in the MASP in the essential technology section) and applying them in different domains as defined in the MASP (as defined in the application trust section).

Admissibility and Eligibility conditions:

Admissibility conditions: Refer to Annex 1

Eligibility conditions

All proposals must comply with the conditions set out in the **Rules for Participation contained in Regulation (EU) No 1290/2013 of 11 December 2013**. A proposal will only be considered eligible if:

- its content corresponds, wholly or in part, to the topic description for which it is submitted;
- it complies with the eligibility conditions set out below, depending on the type of action.

Type of action	Conditions for participation & eligibility for funding
ECSEL Research and Innovation Action	At least three legal entities. Each of the three must be established in a different Member State or associated country. All three legal entities must be independent of each other. ⁷

⁷ Please see also the REGULATION (EU) No 1290/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2013 laying down the rules for participation and dissemination in "Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020)" and repealing Regulation (EC) No 1906/2006, OJ L 347/81, 20.12.2013.; particularly Articles 9 and 10 stipulating detailed conditions for participation and eligibility for funding.

Specific rules apply for eligibility for funding by ECSEL Participating State (refer to Annex 9). Other specific eligibility rules for this call applicable at the FPP phase (proposals not respecting those maxima will be rejected, ie not evaluated)

Duration limit

The maximum duration of the project is 3 years.

Size limit

The maximum size of the project is 50 participants.

Capping

The EU contribution per project is capped at 12M€ and the maximum contribution per partner in a project is limited to 40% of the total EU funding for the project.

Page Limits

Page Limits at the PO phase for RIA and IA ECSEL actions

- The page limit for the chapter on EXCELLENCE is 60 pages
- The page limit for the chapter on IMPACT is 60 pages
- The page limit for the chapter on IMPLEMENTATION is 60 pages

Page Limits at the FPP phase for RIA and IA ECSEL actions

- The page limit for the chapter on EXCELLENCE is 60 pages
- The page limit for the chapter on IMPACT is 100 pages
- The page limit for the chapter on IMPLEMENTATION is 100 pages.

The application of those page limits (font size etc) is further described in the Guide for Applicants. The selected proposals may be required to submit further information regarding the IMPLEMENTATION after selection

Pages in excess of those maxima will not be considered in the evaluation.

Evaluation criteria, scoring and threshold

Evaluation procedure

The document ECSEL PAB 2018.31 contains the details of the evaluation and selection process.

Award criteria

The proposals will be evaluated along the following three evaluation criteria:

1. **Excellence:** The following aspects will be taken into account, to the extent that the proposed work corresponds to the relevant work plan topic description in the ECSEL MASP:
 - a. Clear reference to the topics and main challenges to which this proposal contributes;
 - b. Clarity and pertinence of the objectives and the expected results of the proposed work; with quantified objectives and results and reference baseline.
 - c. Credibility (soundness) of the concept (*what*), including inter--disciplinary considerations, where relevant; and where relevant use of stakeholder knowledge and gender dimension in research and innovation content (if the proposal addresses the gender dimension)
 - d. Credibility (soundness) of the proposed methodology (*how*);
 - e. Extent to which the proposed work is ambitious, is beyond the state of the art, and demonstrates innovation potential (e.g. ground-breaking objectives, novel concepts)

and approaches, new products, services or business and organisation models).

2. **Impact:** The extent to which the outputs of the project should contribute at the European and/or International level to:
 - a. The creation and exploitation of market potential and the gain of a competitive technology advantage (*Impact from participant perspective*);
 - b. Enhancing innovation capacity and integration of new knowledge (*Impact from participant perspective*);
 - c. Strengthening Europe (by future employment and industrial investment) and the competitiveness and growth of companies by developing innovations meeting the needs of European and global markets; and, where relevant, by delivering such innovations to the markets or introducing new technologies into the industry (*Impact from EU perspective*);
 - d. The exploitation of project results per participant and, where relevant, at project level; management of IPR and where relevant management of the research data (for proposals that do not opt out of the pilot on open research data).
 - e. The dissemination of project results, the communication of the project; the development of standards, where appropriate.

3. **Quality and efficiency of the implementation:** The following aspects will be taken into account:
 - a. Quality and effectiveness of the work plan, including extent to which the resources assigned to work packages are in line with their objectives and deliverables;
 - b. Complementarity of the participants and extent to which the consortium as a whole brings together the necessary expertise
 - c. Adequate participation of large companies, SMEs, universities and research institutes. Appropriateness of the allocation of the tasks, ensuring that all participants have a valid role and adequate resources in the project to fulfil that role.
 - d. Appropriateness of the management structures and procedures, including risk and innovation management.

Scoring

PO Phase: The scores will be given using - half marks.

Criteria	Range	Weight (**)	Threshold (*)
Excellence	0-5		2.5
Impact	0-5		2.5
Quality and efficiency of the implementation	0-5		2.5
Total	0-15		11

(*) threshold applies to unweighted score

(**) at PO phase proposals are not ranked

FPP Phase: The scores will be given with a resolution of one decimal. Only proposals which successfully passed the PO phase are eligible to the FPP phase.

Criteria	Range	Weight (**)	Threshold (*)
Excellence	0-5	1.0	3
Impact	0-5	1.0	3
Quality and efficiency of the implementation	0-5	0.7	3

Total	0-15		11
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(*) threshold applies to unweighted score

(**) the weight is only used to establish the ranking of the proposals

Selection criteria

Only in the FPP Phase

- *Financial capacity*: In line with the Financial Regulation and the Rules for Participation. At the full project proposal stage, coordinators will be invited to complete a self-assessment using an online tool.
- *Financial capacity*: Participants declared by their national authority in crisis according to the State-Aid rules as defined by EU regulation 651/2014 will not be eligible for EU funding
- *Operational capacity*: As a distinct operation, carried out during the evaluation of the award criterion 'Quality and efficiency of the implementation', experts will indicate whether the participants meet the selection criterion related to operational capacity, to carry out the proposed work, based on the competence and experience of the individual participant(s).

Priority order for proposals with the same score

PO Phase: No priority order is required at this stage

FPP Phase

Unless the call conditions indicate otherwise, the following method will be applied. As part of the evaluation by independent experts, a panel review will recommend a ranked list for the proposals under evaluation, following the scoring systems indicated above. A ranked list will be drawn up for every indicative budget shown in the call conditions. If necessary, the panel will determine a priority order for proposals which have been awarded the same score within a ranked list. The following approach will be applied successively for every group of *ex-aequo* proposals requiring prioritisation, starting with the highest scored group, and continuing in descending order:

- Proposals will be prioritised according to the scores they have been awarded for the criterion impact. When these scores are equal, priority will be based on scores for the criterion excellence.
- Then proposals that address topics not otherwise covered by more highly-ranked proposals will be considered to have the highest priority.
- Further *ex-aequo* are discussed by the panel of experts and scored on the merit of the proposal to fulfil the objectives of ECSEL JU taking into account elements such as the enhancement of the quality of the project portfolio through synergies between projects, balance between the type of partners, SME participation and gender balance. These factors will be documented in the report of the Panel.
- In the case of two projects with the similar score the PAB can decide to rank the project with the highest ratio: national funding to EU funding; before the other.

Indicative timetable for evaluation and grant agreement

Information on the outcome of the evaluation	Indicative date for the signing of grant agreements
Maximum 5 months from the final date for submission	Maximum 8 months from the final date for submission

Consortium agreement

In line with the Rules for Participation and the ECSEL JU Model Grant Agreement, participants are required to conclude a consortium agreement.

Reimbursement rate for establishing the EU contribution

Reimbursement rates as percentages on the eligible costs according to H2020.

Type of beneficiary	EU Contribution as % of the Eligible Cost according to H2020 (*)
Large Enterprise (for profit non SME)	25 %
SME (for profit SME)	30 %
University/Other (not for profit)	35 %

(*) beneficiaries may ask for a lower contribution

SMEs

SMEs should be encouraged to participate to the proposals in a significant way.

Reimbursement rates for establishing national contributions

Please refer to Chapter 10 “COUNTRY SPECIFIC ELIGIBILITY RULES”).

Contribution to the Council Regulation (Article 4.1)

The consortia proposing projects will strive for a ratio of the total national funding to the EU funding larger than 1.20.

Financial support to third parties

Applicable for this call. Financial support to third parties is capped (limited to) 3% of the EU funding requested by the proposal.

Estimated expenditures

See Annex 3

Annex 7 : Call 2020-3, RIA : IMI – ECSEL joint activity

The details of this joint activity are still under discussion between IMI and ECSEL and the related EC services: because of its administrative complexity, it may take a few more weeks, before all details are clarified within the main lines as indicated below.

This will be subject to an approval of an specific amendment of the workplan 2020.

Scope and objectives

Two of the European public –private partnerships, ECSEL and IMI are actively exploring concrete collaborations to take advantage of their unique mandates in mobilizing their respective industry sectors. This mutual beneficial action should ideally cover an opportunity/gap between the two sectors.

ECSEL is a tri-partite PPP that develops Electronic Components and Systems (ECS) including software, which are at the cutting edge of technology, and serving several sectors including human health. IMI is a PPP that strives to accelerate the medicines development process and as such is a user of enabling ECS technologies to implement a suite of processes in drug development. Closer interaction between users of technology and technology developers would ensure that technologies are developed in a more focused, accelerated, efficient manner, without reinventing the wheel i.e. attempting to develop technologies that already exist.

Next Generation Digital Technologies for Clinical Trials at Home

To differentiate from the many “patch project” and initiatives that have already been running, this project should address the issues and gaps to bring all the scattered activities, technologies, platforms to a higher TRL level by addressing the technical, regulatory, compatibility and acceptability issues that at the moment block endorsement by pharma and hospitals:

- Lack of accuracy (compared to clinical instruments)
- Data integration (into the workflow of hospitals and pharma)
- User friendliness (should be straightforward for non-technical staff and elderly)
- Data security and Privacy (most hospitals don’t want to have data outside the hospital)
- Patch to patch communication (how to prevent latency)

The proposal should start for the running IMI JU project (Trails@Home) and complement to and extent on the technology scan activity of the project which will identify barriers, enablers and data management for the Remote Decentralised Clinical Trials. In an end-to-end journey, aspects as quality and data integrity, security, connectivity, communication interface, stakeholders’ feedbacks such as patients, principal investigators, regulators, sponsors will be assessed over an broad technology range (available or with a validated proof-of-concept) in order to enable a seamless communication, data monitoring and collection from distant location for these RDCT.

Note that National priorities may be applicable to this specific call (refer to Chapter 9 “COUNTRY SPECIFIC ELIGIBILITY RULES”).

Specific Conditions

Mode: 1 phases: Full Project Proposal (FPP)

Publication date: Tuesday 1 September 2020

Deadline FPP phase: at 17:00:00 Brussels time on Tuesday 1 December 2020

Type of action: ECSEL Research and Innovation Action

An ECSEL Research and Innovation Action (RIA) primarily consists of activities aiming to establish new knowledge and/or to explore the feasibility of a new or improved technology, product, process, service, method, tool or solution. For this purpose they may include applied research, technology development and/or method/tool and integration, testing and validation on a small-scale prototype in a laboratory or simulated environment. The activities have their centre of gravity at TRL 3-4.

Projects on particular topics such as the ones discussed in the Long Term Vision chapter of the MASP naturally have activities in the lower TRLs.

A RIA proposal is characterised by:

- Execution by a consortium that may consist of SMEs, large enterprises, universities, institutes, public organizations;
- Developing innovative technologies and/or using them in innovative ways;
- Targeting demonstration of the innovative approach in a relevant product, service or capability, clearly addressing the applications relevant for societal challenges in relation with the ECSEL Strategic Thrusts as outlined in the ECSEL MASP;
- Demonstrating value and potential in a realistic lab environment reproducing the targeted application;
- Having a deployment plan showing the valorisation for the ECSEL ecosystem and the contribution to the ECSEL goals and objectives.
- In order to maximize effective implementation of the ECSEL top-level objectives, the list of RIA proposals to be retained for public funding shall constitute a balanced portfolio of projects developing innovative technologies (as defined in the MASP in the essential technology section) and applying them in different domains as defined in the MASP (as defined in the application trust section).

Admissibility and Eligibility conditions:

Admissibility conditions: Refer to Annex 1

Eligibility conditions

All proposals must comply with the conditions set out in the **Rules for Participation contained in Regulation (EU) No 1290/2013 of 11 December 2013**. A proposal will only be considered eligible if:

- its content corresponds, wholly or in part, to the topic description for which it is submitted;
- it complies with the eligibility conditions set out below, depending on the type of action.

Type of action	Conditions for participation & eligibility for funding
ECSEL Research and Innovation Action	At least three legal entities. Each of the three must be established in a different Member State or associated country. All three legal entities must be independent of each other. ⁸

Specific rules apply for eligibility for funding by ECSEL Participating State (refer to Annex 9). Other specific eligibility rules for this call applicable at the FPP phase (proposals not respecting those maxima will be rejected, ie not evaluated)

Duration limit

The maximum duration of the project is 3 years.

Size limit

The maximum size of the project is 50 participants.

Capping

The EU contribution per project is capped at 5 M€ and the maximum contribution per partner in a project is limited to 40% of the total EU funding for the project.

Page Limits

Page Limits at the PO phase for RIA and IA ECSEL actions

- The page limit for the chapter on EXCELLENCE is 60 pages
- The page limit for the chapter on IMPACT is 60 pages
- The page limit for the chapter on IMPLEMENTATION is 60 pages

Page Limits at the FPP phase for RIA and IA ECSEL actions

- The page limit for the chapter on EXCELLENCE is 60 pages
- The page limit for the chapter on IMPACT is 100 pages
- The page limit for the chapter on IMPLEMENTATION is 100 pages.

The application of those page limits (font size etc) is further described in the Guide for Applicants. The selected proposals maybe required to submit further information regarding the IMPLEMENTATION after selection

Pages in excess of those maxima will not be considered in the evaluation.

Evaluation criteria, scoring and threshold

Evaluation procedure

The document ECSEL PAB 2018.31 contains the details of the evaluation and selection process.

Award criteria

The proposals will be evaluated along the following three evaluation criteria:

⁸ Please see also the REGULATION (EU) No 1290/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2013 laying down the rules for participation and dissemination in "Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020)" and repealing Regulation (EC) No 1906/2006, OJ L 347/81, 20.12.2013.; particularly Articles 9 and 10 stipulating detailed conditions for participation and eligibility for funding.

1. **Excellence:** The following aspects will be taken into account, to the extent that the proposed work corresponds to the relevant work plan topic description in the ECSEL MASP:
 - a. Clear reference to the topics and main challenges to which this proposal contributes;
 - b. Clarity and pertinence of the objectives and the expected results of the proposed work; with quantified objectives and results and reference baseline.
 - c. Credibility (soundness) of the concept (*what*), including inter--disciplinary considerations, where relevant; and where relevant use of stakeholder knowledge and gender dimension in research and innovation content (if the proposal addresses the gender dimension)
 - d. Credibility (soundness) of the proposed methodology (*how*);
 - e. Extent to which the proposed work is ambitious, is beyond the state of the art, and demonstrates innovation potential (e.g. ground-breaking objectives, novel concepts and approaches, new products, services or business and organisation models).

2. **Impact:** The extent to which the outputs of the project should contribute at the European and/or International level to:
 - a. The creation and exploitation of market potential and the gain of a competitive technology advantage (*Impact from participant perspective*);
 - b. Enhancing innovation capacity and integration of new knowledge (*Impact from participant perspective*);
 - c. Strengthening Europe (by future employment and industrial investment) and the competitiveness and growth of companies by developing innovations meeting the needs of European and global markets; and, where relevant, by delivering such innovations to the markets or introducing new technologies into the industry (*Impact from EU perspective*);
 - d. The exploitation of project results per participant and, where relevant, at project level; management of IPR and where relevant management of the research data (for proposals that do not opt out of the pilot on open research data).
 - e. The dissemination of project results, the communication of the project; the development of standards, where appropriate.

3. **Quality and efficiency of the implementation:** The following aspects will be taken into account:
 - a. Quality and effectiveness of the work plan, including extent to which the resources assigned to work packages are in line with their objectives and deliverables;
 - b. Complementarity of the participants and extent to which the consortium as a whole brings together the necessary expertise
 - c. Adequate participation of large companies, SMEs, universities and research institutes. Appropriateness of the allocation of the tasks, ensuring that all participants have a valid role and adequate resources in the project to fulfil that role.
 - d. Appropriateness of the management structures and procedures, including risk and innovation management.

Scoring

FPP Phase: The scores will be given with a resolution of one decimal. Only proposals which successfully passed the PO phase are eligible to the FPP phase.

Criteria	Range	Weight (**)	Threshold (*)
Excellence	0-5	1.0	3
Impact	0-5	1.0	3
Quality and efficiency of the implementation	0-5	0.7	3

Total	0-15		11
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(*) threshold applies to unweighted score

(**) the weight is only used to establish the ranking of the proposals

Selection criteria

Only in the FPP Phase

- *Financial capacity*: In line with the Financial Regulation and the Rules for Participation. At the full project proposal stage, coordinators will be invited to complete a self-assessment using an online tool.
- *Financial capacity*: Participants declared by their national authority in crisis according to the State-Aid rules as defined by EU regulation 651/2014 will not be eligible for EU funding
- *Operational capacity*: As a distinct operation, carried out during the evaluation of the award criterion 'Quality and efficiency of the implementation', experts will indicate whether the participants meet the selection criterion related to operational capacity, to carry out the proposed work, based on the competence and experience of the individual participant(s).

Priority order for proposals with the same score

FPP Phase

Unless the call conditions indicate otherwise, the following method will be applied. As part of the evaluation by independent experts, a panel review will recommend a ranked list for the proposals under evaluation, following the scoring systems indicated above. A ranked list will be drawn up for every indicative budget shown in the call conditions. If necessary, the panel will determine a priority order for proposals which have been awarded the same score within a ranked list. The following approach will be applied successively for every group of *ex-aequo* proposals requiring prioritisation, starting with the highest scored group, and continuing in descending order:

- Proposals will be prioritised according to the scores they have been awarded for the criterion impact. When these scores are equal, priority will be based on scores for the criterion excellence.
- Then proposals that address topics not otherwise covered by more highly-ranked proposals will be considered to have the highest priority.
- Further *ex-aequo* are discussed by the panel of experts and scored on the merit of the proposal to fulfil the objectives of ECSEL JU taking into account elements such as the enhancement of the quality of the project portfolio through synergies between projects, balance between the type of partners, SME participation and gender balance. These factors will be documented in the report of the Panel.
- In the case of two projects with the similar score the PAB can decide to rank the project with the highest ratio: national funding to EU funding; before the other.

Indicative timetable for evaluation and grant agreement

Information on the outcome of the evaluation	Indicative date for the signing of grant agreements
Maximum 5 months from the final date for submission	Maximum 8 months from the final date for submission

Consortium agreement

In line with the Rules for Participation and the ECSEL JU Model Grant Agreement, participants are required to conclude a consortium agreement.

Reimbursement rate for establishing the EU contribution

Reimbursement rates as percentages on the eligible costs according to H2020.

Type of beneficiary	EU Contribution as % of the Eligible Cost according to H2020 (*)
Large Enterprise (for profit non SME)	25 %
SME (for profit SME)	30 %
University/Other (not for profit)	35 %

(*) beneficiaries may ask for a lower contribution

SMEs

SMEs should be encouraged to participate to the proposals in a significant way.

Reimbursement rates for establishing national contributions

Please refer to Chapter 9 “COUNTRY SPECIFIC ELIGIBILITY RULES”).

Contribution to the Council Regulation (Article 4.1)

The consortia proposing projects will strive for a ratio of the total national funding to the EU funding larger than 1.20.

Financial support to third parties

Applicable for this call. Financial support to third parties is capped (limited to) 3% of the EU funding requested by the proposal.

Estimated expenditures

See Annex 3

Annex 8: Call 2020-4, CSA Digital Excellence support action

Scope and objectives

Many projects results of great value are intangible elements (software, data, ontologies, models, ...), or 'soft hardware' items such as dedicated semiconductor devices and models tested on already standardized processes. Despite high levels of dissemination activity during the project lifespan, post-project support of such elements is often lacking, and the results risk to be dissipated or otherwise lost. If the project results could be made available beyond the project lifespan, the public in general and European follow-up projects in particular would benefit from these collected results. This would establish itself as a public state of the art and provide a starting point for various follow-up projects. On the one hand, redundancy would be avoided in the projects, on the other hand an increased transparency for the public would be created and, furthermore, a general understanding of the system about the highly complex industrial domains would be created.

With this new exploitation framework interactive collaboration as well as cascading of projects is possible. on a holistic view Industry can provide data and use cases to make solutions applicable and studies replicable, Research institutes can make models available to make them transferable and implementable, system providers can make software components available to connect to other projects and provide the community useful open source implementation.

In detail, this proposal originates from different industrial partners in the project Productive4.0. In this project, a major effort was driven towards semantic description of the semiconductor industry and supply chains containing semiconductors. Specifically the outcome of this project was a digital reference platform, a semantic web which describes the structure of typical semiconductor supply chains in general. Different industrial partners described the Generic Semiconductor Data Model and provided production data on this structural basis, which have to be maintained available to develop cutting edge solutions for semiconductor supply chains. The requirement is to make these structural descriptions as well as the corresponding data samples available for future projects and the public in general.

Multiple running projects showed interest to support this action to make the project results timeless.

This CSA is designed to offer means for extending the availability of the project results for other ECSEL/EU projects, or for not-for-profit exploitation of those results.

The organization selected for this CSA would need to:

A. Identify suitable infrastructure and hosting mechanisms for those results, that can assure accessibility in an open yet suitably controlled and secure manner – typically a URI

The exploitation platform should contain a descriptive website for uploading the publishable use case documents and results and describing the structure of the particular initiative. Additionally it should contain a data cloud (few TB) to store necessary use case data to firstly, make results replicable, secondly, to fasten the setup of future projects, thirdly to enable project overarching European collaboration and research and fourthly to make the projects traceable beyond the lifespan.

There are specific requirements for the public exploitation platform

1. It has to provide links to enable access and download of specific use case descriptions and the corresponding anonymized industrial data sample.
2. The underlying database has to enable simple upload from different kinds of project specific databases.
3. It has to provide download functions for the different UML and OWL versions.
4. The Visualization via Webvowl or other means has to go beyond the existing possibilities with tailored ontologies and means to enable a better human interface
5. It has to provide an online form for public change requests
6. Requestor contact is not visible for general user
7. It has to provide the use case specific responsible contacts
8. It has to provide a news feed box with news and dates from the latest versioning conferences and from upcoming events
9. file upload (*.sql, *.xml, *.jpg, *.pdf) drag & drop in context of UML model, use case
10. general file upload / download FTP
11. Regular security updates are managed
12. Communication is secure (SSL)
13. Single Sign On (OAuth2.0)
14. The classes in the digital reference need both accuracy, stability but also agility. A blended approach featuring a distributed ledger and a notary system might fit the needs.

B. Establish regular meetings of stakeholders with a view to management and keeping up to date of the results

During the projects, effective research groups are forming which are willing to meet regularly (in the example of Productive4.0 the review board of the Generic Semiconductor Data Model meets bi-annually to update and extend the Semiconductor Data Model and the corresponding data samples.. These required review board meetings are hoped to be further supported by the proposed exploitation framework after Productive4.0 ends. Some others especially in the scattered supply chain will need a Distributed Ledger approach

C. Establish a mechanism whereby other relevant EU-funded projects can access and make use of these results and contribute to their further enhancement

The web space of the public exploitation framework requires a user management concept with five kinds of user groups:

1. Admin Users with read and write rights (upload, edit, download) on all projects.
2. Project Admin Users with read and write rights (upload, edit, download) on project specific content
3. Key Users with read rights (download) on all content of all projects
4. Project Users with read rights (download) on all content of specific projects
5. Public users with read rights (download) to public content of all projects

System supports additional role: requestor

- User can register himself as requestor
- Admins can see contact of requestor
- Additionally Admin users can publish new head version (older version moved to archived)

D. Study the extensibility of the results into further use-cases or application domains, developing support for those as part of their operation

The extensibility and applicability of specific contributions to the exploitation framework should be part of considerations for project proposals

E. Through communication campaigns, including presentations at public events coordinated through, for example, funding bodies or Lighthouse Initiatives, assure widespread knowledge of the existence of these results and how they may be accessed

With the help of campaigns of the project partners, funding bodies and Lighthouse Initiatives the exploitation framework has the unique chance to establish dynamic adaptable state of the reference models which evolve with the contributions of each project and become a reliable reference source for any kind of research activity in the particular domains.

F. Study and report on additional mechanisms or business models which can lead to the support of the results becoming self-sustaining

The semantic web based exploitation platform delivers a prevalidation for upcoming standardization initiatives. Thereby the exploitation platform is much more dynamic and is elaborating faster due to the active exploitation contributions of the particular projects – see also requirement #14.

G. Support the standardization initiatives

As a follow up to F.

H. Research and propose a concrete implementation plan for what must follow, to assure maximum benefit is taken from the results, in specific and in general use-cases.

Links to other domain platforms like from BOOST should be established from the beginning without sacrificing the domain specific need

Effort should be taken to transfer the CSA to a on demand business being charged by usage time rather than license fees. It should stay advertising free.

Specific Conditions

Mode: 1 phase: Full Project Proposal (FPP)

Publication date: 5 February 2020

Deadline FPP phase: 5 May 2020

Admissibility and Eligibility conditions:

Admissibility conditions: Refer to Annex 1

Eligibility conditions

All proposals must comply with the conditions set out in the **Rules for Participation contained in Regulation (EU) No 1290/2013 of 11 December 2013**. A proposal will only be considered eligible if:

- its content corresponds, wholly or in part, to the topic description for which it is submitted;
- it complies with the eligibility conditions set out below, depending on the type of action.

Type of action	Coordination and Support Action
ECSEL CSA	At least one legal entity established in an EU Member State or Horizon 2020 associated country

Page Limits for CSA ECSEL actions

- The page limit for the chapter on EXCELLENCE is 30 pages
- The page limit for the chapter on IMPACT is 30 pages
- The page limit for the chapter on IMPLEMENTATION is 30 pages

The application of those page limits (font size etc) is further described in the Guide for Applicants. The selected proposals maybe required to submit further information regarding the IMPLEMENTATION after submission.

Evaluation criteria, scoring and threshold

Evaluation procedure

The H2020 rules will be followed, refer to Annex 1 1.

Scoring

FPP Phase: The scores will be given using - half marks.

Criteria	Range	Weight (**)	Threshold (*)
Excellence	0-5	1	3
Impact	0-5	1	3
Quality and efficiency of the implementation	0-5	1	3
Total	0-15		10

(*) threshold applies to unweighted score

(**) at PO phase proposals are not ranked

Selection criteria

- *Financial capacity*: In line with the Financial Regulation and the Rules for Participation. At the full project proposal stage, coordinators will be invited to complete a self-assessment using an on-line tool.
- *Operational capacity*: As a distinct operation, carried out during the evaluation of the award criterion 'Quality and efficiency of the implementation', experts will indicate whether the

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participants meet the selection criterion related to operational capacity, to carry out the proposed work, based on the competence and experience of the individual participant(s).

Indicative timetable for evaluation and grant agreement

Information on the outcome of the evaluation	Indicative date for the signing of grant agreements
Maximum 5 months from the final date for submission	Maximum 8 months from the final date for submission

Consortium agreement

In line with the Rules for Participation and the ECSEL JU Model Grant Agreement, participants are required to conclude a consortium agreement.

Reimbursement rate for establishing the EU contribution

Reimbursement rates as percentages on the eligible costs according to H2020.

Type of beneficiary	EU Contribution as % of the Eligible Cost according to H2020 (*)
Large Enterprise (for profit non SME)	100%
SME (for profit SME)	100%
University/Other (not for profit)	100%

(*) beneficiaries may ask for a lower contribution

Financial support to third parties

Not applicable for this call

Duration of the action

The action should start mid 2020 and last until mid 2023, for a maximum total duration of 3 years.

Estimated expenditures

See Annex 3

Annex 9: Important challenges as proposed by the LIASEs of the ECSEL Lighthouse Initiatives and by the European Commission

CHALLENGE 1 from the Mobility.E LIASE : “ENVIRONMENT PERCEPTION, PREDICTION AND ROBUST DECISION MAKING UNDER UNCERTAINTIES.”

Specific scope and objectives

This topic is focusing/refining the MASP 6.3.3 Major Challenge 2: *6.3.3. Major Challenge 2 Ensuring secure connected, cooperative and automated mobility and transportation.*

The area of Connected Automated Driving and automation is one of the hot topics for policy makers with a particular attention safer and more efficient road transport.

Europe is undergoing a revolution in mobility with cities outlawing ICE vehicles in their mission to meet ambitious zero-emission targets. In addition, the business model of the road transport is transforming. The mobility-as-a-service business model is becoming a reality, in order to keep the market position of the EU automotive industry it is essential that European companies stay in the race. To help European companies to compete in the upcoming market of connected and automated transport of the future will require Europe to keep the R&D effort in the critical areas of the Automated Driving.

Driverless cars will be equipped with a large number of sensors, embedded cameras, on board artificial intelligence, high precision GPS and satellite receivers, short-range wireless network and 5G interfaces to connect to the Internet. In addition, these vehicles will permanently exchange data with management and supervising systems and will use large local infrastructure databases that are constantly feeding them with real-time information about the local environment, traffic situation, emergency alerts and weather conditions.

Consequently autonomous vehicles will generate and use a large variety of data to analyze continuously their geographical position, condition of the road, state of the vehicle, passenger comfort and safety. To manage and meaningfully use all this data, highly capable, on board systems for environment perception and effective predictive driving functions are crucial.

The focus concerns the Mobility.E burning topic “Intelligence on board” focusing on component design, subsystem and system integration for environment perception, prediction and robust decision making under uncertainties. Including models, methods and algorithms as well as deep learning.

Proposals that would like to contribute could cover some of the below listed aspects:

- Improved architectures, components, sub-systems, Including models, methods and algorithms as well as deep learning for environment perception.
- Novel computational architectures components, sub-systems, Including models, methods and algorithms for effective decision taking in predictive driving functions. Including automated decision systems to address the driver’s reaction time for faster decision in the traffic operation and the related systems behind.
- Methods and tools to validate the models

CHALLENGE 2 from the Industry 4.E LIASE : “Artificial intelligence (AI) enabled inclusive and resilient manufacturing – The Human in the Loop”.

Specific scope and objectives

AI methods are revolutionary in many industrial areas, but in most cases, their autonomy is limited specifically where robustness and resilience is required in complex manufacturing environments. **Participation of humans in the control loops** remains necessary to ensure maximum performance and adaptability to change. A central issue of these systems is how humans and AI agents collaborate at the human-machine interface will need to adapt during changing and critical situations.

Another issue for the common use of AI in manufacturing is the difficulty that intelligent algorithms must communicate appropriately the reasons of their decisions, and how they will help achieving the mission objectives. A lack of communication will create trust issues and misunderstandings, degrading the performance of the joint cognitive systems composed of humans and AI, and there is a need for ‘**explainable AI**’ that humans build trust.

AI for adaptable/resilient factories: AI enables the creation of (semi)autonomous but still dependable factories/CPPS (Cyber Physical Production Systems) that can react to unforeseen, unpredictable, evolving behaviors. This also includes humans (e.g. the work force).

AI for human machine/robot collaboration: AI, supported by the relevant sensors/actuators (components) and data analytics tools, can enable and optimize efficient, adaptive and inclusive human machine collaboration. Going a step further, increasing levels of autonomy, shared decision making and collaborative intelligence (natural and artificial), can bring systems to higher levels of resilience.

Proposals that would like to contribute could cover some of the below listed aspects:

- Demonstrate a clear added value: higher process quality and robustness, reduced maintenance and down-time, higher flexibility, reduced consumption of process resources....
- Integration of AI in optimization processes such as Condition monitoring, predictive maintenance, (predictive) process optimisation (including humans in the system), predictive scheduling, towards prognosis, self-x ...
- Combination of data and model-driven AI: Use of explicit functional models as knowledge in cognitive control loops. Explore model-based and model-driven systems to ease the issues of trust in joint cognitive systems.
- AI-based interactive learning and training systems Autonomous/shared/collaborative decision making
- Socio-CyberPhysical Systems (where humans play a role either as part of the plant, as part of the controller and/or as part of the environment) in manufacturing.
- Developing and demonstrating how AI-related computations are implemented in distributed architectures, modern embedded-edge/fog-cloud architectures, etc. Modular, reusable user interface assets for monitoring and visualisation. These assets need to improve the comprehension and reasoning by human users of the behavior of AI agents during its pursuit of high-level mission objectives.
- Investigate how to improve the representation of system behaviour and operative limits in order to ensure a smart integration of humans and AI agents.
- Joint cognitive systems for real-time production scheduling, where the responsibility of taking decisions to optimize production, including times when a disruption event happens, is shared between human and AI.
- Investigate systems that learn from user input at runtime, and not design time.
- AI for Machine learning made easy for to overcome the lag time required for programming and predictive modeling.

- AI for scheduling, based on Data and manufacturing requirements (i.e. allow for human interaction in the scheduling process to avoid AI to dictate the process can lead to data driven errors).
- Data enabled decision making where AI can facilitate efficiency work and lessen the chances of errors while holding highest quality standards minimise an employee's dependency on others to take a decision.

CHALLENGE 3 from the Health.E LIASE : “ARCHITECTURES, COMPONENTS AND SYSTEMS FOR BIOELECTRONIC MEDICINES”

Specific scope and objectives

Bioelectronic medicines or Electroceuticals stimulate the peripheral nervous system to treat a variety of chronic diseases. Bioelectronic medicines are expected to become a complimentary or even replacement therapy in the treatment of autoimmune and inflammatory conditions. To make this a practical reality, implantable neurostimulators need to be miniaturized so that they can be implanted on the nerve using minimally invasive procedures, they need to be intelligent for closed loop operation and they need to be specific. It is up to the ECS community, with its expertise in mass producing high quality miniaturized complex systems, to take the lead in the development of this next generation smart unobtrusive implantable neurostimulators.

Proposals that would like to contribute could cover some of the below listed aspects:

- Miniaturization of complex heterogeneous systems to allow for minimally invasive device delivery on the target nerve;
- Power management covering storage (battery or capacitor) and remote charging (inductive, ultrasound, scavenging);
- Communication with the implant with an emphasis on data security and privacy;
- Low-power AI computation to allow for autonomous closed loop operation;
- Specificity to stimulate only the relevant neurons in a nerve;
- Encapsulation in relation to reliability, bio-stability, weight, manufacturability and cost;
- Development of model systems for the validation of bioelectronic medicines, taking into account biophysical, clinical and regulatory aspects.

CHALLENGE 4 from European Commission: “Electronics in the Energy Sector: Condition and Health Monitoring (C&HM) for Power Electronics in Energy Applications.”

Specific scope and objectives

The analysis of the key enabling technologies for the increasing penetration of renewables in the energy sector reveals that power electronics plays one of the major roles. In fact, the development of power electronics has allowed better performance of the converter, indispensable component of renewables such as PV, wind generators, etc. Having detected this important element in the whole value chain, the aim is to find potential areas of action to increase further the deployment of RES and finally to contribute to the decarbonisation of the energy sector.

For power electronics system implemented in many applications such as renewable energy, energy transmission and transportation, very high levels of in-service availability is demanded to reduce to minimum the downtime. However the degradation and eventual failure of power electronic assemblies is inevitable due to harsh operating conditions (temperature swings, humidity, vibrations and similar) to which those systems are constantly exposed. Unforeseen failures can lead not only to loss of the operation time but also to critical situations in some systems. Furthermore, the critical failures require unscheduled maintenance that can be in some applications (wind power systems, energy transmission) hard to realise and costly.

To exploit fully the potentials of C&HM to be developed in this topic, proposals that would like to contribute could cover some of the below listed aspects:

1. Condition and health monitoring is an effective method for improving the availability of power electronic components, converters and systems by monitoring the state of power electronics, estimating end-of-life and estimating most cost-efficient maintenance time (thus also lowering lifetime costs). The data collected in C&HM can be also further utilised for an exact analysis of failure causes of power electronics and thus presents valuable information for the manufacturers.

Further research in C&HM methods for low cost and efficient methods:

- Estimation of junction temperature T_j based on TSEPs (thermo-sensitive electrical parameters). Here especially big challenge present SiC MOSFETS and Schottky diodes because the TSEPs sensitivity is lower, non-linear and depends on the built technology. Further issues are calibration, circuit drift, influence of PWM and other.
 - Development of new and evaluation/further development of already existing unconventional techniques to measure temperature and estimate degradation such as application (such as for example, but not limited to, Kelvin connection or acoustic based methods).
 - Development and evaluation of new of already existing techniques for generating the lifetime models based on big-data analysis and by utilisation of soft computing techniques.
 - Combination of (big) data-driven and physics-of-failure driven approaches in C&HM.
2. C&HM methods also enable stress steering of already degraded components to keep the system in (non-optimal) operating conditions to avoid critical failures until the maintenance is possible. Stress-steering methods are being in development but not often applied yet. Evaluation of benefits of those methods in terms of life extension for already mentioned critical application is necessary to see how beneficial their further development and application could be.

For a more successful business case realisation, the proposals will count on the co-operation and communication between the following categories of partners:

- manufacturers of power electronics components (for example to integrate sometimes necessary sensors),
- system designer (to provide access to the data such as measured load cycles and general mission profiles) and,
- the companies responsible for operation and maintenance of the systems. Currently those companies are especially for off-shore wind parks developing their own C&HM systems which are operating based on sometimes scarce available data. Optimisation is possible when already initial products would be designed in the way that it would be possible to obtain data/measurements needed in C&HM. For power electronics modules, the most valuable data seems to be T_j (junction temperature).
- The costs of maintenance for specified applications should be carefully estimated, as it seems that they are currently underestimated. It would be also useful to investigate different costs models as the final costs for C&HM can be absorbed by the producers especially in the case that it is also responsible for maintenance or it can be also

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transferred to the final user when the final user can therefore provide safer and more reliable service.

10: COUNTRY SPECIFIC ELIGIBILITY RULES

The conditions and rules expressed in the next Participating State sections apply only to the participants of that Participating State in particular as to their eligibility for national funding or as to the attribution of national funding.

Austria

National contact person for ECSEL JU programme

Country	Name	First name	Tel	E-mail
AUSTRIA	Vierbauch	Doris	+43 (0)5 7755-5024	doris.vierbauch@ffg.at

National Funding Agency for Austria: [FFG](#)

The full version of the national eligibility criteria can be found at: www.ffg.at/ecsel

Legal requirements for the eligibility of a partner or a project

1) Type or nature of participants

Legal entities, partnerships and sole traders that are not part of the Austrian federal administration are eligible to receive funding. The following are eligible for funding:

- Companies of any legal form
- Institutions of research and knowledge dissemination
 - Universities⁹
 - Universities of applied sciences
 - Non-university research institutions
 - Technology transfer institutions, innovation agents and other research-oriented organisations such as associations with a relevant purpose
- Other non-commercial institutions
 - Local authorities¹⁰ and autonomous bodies
 - Non-profit making organisations such as NPOs¹¹

3) Legal, administrative and financial conditions

The national application of Austrian partners has to be submitted electronically via eCall: <https://ecall.ffg.at> before the deadline of the project outline submission and before the deadline of the Full Project Proposal submission respectively.

FFG experts will check the financial viability (credit rating and liquidity) of the participating enterprises. It is not possible to provide funding to undertakings in difficulty¹². Austrian enterprises have to provide the following documents:

- Annual statement of accounts (balance sheet, profit and loss account) from the past 2 financial years

⁹ The smallest possible unit of a university is an institute of the university or a organisation comparable to a UOG 2002/§20 organisation unit. It is a precondition that the participating organisation unit (institute or comparable unit) is authorised with corresponding mandate according to UOG 2002/§ 27. Units below (for example working groups) can not act as project partners.

¹⁰ Activities of local authorities falling within their statutory mandate are not eligible for funding.

¹¹ "Non-profit making organisations" do not distribute profits to their owners, members or other natural persons or legal entities in accordance with their legal status or articles of association.

¹² Undertakings in difficulty as defined in the General block exemption Regulation (EU) N°651/2014 of 17 June 2014

- [Declaration of SME Status](#) for associations and sole traders

The company size is to be determined according to the SME definition as specified by EU competition law: [information on SME definition](#).

3) Consortium configuration

The ratio of the **resources (PM = person month)** between Austrian companies and Austrian research organisations has to be 1.5 to 1 or higher within each project.

4) Other conditions

All Topics and Major Challenges of the MASP and Annual Work Plan 2020 are eligible for national funding. A certain amount of the available national budget is earmarked for the funding of national priorities:

- Being a national priority for national funding the key application “Transport & Smart Mobility” should receive a minimum funding of 3 Mio. €.
- Being a national priority for national funding the key application “Digital Industry” should receive a minimum funding of 3 Mio. €.
- Projects addressing the national priorities “Digital Industry” and “Transport & Smart Mobility” should take into account the ECSEL lighthouse initiatives Mobility.E and Industry4.E
- Priority is also given to projects addressing multi physical modelling and simulation for heterogeneous integration

Austria intends to reach a good balance between hardware oriented projects and software oriented projects.

The participation (total requested national budget) of each single Austrian institution has to be balanced in relation to the total national commitment. Project participations of Austrian partners are eligible for national funding only if they comprise mainly R&D activities.

Eligibility of the costs and funding

1) Eligibility of costs

The eligibility of costs is in accordance with the national rules on eligible costs. For details on the eligibility of costs see the Cost Guidelines Version 2.1: <https://www.ffg.at/recht-finanzen/kostenleitfaden/version-21>

2) Funding rates

	Percentage of the national subsidy to the beneficiaries ¹³			
	Large Enterprises, Groups and Associations of Enterprises	Medium Enterprises ¹⁴	Small Enterprises ¹⁴	Public Research Institutes and Universities
Experimental development (call 2019-1, IA)	up to 20 %	up to 25 %	up to 35 %	up to 30 %
Industrial Research (call 2019-2, RIA)	up to 25 %	up to 30 %	up to 40 %	up to 35 %

Additional Information to be provided at submission and other conditions

- **Registration at the eCall System of the FFG at <https://ecall.ffg.at/> for Project Outline stage AND Full Project Proposal stage** – completion of all relevant forms.
- Upload of relevant documents in the eCall: balance sheets, “ECSEL 2020 work package description for Austrian partners” for FPP, ...

¹³ calculated on national eligible costs

¹⁴ With regard to the size of companies, the current definitions of SMEs given in the EU competition law are applicable. (Definition of small and medium-sized enterprises and of independent businesses in accordance with recommendation 2003/361/EC of the Commission dated 6 May 2003, (ABl. L 124 of 20.5.2003, pp. 36-41)
http://ec.europa.eu/enterprise/policies/sme/files/sme_definition/sme_user_guide_de.pdf

Belgium

National contact person for ECSEL JU programme

Country	Name	First name	Tel	E-mail
BELGIUM Flanders	DEPREZ	Francis	+32 (0) 2 432 4301	francis.deprez@vlaio.be
	SILEGHEM	Maarten	+32 (0) 2 432 4202	maarten.sileghem@vlaio.be
	Brussels-Capital Region Maas	Stijn	+32 (0) 2 600 5067	smaas@innoviris.brussels

Funding authority websites:

Flanders: www.vlaio.be

Brussels: www.innoviris.brussels

Additional for ECSEL (Flanders):

- www.vlaio.be/nl/zoek?keyword=ecsel&type
- www.vlaio.be/nl/subsidies-financiering/subsidies-voor-ooi-een-internationaal-consortium/networks/ecsel-en

Legal requirements for the eligibility of a partner or a project

1) Type or nature of participants

For Flanders:

The participant must be a company established in Belgium, with a sustainable economic activity in Flanders, based upon a sound business model.

Flemish Strategic Research Centres (SOC) can be independent legitimate participants.

Research centres and universities can only be legitimate participants in projects compliant to the Flemish O&O-subsidy conditions (Research Partner)

For Brussels:

Participants in ECSEL projects wishing to receive funding from Innoviris must be companies, universities or research organisations (in accordance with the definitions provided for by the General Block exemption Regulation for State Aid and the Brussels legislation regulating the action of Innoviris) established on the territory of the Brussels-Capital Region and performing RDI activities within the project.

However, universities and research organisations are only eligible if, as part of the project, they are collaborating with a Brussels-based company.

Please note that no individual partner alone is allowed to support more than 70% of the project's cost.

2) Legal, administrative and financial conditions

For Flanders:

The participant can have no other public funding for the same activities.

In case of a multinational company, the application needs to be done by the Belgian legal entity or subsidiary.

For the independent project participation of a research centre or university, the legitimate status of Strategic Research Centre (SOC) is mandatory. A specific agreement with VLAIO is compulsory. Flemish governmental funding outside HERMES fund applies.

For enterprises “State Aid for Rescuing and Restructuring Firms in Difficulty” is applicable.

For Brussels:

For Brussels enterprises wishing to benefit from Innoviris funding, the financing conditions are as follows.

- develop all or some of its R&D activities within the territory covered by the Brussels-Capital Region
- present an innovative RDI project likely to have a favourable impact on employment and/or sustainable development of the Brussels-Capital Region
- show one's ability to finance one's share in the project
- have fulfilled its obligations in the context of previous support initiatives allocated by the Region.

No other public funding (except the European contribution provided by the JU) can be received by the beneficiaries for the activities performed within the project. Any other funding must be declared to Innoviris.

3) Consortium configuration

For Flanders:

Project application is done by either an enterprise with a legal entity in Belgium or a legitimate Strategic Research Centre.

Projects need to be primarily executed to the benefit of the applying entities.

Applications compliant to the status of Strategic Research Centre need to be done independently.

For Brussels:

Participants in ECSEL projects wishing to receive funding from Innoviris must be a company or a research organisation

Research organisations will only be awarded a regional financial support if within the project they collaborate with a Brussels-based enterprise.

4) Other conditions

For Flanders:

Enterprises need to prove adequate (financial) means to execute the project and a potential to use the results.

The project should yield socio-economic effects which can be quantified by activities or investments after the completion of the project, by exploitation in Flanders based entities, in accordance with the ruling detailed in the document (except for project applications by Strategic Research Centres). Conditions are compliant to the impact conditions of O&O, detailed on:

www.vlaio.be/nl/subsidies-financiering/onderzoeksproject/voorwaarden-om-aanmerking-te-komen-voor-de-subsidie

www.vlaio.be/nl/subsidies-financiering/ontwikkelingsproject/wie-komt-aanmerking-en-onderwelke-voorwaarden

Project qualification can be either 'research' or 'development' independent on the ECSEL call (IA, RIA of additional calls).

In case of potential military applications (including dual use), funding can be restricted.

For Brussels:

Exploitation and valorisation conditions:

Brussels-based participants must demonstrate their capability to carry out the tasks assigned to them in the project, exploit the results of the latter and the project's likelihood to have a positive impact on the Brussels-Capital Region's economy, employment and/or sustainable development.

Eligibility of the costs and funding

1) Eligibility of costs

For Flanders

Eligibility of costs is in accordance with the ruling of the O&O bedrijfssteun of Flanders, detailed in the documents available on:

<https://www.vlaio.be/nl/subsidies-financiering/onderzoeksproject/welk-bedrag-kan-je-krijgen-de-subsidie-onderzoeksproject>

www.vlaio.be/nl/subsidies-financiering/ontwikkelingsproject/financiele-steun-voor-een-ontwikkelingsproject

Eligible cost calculation will be done on the costs formulated in the ECSEL application.

In case of stand-alone Strategic Research Centre projects, ECSEL eligible cost system (H2020) is applicable for both ECSEL and national funding

For Brussels

For ECSEL projects, the Brussels-Capital Region will align on the JU and will therefore not apply additional rules, such as the regional rules applicable for individual RDI projects, on the eligibility of costs. The eligible costs will therefore be those retained by the JU for the European contributions in accordance with the Horizon 2020 Rules for Participation.

2) Funding rates

For Flanders

Type of Organisation Type of activity	Percentage of the national subsidy to the beneficiaries (1)			
	Large Enterprises, Groups and Associations of Enterprises	Medium Enterprises	Small Enterprises	Public Research Institutes and Universities (2) (3)
Industrial/Applied Research projects	60%-JU	60%-JU	60%-JU	= JU (1:1 ratio)
Experimental development projects	35%-JU	45%-JU	50%-JU	= JU (1:1 ratio)

Notes:

1. These percentages are maxima and given under the constraints that the project proposal fulfils the ECSEL eligibility criteria and that no participant in the ECSEL project holds more than 70% of the total (international) ECSEL project budget.
2. The funding of stand-alone Strategic Research Centre contributions is determined by specific project related agreement with IWT. These projects have no specific funding limit. The eligible costs for these projects may be set equal to the ECSEL eligible costs.
3. The funding of public research institutes and universities in projects initiated by enterprises in Belgium, is determined by the general principles of O&O-bedrijfsprojecten as published on the websites

www.vlaio.be/nl/subsidies-financiering/onderzoeksproject/wat-houdt-de-subsidie-onderzoeksproject

www.vlaio.be/nl/subsidies-financiering/ontwikkelingsproject/wat-is-een-ontwikkelingsproject

The funding level of the participating (initiating) enterprise applies.

Except for stand-alone Strategic Research Centre projects, funding is limited to € 3M per project. Total funding for not stand-alone Strategic Research Projects may be limited to € 4M. Funding to

enterprises may be limited if combined R&D funding (national and international) to an industrial participants exceeds VLAIO applicable ruling.

For Brussels:

Type of Organisation Type of activity	Percentage of the national subsidy to the beneficiaries (1)			
	Large Enterprises, Groups and Associations of Enterprises	Medium Enterprises	Small Enterprises	Public Research Institutes and Universities
Industrial/Applied Research projects	65%-JU%	75%-JU%	80%-JU%	100%-JU%
Experimental development projects	40%-JU%	50%-JU%	60%-JU%	100%-JU%

Notes:

These percentages are maxima and given under the constraints that the project proposal fulfils the ECSEL eligibility criteria and that no participant in the ECSEL project holds more than 70% of the total (international) ECSEL project budget.

Project funding for Brussels may be limited to € 0,5M.

Additional Information to be provided at submission and other conditions

For Flanders:

Additional information is mandatory as of the FPP-phase. Application according the ECSEL application form www.vlaio.be/nl/media/739 is mandatory (endorsing the application compulsory by ECSEL FPP closing date). European application format is requested. Starting the application procedure (without endorsement) is recommended as of the ECSEL PO phase.

For Brussels

The submission of a Part C containing additional information is compulsory for all Brussels partners. The Part C template is available on the INNOVIRIS website <http://www.innoviris.be> (Financial Aid to enterprises / European Programmes/ECSEL).

Bulgaria

National contact person for ECSEL JU programme

Country	Name and surname	Telephone	E-mail
Bulgaria	Emil Komatischev	+359(02)9407255	e.komatischev@mec.government.bg

Czech Republic

National contact persons for the ECSEL programme

Country	Name and surname	National funding authority	E-mail address
Czech Republic	Mr. Michal Vávra	Ministry of Education, Youth and Sports	michal.vavra@msmt.cz
	Mrs. Lucie Núñez Tayupanta		lucie.nunez@msmt.cz

The National Funding Authority (NFA) of the Czech Republic for the ECSEL programme is the **Ministry of Education, Youth and Sports** (hereinafter referred to as the “MEYS”), Department for Research and Development – Unit for European Research Area. Principal legal regulations and documents on public funding of research, development and innovation in the Czech Republic are available on the websites www.msmt.cz/vyzkum-a-vyvoj and www.vyzkum.cz.

Legal requirements for the eligibility of a partner or a project

1) Type or nature of participants

Public universities, public research institutes, private research organisations and/or other legal entities that can be classified as “**research and knowledge-dissemination organisations**” (hereinafter referred to as the “research organisation”) in accordance with the [Commission Regulation \(EU\) No 651/2014 of 17 June 2014](#) declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty (Chapter I, Article 2, Paragraph 83).

“**Enterprises**” – Small, medium and/or large-sized enterprises as defined by the Commission Regulation (EU) No 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty (Chapter I, Article 2, Paragraphs 2 and 24), listed in Business Register of the Czech Republic and performing research, development and innovation in the Czech Republic.

2) Legal, administrative and financial conditions

Public funding of research, development and innovation in the Czech Republic is provided pursuant to the **Act No. 130/2002 Coll. on the Support of Research, Experimental Development and Innovation from Public Funds** and on the Amendment to Some Related Acts (hereinafter referred to as the “Act on the Support of Research, Experimental Development and Innovation“).

3) Consortium configuration

The Czech fraction of an ECSEL project consortium must be configured from at least one enterprise and at least one research organisation, both these entities fulfilling the requirements stipulated in the clause 1 “Type or nature of participants”, thus complying with the Public-Private-Partnership principle.

4) *Other conditions*

It is obligatory that a Czech participant involved in an ECSEL project consortium proves its compliance with the eligibility criteria and fulfilment of the conditions stipulated by § 18 of the Act on the Support of Research, Experimental Development and Innovation by the means of a **Statutory Declaration**. The required procedures are described and the Statutory Declaration template is available on the website <http://www.msmt.cz/vyzkum-a-vyvoj-2/vyzva-k-predkladani-navrhu-projektu-ecsel-v-roce-2020>

Eligibility of the costs and funding

1) *Eligibility of costs*

Eligible costs for a Czech participant involved in an ECSEL project consortium are defined by:

Regulation (EU) No 1290/2013 of the European Parliament and of the Council of 11 December 2013 laying down the rules for participation and dissemination in "Horizon 2020 – Framework Programme for Research and Innovation (2014 – 2020)" and repealing Regulation (EC) No 1906/2006 (Article 26).

Regulation (EU, EURATOM) No 966/2012 of the European Parliament and the Council of 25 October 2012 on the financial rules applicable to the general budget of the Union and repealing the Council Regulation (EC, Euratom) No 1605/2002 (Article 126).

The **maximum indirect costs** are 25 % (flat rate) of the direct costs without the sub-contracting.

2) *Funding rates*

The MEYS consider the Research and Innovation Actions (RIA) being industrial research projects and the Innovation Actions (IA) being experimental development projects. Given these circumstances, the maximum intensity of the MEYS aid will be derived from the Commission Regulation (EU) No 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty (Chapter III, Section 4, Article 25, Paragraph 5).

The aid intensity for industrial research and experimental development will not be increased by the MEYS although the Czech participants in an ECSEL project consortium meet the conditions stipulated by the [Commission Regulation \(EU\) No 651/2014 of 17 June 2014](#) declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty (Chapter III, Section 4, Article 25, Paragraph 6). The aid intensities stipulated in the table below are definitive.

Funding rates	Large enterprises	Small and medium sized enterprises	Research organisations*
Research and Innovation Actions (RIA) projects	50 % including EU contribution	70 % including EU contribution	100 % including EU contribution

= Industrial Research			
Innovation Actions (IA) projects = Experimental Development	20 % + EU contribution (up to 40 %)	25 % + EU contribution (up to 50 %)	100 % including EU contribution

* **The aid intensity for research and development activities carried out by the research organisation might be at the level of 100 % (EU and the Czech national contribution included)** only if the research organisation entirely complies with the requirements stipulated by the Article 2.1.1 “Public funding of non-economic activities” of [Framework for State Aid for Research and Development and Innovation \(2014/C 198/03\)](#) and proves it by the means of a **Statutory Declaration** submitted to the MEYS using the form available on website <http://www.msmt.cz/vyzkum-a-vyvoj-2/vyzva-k-predkladani-navrhu-projektu-ecsel-v-roce-2020>.

If a legal entity does not comply with all the requirements stipulated for the research organisation, it will be considered as an enterprise (small, medium or large) and the aid intensity will be then adjusted appropriately by the MEYS.

Additional Information to be provided at submission and other conditions

All the information concerning additional requirements stipulated by the MEYS for the ECSEL program are available on website <http://www.msmt.cz/vyzkum-a-vyvoj-2/vyzva-k-predkladani-navrhu-projektu-ecsel-v-roce-2020>.

Denmark

National contact person for ECSEL JU programme

Country	Name	First name	Tel	E-mail
Denmark	Vittrup	Jens Peter	+45 6190 5023	Jens.peter.vittrup@innofond.dk
	Lindberg	Børge	+45 6190 5012	Boerge.lindberg@innofond.dk

Legal requirements for the eligibility of a partner or a project

1) Type or nature of participants (project partners)

- Danish: Commercial enterprises registered in Denmark (The Central Business Register - CVR).
- Research organisations, recognized as such by the Research Council of Norway: Universities,
- Higher education institutions (HEI), Public research institutes.
- Any other type of Danish organization such as hospitals, municipalities etc. (See IFDs Guidelines for International Projects)

2) Legal, administrative and financial conditions

- General eligibility criteria and conditions for receiving project funding from the Innovation Fund Denmark (IFD) will apply (i.e. the beneficiary must be a registered legal entity, have credible capacity to execute the project activities in Denmark, demonstrate financial viability, and provide transparency as to funding requested or received from other sources).
- Companies must be established with a considerable business activity in Denmark within the scope of the ECSEL project.
- All Danish project partners must possess relevant research & innovation capabilities.

3) Consortium configuration

- At least one Danish company must be involved as a partner in the project, and at least 50 % of the efforts (total eligible costs) of Danish partners in the project must be from Danish business partners. National funding priority will be given to projects with based on the results of the project can generate most knowledge based growth and employment in Denmark.
- The industrial relevance of the participation of a research organisation must be justified by declarations from the Danish business partner(s) in the project or from some other enterprise(s) that would be eligible according to the criteria 1) and 2) above.

4) Other conditions

- Companies (business partners in the project) must provide specific information on the possible industrial and commercial impact of the project, and justify that they have the necessary means to exploit the project results.
- Research organisations and other non-commercial partners must specify national industrial impact in terms of exploitation opportunities for Danish businesses.

Eligibility of the costs and funding

1) Eligibility of costs

Horizon 2020 rules and guidelines on eligible costs will apply.

2) Funding rates

The maximum funding rates for the national share of the funding provided by the IFD will be as listed in the table below. In addition, the EU cofunding can be provided according to the ECSEL co-funding rates:

IFD funding rates for ECSEL projects, Max IFD funding per DK partner: €300.000, Max for all DK partners €500.000						
	Large industry	Medium Enterprises (50-248 FTE)	Small Enterprises (1-49 FTE)	Research organisations (GTS)	Universities, hospitals & public institutions	Other costs (overhead). Share of funding
Experimental Research (IA)	20%	25%	25%	25%	55%	Universities: 44% Hospitals: 3,1
Industrial Research (RIA)	40%	45%	45%	25%	55%	Universities: 44% Hospitals: 3,1%

Additional Information to be provided at submission and other conditions

1. The total Danish funding budget for the above ECSEL Calls is 2 mill. €.
2. Additional budget might become available for the Call 2019-3. This will be announced at a later stage.
3. There is no pre-allocated distribution of the Danish funding budget between the two Calls, nor to specific topics of any of the two Calls.
4. Danish applicants should consider 0,3 mill. € as a maximum amount of national funding if one Danish partner participate in the application and up to 0,5 mio.€ for all Danish participants if more than one Danish partner participate in the call. In addition to the national funding EU co-funding can be received according to ECSELS co-funding rules.
5. National funding will be subject to conditions in current state aid rules (Commission Regulation (EU) No 651/2014). If other public funding, besides the EU funding, will be granted for the project, the listed maximum rates for national funding will be reduced if required to ensure that aid intensity limits in the state aid rules are respected. Beneficiaries must submit declarations regarding company size and financial situation.
6. Information providing the justifications required according to items 3) and 4) in the above eligibility criteria must be provided as a separate attachment (Part C) at submission, both at the PO and at the FPP submission stage.
7. Information necessary to confirm whether eligibility criteria mentioned in item 2) above are fulfilled shall be submitted to the Research Council of Norway on request, before a National

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Grant Agreement can be established.

Finland

National contact person for ECSEL JU programme

Country	Name	First name	Tel	E-mail
Finland	Ahola	Kimmo	+358 50 5577 756	kimmo.ahola@businessfinland.fi
	Leino	Kari	+358 50 5577 698	kari.leino@businessfinland.fi

Finland's national public funding authority for ECSEL is Innovation Funding Agency Business Finland. Business Finland funding principles can be found at:

www.businessfinland.fi/en (English)

www.businessfinland.fi (Finnish)

Legal requirements for the eligibility of a partner or a project

1) Type or nature of participants

- Companies (enterprises)
- Industry associations
- Universities and polytechnics
- Public research institutes and similar research organizations

2) Legal, administrative and financial conditions

- A company has considerable industrial or R&D&I activities in Finland
- A company has a clear financial record and has the financial capability to cover its own expenses during the project (e.g. the company must show positive equity at decision taking)

3) Consortium configuration

- A public research institute, university or a polytechnic shall be accompanied in the project by at least two eligible companies in Finland
- Research and Innovation Actions (RIA) projects: The project volume (costs) of public research institutes, universities and polytechnics from Finland combined shall not exceed 50 % of the total volume (costs) of Finnish participants based on national (Business Finland) funding rules
- Innovation Action (IA) projects: The project volume (costs) of public research institutes, universities and polytechnics from Finland combined shall not exceed 30 % of the total volume (costs) of Finnish participants based on national (Business Finland) funding rules

4) Other conditions

- The project participation should have sufficient positive impact on the Finnish economy or society.
- Priority is given to the topics that are not covered by already funded ECSEL projects.

Eligibility of the costs and funding for ECSEL Call 2019**1) Eligibility of costs**

Eligibility of the costs is in accordance with the national (Business Finland) funding rules.

2) National public funding

Type of activity	Large Enterprises	Small and Medium Enterprises	Public Research Institutes and Universities
Research and Innovation action	20 % grant	35 % grant	38 % grant
Innovation Action	20 % grant or Max. 50 % loan	35 % grant or Max. 50 % loan	38 % grant

Additional Information to be provided at submission and other conditions

Every participant in Finland should submit a separate Business Finland funding application within 14 days of ECSEL call closure date.

France

National contact person for ECSEL JU programme

Country	Name	First name	Tel	E-mail
France	CAPY	Loïc	01 79 84 32 61	loic.capy@finances.gouv.fr contact.ecsel@finances.gouv.fr

Website reference:

www.entreprises.gouv.fr/secteurs-professionnels/initiatives-technologiques-conjointes-jti

Legal requirements for the eligibility of a partner or a project

The items published in French in the following text are the official national eligibility criteria for funding. The items published in English are a translation. The text in French takes precedence over the text in English.

The French applicants of an ECSEL 2020 project proposal have to seek a national funding to become eligible :

- through an existing national program such as Nano 2022, if they are beneficiaries of it, and under the conditions of this program. In the case of Nano2022, it is reminded that only the already identified team leaders are allowed to bid in the framework of this program.
- through a national or regional call, with respect to the specific conditions of this call.

Applicants to a funding through Ecsel have to respect all the criterias listed in the present document.

Les porteurs français d'une proposition de projet pour ECSEL 2020 doivent, pour être éligibles, rechercher un financement national :

- au titre d'un programme national existant tel que Nano2022, s'ils en sont bénéficiaires et dans les conditions prévues par ce programme. Dans le cas de Nano2022, il est rappelé que seuls les chefs de file identifiés dans le programme sont habilités à déposer des dossiers au titre de ce programme ;
- au titre d'un appel à projets national ou régional, en respectant les conditions spécifiques à cet appel.

Partners must contact the national correspondent before the « Project Outline » submission. The aim of this contact is to direct the requestor to the most relevant financing mechanism, and for the Nano2022 team leaders, to check the conformity of the project with the strategic lines of the program.

Les partenaires doivent impérativement contacter le correspondant national avant le dépôt de la « Project Outline ». L'objectif de ce contact est d'orienter le demandeur vers le guichet le plus adapté, et pour les chefs de file Nano2022 de déterminer la conformité du projet avec les axes stratégiques du programme.

The following criteria are valid only for the partners eligible to the plan Nano2022 and are without prejudice to the application of legal rules and regulations concerning the allocation of public

funding by the French State. For partners who have submitted an application for funding under a national or regional call for projects, they must refer to the terms of reference of this call.

Les critères suivants ne s'appliquent qu'aux partenaires éligibles au plan Nano2022 et ne préjugent pas de l'application des règles légales et réglementaires en vigueur concernant l'attribution de subventions par l'État français. Pour les partenaires ayant déposé une demande de financement au titre d'un appel à projets national ou régional, ils doivent se référer au cahier des charges de l'appel à projets en question.

1) Type or nature of participants

- Private and public companies of all sizes
- Universities
- Research Institutes

- Entreprises privées ou publiques de toutes tailles
- Universités
- Instituts de recherche

2) Legal, administrative and financial conditions

The work to be done by the partners must neither have already benefited from public funding (excluding generic fiscal aid) nor be redundant with similar projects already funded by French authorities.

Les travaux ne doivent pas déjà avoir fait l'objet d'un soutien public (hors mesures fiscales génériques) ni être en redondance avec des travaux similaires financés par les autorités françaises.

The financial situation of each private partner must be validated (financial structure, cash flow, operating accounts) and considered compatible (activity volume, workforce, financial capability) with the amount and the content of the eligible costs as well as with the amount of the demanded aid and of the already granted public aid.

La situation financière de chaque partenaire privé doit être validée (structure financière, flux de trésorerie, compte d'exploitation) et jugée compatible (volume d'activité, moyens humains, moyens financiers) avec le montant et le contenu de l'assiette des dépenses ainsi qu'avec le montant de l'aide sollicitée et des aides publiques déjà accordées par ailleurs.

3) Other conditions

The partners must contribute to achieving one or several significant technological breakthroughs with the objective of designing or improving products, services or processes, and must set-up a capability to make these products or processes. These ones must have a sufficient potential impact on their activity in the European Union and in particular in France, in terms of employment, competitiveness, value creation and growth at short or medium-term.

Les partenaires doivent contribuer à lever un ou plusieurs verrous technologiques significatifs en vue de concevoir ou d'améliorer des produits, services ou procédés, ainsi que mettre en place les moyens de réalisation de ces produits et procédés. Ceux-ci doivent présenter pour eux des perspectives suffisantes de retombées sur le territoire de l'Union européenne, et notamment en France, en termes d'emplois, de compétitivité, de création de valeur et d'activité économique à court ou moyen terme.

The tasks assigned to partners must be well specified and should consist in « experimental development » or « industrial research » as defined in the R&D&I framework. In

accordance with the R&D&I framework, the aid to each company must have an incentive effect on its R&D&I activities.

Les travaux réalisés par les partenaires doivent être bien spécifiés et pouvoir être considérés comme « développement expérimental » ou « recherche industrielle » au sens de l'encadrement des aides à la RDI. Conformément à l'encadrement des aides à la RDI, l'aide à chaque entreprise doit avoir un effet d'incitation sur ses activités de RDI.

Eligibility of the costs and funding

1) Eligibility of costs

The French eligible costs will be based on the amount obtained using the financial data sheets, which will have to be filled by each French partner.

Les coûts éligibles français seront basés sur le montant obtenu en remplissant les annexes financières des autorités françaises pour chaque partenaire français.

2) Funding rates

The reference rates for the French public funding are the following :

Les taux de référence pour l'aide nationale française sont les suivants :

Type of partner	Calls RIA (Research and Innovation Actions) & IA (Innovation Actions)
Industry	15%
SME	20%
RTO	15%
Univ, non profit	60%

These rates will be applied nominally for projects funded under the Nano2022 framework. For projects whose national public funding originate from other programs or national/regional calls, these rates might be adapted according to the conditions of these financing mechanisms, who could also take into account the existence of a European co-funding.

Ces taux seront appliqués en l'état pour les projets financés au titre du programme Nano2022. Pour les projets dont le financement national serait obtenu au titre d'autres programmes ou guichets nationaux / régionaux, les taux sont susceptibles de varier selon les conditions propres aux dispositifs dont les financements seront issus, et à la prise en compte par ces dispositifs de l'existence d'un cofinancement européen.

Additional Information to be provided at submission and other conditions

Only for the partners eligible to the plan Nano2022 and in parallel to the documents sent to the ECSEL JU, the French leader of each submitted project will have to send to the French public authorities a file called “part C” , **for each French partner in the project.**

Seulement pour les partenaires éligibles au plan Nano2022 et en complément du dossier de soumission du projet, transmis à l’entreprise commune, le responsable français de chaque projet doit adresser aux autorités françaises un dossier appelé « partC »pour chaque partenaire du projet.

The application submitted must **contain all elements which will allow French authorities to assess and justify the eligibility of the aid** asked by the partners. In particular, the application must include, besides the documents required for application to the Joint Undertaking call and all documents listed on the reference website, **information specifying for each partner the potential economic impact in the European Union in terms of employment, competitiveness, value creation and economic activity, as well as the positioning of the partner on the targeted markets and the timeframe of this impact.**

Le dossier soumis doit **présenter les éléments permettant aux autorités françaises d’apprécier et de justifier l’admissibilité de l’aide** demandée par les partenaires. En particulier, le dossier doit comprendre, outre les documents requis au titre de l’appel à projets de l’entreprise commune et les documents spécifiés sur le site internet de référence, **une fiche précisant, pour chaque partenaire, les perspectives de retombées économiques sur le territoire de l’union européenne, en termes d’emploi, de compétitivité, de création de valeur et d’activité économique, ainsi que le positionnement du partenaire sur les marchés visés et l’horizon temporel de ces retombées.**

Germany

National contact people for the ECSEL JU programme

Country	Name	First name	Tel	E-mail
Germany	General information on funding under Horizon 2020			
	Schröder	Sabine	+49 30 670 55 772	Sabine.Schroeder@dlr.de

Germany	Specific information on national funding applications for ECSEL			
	Kaltschew	Julia	+49 30 310078 151	Julia.Kaltschew@vdivde-it.de
	Rittner	Johannes	+49 30 310078 230	Johannes.Rittner@vdivde-it.de

NOTE: For 2020, there are changes below regarding the desired minimum overall effort (50 person years instead of 100 person years) and highlighting the fact that proposals with a strong involvement of SMEs in the value chain are particularly welcome.

The national call for proposals for German federal funding for ECSEL participants is available via the URL given below. It contains additional information on contact points for *Länder* funding. There will be a technical update of the call for 2020.

Applicable documents

- The German Federal Government's Framework programme for Research and Innovation 2016-2020 „Mikroelektronik aus Deutschland – Innovationstreiber der Digitalisierung“: https://www.bmbf.de/pub/Rahmenprogramm_Mikroelektronik.pdf (English translation: “Microelectronics from Germany – Driver of innovation for the digital economy” <http://www.elektronikforschung.de/dateien/publikationen/research-programme-microelectronics-from-germany.pdf>).
- Strategic framework „Die Hightech-Strategie 2025 – Köpfe.Kompetenzen.Innovationen“: https://www.bmbf.de/pub/Forschung_und_Innovation_fuer_die_Menschen.pdf (English translation: “The High-Tech Strategy 2025” https://www.bmbf.de/upload_filestore/pub/Research_and_innovation_that_benefit_the_people.pdf)
- Federal funding will be awarded by the Bundesministerium für Bildung und Forschung (BMBF) according to a national ECSEL call accessible via <https://www.elektronikforschung.de/foerderung/europaeische-foerderung/ecsel>
- Certain *Länder* provide regional co-funding for project work carried out there. This currently applies to:
 - Saxony (see https://www.bmbf.de/files/BMBF-Sachsen_Gemeinsame_Erklaerung_zur_Foerderung_in_ECSEL.pdf). The Saxon funding decision will be based on the criteria listed in the Annex of the *Sächsische ECSEL-Förderrichtlinie* <http://www.revosax.sachsen.de/vorschrift/14170>.
 - Thuringia

Up-to-date information on participating *Länder*, any applicable regional calls for funding, and

specific application forms is provided via <https://www.elektronikforschung.de/foerderung/europaeische-foerderung/ecsel>

Criteria and rules for the eligibility of a partner or a project

1) Type or nature of participants

- Commercial companies in Germany
- State and non-state institutions of higher education and non-university research establishments in projects with commercial companies in Germany

2) Legal, administrative and financial conditions

A contribution of German partners within the Work Plan 2020 is nationally eligible for funding by the BMBF if the contribution of the national partners focuses on research in electronics and smart systems, including hardware- and software-intensive cyber-physical systems. Details are specified in the national ECSEL call (see above).

Partners from certain *Länder* will typically receive combined funding from the BMBF and the respective *Land* based on administrative agreements between these two parties.

- It is required that project proposals contribute significantly to “Die Hightech-Strategie 2025 - Köpfe.Kompetenzen.Innovationen”. They should address at least one of the strategic research focuses and/or application focal points given in the above-mentioned framework programme “Microelectronics from Germany – Driver of innovation for the digital economy”, sections 3.1 “Expanding technology expertise” and 3.3 “Tackling future tasks using microelectronics”.
- The work planned by the partners must neither have already benefited from public funding nor be redundant with similar projects that are already being funded or that are under consideration in another programme.
- R&D&I projects shall relate to societally relevant questions. An essential ambition of funding is to strengthen the position of project partners and companies located in Germany which aim to exploit research results in Germany and Europe, as well as to accelerate technology transfer from the pre-competitive area into practical applications. Projects should illustrate the added value of R&D&I results on the basis of an appropriate application, e.g. a demonstrator.
- Funding will be allocated to R&D&I projects which promise a lasting benefit for Germany and Europe in terms of safeguarding and creating employment, maintaining competitiveness and increasing added value. Projects with a greater national and European added value are a greater priority for funding.
- Reimbursement rates requested in national grant applications should correspond to the TRL of the planned work and the type of applicant. Each national grant application will be assessed individually to determine the maximum total reimbursement rate as well as the nationally eligible costs/expenditures.
- To be eligible for national funding, the overall effort of any project with participants from Germany should be at least 50 person years. Additionally, German participation in this project should be at least 10% of the overall effort. Moreover, each German partner should contribute substantially to the effort of the German consortium.
- The Project Outline (PO) and Full Project Proposal (FPP) submitted to the ECSEL JU shall include a fully completed “National Grant” table. The “National Grant” table shall include the budget (including national funding request) established according to the rules for cost eligibility and amounts applicable in Germany for purely national funding. Where a single legal entity (“organisation” in Part A of the ECSEL application form) requests funding for activities to be

carried out at one or several organisational units (“departments”) that have a high degree of autonomy and/or are located in a different *Land* from the organisation, the budget for each such department shall be listed separately in the “National Grant” table. Please refer to <https://www.elektronikforschung.de/foerderung/europaeische-foerderung/ecsel> where a template for the “National Grant” table is available. **The eligibility of German project partners cannot be evaluated without the “National Grant” table.**

- National grant applications shall not be handed in before they are requested by the national funding authority. In case the FPP is selected to be funded nationally, the national funding authority will contact each partner individually in order to request a national grant application (for details please see the national call that is available via <https://www.elektronikforschung.de/foerderung/europaeische-foerderung/ecsel>).

3) Consortium configuration

- As ECSEL is an industry-driven programme each consortium has to reflect an appropriate balance between industrial companies, RTOs and academia: the ratio of efforts (in person months) between companies and research institutions from Germany in any given project should be 2:1 or higher.
- Germany aims at a high participation of SMEs and supports the Horizon 2020 goal that a minimum of 20 % of the total public funding should be awarded to SMEs. To this end, proposals are particularly welcome that demonstrate a substantial involvement of SMEs in the value chain(s).

4) Other conditions

TRL 2 – 4: application-oriented projects

Funding may be awarded for high-risk pre-competitive industry-driven research and development projects of civil nature and civil use which focus on cross-border technologies in an application-oriented approach, meet a sufficiently high level of innovation and could not be accomplished without public funding.

TRL 5 – 8: production-related projects

Funding may be awarded for high-risk pre-competitive industry-driven research and development projects of civil nature and civil use related to production which focus on experimental development, meet a sufficiently high level of innovation and could not be accomplished without public funding.

The following projects are not eligible for BMBF funding:

- Projects in entertainment and gaming;
- Projects that do not have an exclusive focus on civil applications and civil exploitation;
- Projects of pure basic research.

Eligibility of the costs and funding

1) Eligibility of costs

- The eligibility of costs is regulated in the BMBF’s standard terms and conditions for grants on

expenditure or cost basis and the administrative regulations under sections 23 and 44 of the Federal Budget Code (BHO). Identical rules will be applied in cases where applicants request funding from Saxony and Thuringia. Rules for any additional *Länder* that might provide funding in future are subject to negotiation between BMBF and the respective *Land*.

2) Funding and funding rates

- Financial BMBF support is awarded in the form of grants to participants through project funding as non-repayable grants.
- Project grants will be awarded in accordance with the BMBF's standard terms and conditions for grants on expenditure or cost basis and the administrative regulations under sections 23 and 44 of the Federal Budget Code (BHO).
- The BMBF's "General Conditions for the Allocation of Benefits for Research and Development Projects to Commercial Companies on a Costs Basis 2017" (NKBF 2017) and the „General Conditions for the Allocation of Benefits on an Expenditure Basis“ (NABF) respectively form part of any award of grants. Identical rules will be applied in cases where applicants request funding from Saxony and Thuringia. Rules for any additional *Länder* that might provide funding in future are subject to negotiation between BMBF and the respective *Land*.
- Universities and other higher education institutions may request a "Projektpauschale" which will be granted on the national funding part managed by the BMBF.
- The national funding aims at mirroring the funding which a participant actually receives from the Joint Undertaking in absolute amounts (EUR), matching up to 1:1. Furthermore, the total public funding (EU + BMBF + any other public funding) will not exceed the level that usually applies for purely national funding, in line with EU state aid rules, national funding policies, budgetary considerations, and the project structure. The national funding may therefore be below a 1:1 ratio per partner.

Additional Information to be provided at submission and other conditions

- Applicants from Germany need to use the electronic application system "easy-Online" for formal national applications upon request by the national funding authority. In addition, they must submit each grant application by mail including a legally binding signature and a short description for all cost positions as well as an exploitation plan of the planned project in German language.
- Guidelines, information for applicants and the terms and conditions for the award of grants are available at "Formularschrank BMBF":
https://foerderportal.bund.de/easy/easy_index.php?auswahl=easy_formulare&formularschrank=bmbf
- Partners applying for funding from Saxony or Thuringia need to submit the appropriate form in parallel with the BMBF grant application (available via <https://www.elektronikforschung.de/foerderung/europaeische-foerderung/ecsel>).
- Applicants shall take care to ensure a consistent presentation of the project costs in the national and the European grant application, taking into account the respective criteria for the eligibility of costs.
- If additional information is requested, it will be specified in the national funding authority's request to submit a formal application.
- There is no legal entitlement to the award of a grant. BMBF will take a decision after due assessment of the circumstances and within the framework of the budget funds available.

Hungary

National contact person for ECSEL JU programme

Country	Name	First name	Telephone	E-mail
Hungary	Divinyi	Agnes	+36 1 896-3754	agnes.divinyi@nkfih.gov.hu

National Funding Authority: National Research, Development and Innovation Office (1077 Budapest, Kéthly Anna tér 1.)

website: www.nkfi.gov.hu

Legal requirements for the eligibility of a partner or a project

Type of participants

The following types of organisations are eligible for funding:

- Business enterprises with legal entity registered in Hungary;
- Foreign-registered enterprises with branch office in Hungary;
- Non-profit organisations with legal entity registered in Hungary;
- Public bodies or their institutes with legal entity

Legal, administrative and financial conditions

In order to conclude the national grant agreement the Hungarian applicants have to comply with the regulations of Act CXCV of 2011 on Public Finance, Government Decree No. 368/2011 on the implementation of Act on Public Finance, Government Decree No. 380/2014 on the rules of operation and use of National Research, Development and Innovation Fund.

Applicants are expected to contribute their own financial resources to the project costs. This amount depends on the project activities and the applicant's organization form. The own financial resources shall be determined by prevailing law.

Consortium configuration

Hungarian consortium members shall be autonomous¹⁵ regarding their relation with each other in the consortium.

¹⁵ autonomous: the enterprise is either completely independent or has one or more minority partnerships (each less than 25%) with other enterprises

Eligibility of costs and funding

Eligible costs

- Personnel costs: salaries, social security charges and other costs included in the usual remuneration of personnel assigned to the action based on the number of annual productive hours (excluding premium, cafeteria etc.),
- travel costs and related subsistence allowances,
- cost of other goods and services (e.g. consumables and supplies),
- subcontracting,
- equipment costs (depreciation) and immaterial expenses (depreciation),
- indirect costs (flat rate of maximum 25% of total direct eligible costs, excluding direct eligible costs for subcontracting and the costs of resources made available by third parties which are not used on the premises of the beneficiary).

Ineligible costs in particular: deductible VAT, currency exchange losses, bank costs, mortgage costs, guarantee costs, interest owed, penalties and fines, debt and debt service charges, membership fee, representation costs, public procurement costs, excessive or reckless expenditure, costs incurred during suspension of the implementation of the action etc.

Funding rates

Funding rates are based on Article 25 (aid for research and development projects) of Commission Regulation (EU) No 651/2014 of 17 June 2014 on declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty.

Type of Organisation	Percentage of maximum subsidy (EU contribution and national funding together) to the beneficiaries (calculated on the basis of the national eligible costs)			
	Large Enterprises	Medium enterprises	Small Enterprises	Public Research Institutes, Universities, non-profit organisations
Fundamental/Basic research	100%	100%	100%	100%
Industrial/Applied Research	up to 65%	up to 75%	up to 80%	100%
Experimental development	up to 40%	up to 50%	up to 60%	100%

The aid intensity of

- industrial research is 50% and
- experimental development is 25%,

however these rates may be increased

- by 20 percentage points for small enterprises and
- by 10 percentage points for medium-sized enterprises.

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Funding intensity per member may be increased by a further 15 percentage points up to a maximum of 80% (this means the whole public funding, i.e. Hungarian national funding + EC funding) if one of the following conditions are fulfilled:

- the project is implemented through effective collaboration
 - between undertakings among which at least one is an SME, or is carried out in at least two Member States, or in a Member State and in a Contracting Party of the EEA Agreement, and no single undertaking bears more than 70 % of the eligible costs, or
 - between an undertaking and one or more research and knowledge-dissemination organisations, where the latter bear at least 10 % of the eligible costs and have the right to publish their own research results
- the results of the project are widely disseminated through conferences, publication, open access repositories, or free or open source software.

Coordination, dissemination and IP protection activities are financed as de minimis aid, which has 100% funding rate.

Maximum national grant amount for an entity in a project is HUF 200 million.

Additional Information to be provided at submission and other conditions

Please note that Hungarian project partners shall submit a proposal to the National Funding Authority for national financing if the project has been selected and approved for funding through the international evaluation and selection process.

A legal entity is allowed to participate in more than one project proposals, but in case of successful evaluation it will be financed in the framework of only one project.

Ireland

National contact person for ECSEL JU programme

Country	Name	First name	Tel	E-mail
Ireland	O'Reilly	Stephen	+353 21 4800217	stephen.oreilly@enterprise-ireland.com

www.enterprise-ireland.com/JTIs

Legal requirements for the eligibility of a partner or a project

1) Type or nature of participants

Companies that are eligible to receive R&D funding from one of the following agencies will be considered for funding; Enterprise Ireland, IDA Ireland or Udaras na Gaeltachta.

Irish third level research performing organisations will also be considered for national funding.

2) Legal, administrative and financial conditions

The relevant national funding agency should be satisfied that a company seeking national funding has the potential to derive a benefit, proportionate to the national funding being sought, through the exploitation of the results of the proposed project or otherwise.

All participants are advised to contact the relevant national funding agency before committing to participate in any proposal.

Higher Education Institutions will be eligible only if;

- there is also at least one Irish based company that meets the national eligibility criteria in the consortium, and
- the national funding agencies are satisfied that there will be a benefit from the participation of the Higher Education Institution, proportionate to the funding being sought, for an Irish based company or companies that the agencies are satisfied to support.

3) Consortium configuration

Projects should be introduced by companies and primarily executed to the benefit of these entities.

4) Other conditions

Example: eligibility conditions related to pilot lines

Eligibility of the costs and funding**1) Eligibility of costs****2) Funding rates**

Type of Organisation / Type of activity	Percentage of the national subsidy to the beneficiaries ¹⁶			
	Large Enterprises, Groups and Associations of Enterprises	Medium Enterprises	Small Enterprises	Public Research Institutes and Universities
	Up to 40%	Up to 50%	Up to 50%	100% less EU contribution

Additional Information to be provided at submission and other conditions

Only for the Full Project Proposal (not for the Project Outline):

Please note that each Irish participant must create a PDF file indicating how they meet the national eligibility criteria for funding as indicated in the Irish section of the Eligibility Criteria document published in the Call. You must upload this in the ECSEL JU Proposal Submission system as Part C of the **Full Project Proposal** (one file for each participant).

Note that Irish companies must clearly state in the proposal the following points:

1. From which of the three Irish agencies (Enterprise Ireland, IDA Ireland or Udaras na Gaeltachta) it is eligible to receive national R&D funding
2. Explain how it has the potential to derive a benefit, proportionate to the national funding being sought, through the exploitation of the results of the proposed project or otherwise.

¹⁶ With regard to the size of the enterprise, the respective SME definition according to EU competition law applies as amended (definition of small and medium-sized enterprises according to Recommendation 2003/361/EC of the Commission of 6 May 2003, (OJ L 124 of 20.5.2003, pp 36-41) http://ec.europa.eu/enterprise/enterprise_policy/sme_definition/index_en.htm

Israel

Israel Innovation Authority (InnovationAuth)

Malha Technology Park,
Derech Agudat Sport Hapoel 2, Jerusalem, 9695102, Israel

National contact person for ECSEL JU programme – Calls 2020

Country	Name	First name	Tel.	E-mail
Israel	Seker	Danny	+972-3-5118121	Dan@iserd.org.il
Israel	Shaked	Nir	+972-3-7157916	Nir.s@iserd.org.il

<http://www.iserd.org.il/ecsel>

Funding Criteria and Regulations

Eligibility criteria:

- The application and eligibility are subject to the “Procedure for Financing Israeli Partners by the Israel Innovation Authority under ECSEL” (the “Procedure”) which will be available online at <https://www.innovationisrael.org.il/> > search for ECSEL.

- Each applicant needs to provide the InnovationAuth a preliminary proposal in a form that may be found at the InnovationAuth site, by the deadline of stage 1 of this call.

Only applicants that passed InnovationAuth eligibility committee and ECSEL stage 1 technical evaluation check will be permitted to pass to stage 2 of the call.

- Each participant, that passed the second round of the Technical evaluation, will need to sign the "ECSEL 2020 participant document" prior to the final approval of IIA GA. This document will be update with the approved results (Total approved cost, funding percentage) prior to open the IIA GA.

1) Type or nature of participants

The following legal entities are eligible for funding:

- Industrial entities registered in Israel, with internal R&D capabilities
- Israeli universities may take part as sub-contractor of an Israeli Industrial entity

2) Administrative and financial conditions

The ECSEL rules applies for the Israeli participants.

3) Consortium configuration

The ECSEL rules applies

4) Other conditions

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Financial viability and business soundness is verified by means of an internal check - companies that are in danger of insolvency cannot be funded

5) Cost Eligibility and funding rates

Eligibility of the costs

The ECSEL rules applies

Maximum fund

The maximum overall contribution for Israeli participant (EC contribution and IIA contribution) will not exceed 50% of the Total approved cost for this participant.

Italy

Italy is participating to the present calls with funds coming from the following funding organizations:

- 1) Ministry for University and Research (MUR) which is committing 2,5 M€ as grants;
- 2) Ministry for Economic Development (MISE) whose commitment has not been decided yet;

The specific eligibility criteria and funding rules for each funding organization are described the following paragraphs.

Ministry for University and Research (MUR)

National Funds (FIRST)

National contact person for ECSEL JU programme

Country	Name	First name	Tel	E-mail
Italy (MUR)	Covello	Aldo	+39 069772 6465	aldo.covello@miur.it
Italy (MUR)	Di Marco	Vincenzo	+39 06 9772 7727	vincenzo.dimarco@miur.it

Website: <http://www.ricercainternazionale.miur.it/era/jti/ecsel.aspx>

Legal requirements for the eligibility of a partner or a project

1) Type or nature of participants

According to art. 60 of the Decree-Law n. 83/2012 and art. 5 of its implementing Ministerial decree 593/2016, the following entities are eligible, providing that they have stable organization in Italy: enterprises, universities, research institutions, research organizations in accordance with EU Reg. n. 651/2014 of the European Commission - June 17, 2014.

2) Legal, administrative and financial conditions

The participant must not be defaulting with regard to other funding received by the Ministry.

The participant must not have requested/got any other funding for the same project, apart from the ECSEL funding.

The participant must respect the Italian law "D.Lgs. n 159 del 6/09/2011 e successive modificazioni ed integrazioni".

The participant must not be subject to bankruptcy proceedings as of art. 5, comma 4, letter b) of DM 593/2016 or must not be a company in difficulty according to the definition under number 18) of article 2 "Definitions" of Regulation (EU) no. 651/2014.

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The participant must be in compliance with the obligations laid down in the contributory and social security regulations (DURC).

The judicial and pending records of the legal representative of the participant are negative

For any private entity, the following financial criteria, calculated using the data reported in the last approved balance sheet, must be fulfilled

a) $CN > (CP - I)/2$

Where:

CN = net assets (Capitale netto)

CP = sum of the costs of all the projects for which public funding has been requested by the participant during the year

I = sum of the contributions received, approved or requested for the same projects

b) $OF/F < 8\%$

Where:

OF = financial charges (Oneri finanziari)

F = turnover (Fatturato)

3) Consortium configuration

The Italian consortium must include at least one Italian company, independently from the Ministry which is funding it. Other types of participants are allowed, provided that the financial participation of companies is higher than 50% of the total cost of the Italian consortium. The project shall be executed primarily to the benefit of the company/es

4) Other conditions

Companies must have the financial means to execute the project and a potential to use the results.

The participant should foresee, after the end of the project, the exploitation of the results of the project so to guarantee the return of the investment.

Budget available and calls supported

MUR committed a budget of 2,5 million euro as grant. The maximum funding which can be requested to MUR by the Italian participants in a project is 500.000 euro, independently from the number of Italian partners.

The entire budget is reserved only for the call ECSEL-2020-2 Research and Innovation Actions and the call ECSEL-2020-3 Research and Innovation Actions.

Italian participants willing to participate to the call ECSEL-2020-1 Innovation Actions are required to self-fund their participation or to find other sources of funding.

However, in case part of the budget allocated to ECSEL-2020-2-RIA and ECSEL-2020-3-RIA call cannot be used for this call, it can be transferred to the ECSEL-2020-1-IA call

CostEligibility and funding rates

1) Eligibility of costs

All costs incurred during the lifetime of a project under the following categories are eligible: personnel, equipment, subcontracting, consumables, and overheads. Overheads are calculated as a fixed percentage of the personnel cost. They include also coordination dissemination and travel expenses and in no cases can be larger than 50% of the personnel costs.

2) Funding rates

MUR will fund the Italian participants using the following funding rates:

	ECSEL-2020-2-RIA ECSEL-2020-3-RIA	ECSEL-2020-1-IA
Type of partner	Grant	Grant
Large enterprise	10 %	5%
Medium Enterprise	15 %	10%
Small Enterprise	25 %	20%
Universities, research centers and research organizations	30 %	20%

On request of applicants a pre-payment may be done, equal to:

- 80% of the total contribution for public entities;
- 50% of the total contribution for private entities.

The remaining part of the contribute will be paid in instalments after each reporting period

Additional Information to be provided to MIUR and other conditions

All Italian participants must upload on a dedicated web platform a set of additional information and national documents as published on MUR website. These documents must be submitted to MUR by the same deadline of the Full Project Proposal (FPP) phase of the ECSEL call. Any participant who does not send its national documents by this deadline, will be considered ineligible.

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**Ministry of Education, University and Research (MIUR) &
National Funds (FIRST)**

TO BE DEFINED

Latvia

National contact person for ECSEL JU program

Country	Name	First name	Tel	E-mail
LV	Pliksa	Ineta	+371 67785485	Ineta.Pliksa@viaa.gov.lv

National Funding Authority (NFA) of the Republic of Latvia for the ECSEL programme is State Education Development Agency (hereinafter VIAA).

Website reference:

http://viaa.gov.lv/lat/zinatnes_inovacijas_progr/ecsel

Legal requirements for the eligibility of a partner or a project

1) Type or nature of participants

Following legal persons (as defined under the Latvian law) are eligible for funding, except natural persons:

- ✗ Private entities - enterprises and companies;
- ✓ Public R&D institutions - research institutes, universities, higher education establishments, their institutes and research centres etc.

2) Legal, administrative and financial conditions

A researcher may participate as Principal Investigator in only one project proposal at any one time. As a team member, it is possible to participate in more than one project proposal.

The funding for RTD activities is provided pursuant in accordance with:

- the Commission Regulation (EU) No 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty,
- the Law on Research Activity (adopted on 14 April 2005 with amendments) and
- Cabinet of Ministers of the Republic of Latvia regulation No 259 on the procedure for providing support for participation in international cooperation programs for research and technology (approved on 26 May 2015).

Public R&D institution (research institutes, universities, higher education establishments, research centres etc.) must be listed in the Registry of Research Institutions operated by the Ministry of Education and Science of the Republic of Latvia.

Private entities (enterprises and companies) must be registered in the Registry of Enterprises of the Republic of Latvia and provide most of its R&D&I activities in the Republic of Latvia.

No other funding (except the European contribution provided by the JU) can be received by the beneficiaries for the activities performed within the project.

3) Consortium configuration

Public R&D institution shall be accompanied in the project by at least one eligible private entity in Latvia.

Eligibility of the costs and funding

1) Eligibility of costs

1. Direct costs:
 - 1.1. Personnel costs – R&D related personnel costs should reach at least 80% of all staff costs,
 - 1.2. Other direct costs such as consumables, equipment (only depreciation costs), materials and etc.,
 - 1.3. Subcontracts (up to 25% of total participant's direct costs),
 - 1.4. Travels costs (up to € 18,000 per participant per project),
 - 1.5. Project management costs.
2. Indirect costs (can reach a maximum of 25% of the total direct costs excluding direct eligible costs for subcontracting).

2) Funding rates

Funding rates are based on Article 25 (aid for research and development projects) of Commission Regulation (EU) No 651/2014 of 17 June 2014 on declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty.

Type of Organisation / Type of activity	Percentage of the national funding to the beneficiary of the total national eligible costs			
	Large Enterprise	Medium Enterprise	Small Enterprise	Public R&D institution *
Research and Innovation Action (RIA) (Industrial Research)	Up to 50+15 (max 65 %)	Up to 50+10+15 (max 75 %)	Up to 50+20+15 (max 80 %)	up to 100%
Innovation Action (IA) (Experimental Development)	Up to 25+15 (max 40 %)	Up to 25+10+15 (max 50 %)	Up to 25+20+15 (max 60 %)	up to 100%

The aid intensity

for industrial research is 50%,

for experimental development is 25%.

These rates may be increased

by 20 percentage points for small enterprises,

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by 10 percentage points for medium enterprises.

Funding intensity per beneficiary may be increased by a further 15 percentage points up to a maximum of 80% if one of the following conditions are fulfilled:

- the project involves effective collaboration between beneficiaries among which at least one is an SME and no single beneficiary bears more than 70 % of the eligible costs, or
- the results of the project are widely disseminated through conferences, publication, open access repositories, or free or open source software.

*The aid intensity for research and development activities carried out by the public R&D institutions might be at the level of 100 % only if the public R&D institution entirely complies with the requirements stipulated by the Article 2.1.1 of the “[Framework for State Aid for Research and Development and Innovation](#)” (2014/C 198/01) and proves it by the submission of the Financial report for last year to the VIAA.

National funding for eligible Latvian beneficiary in project can reach € 70 000 per year for each beneficiary.

Additional Information to be provided at submission and other conditions

The national funding committed for the ECSEL Call 2020 is € 420 000 for supporting Latvian beneficiaries preferably in Research and Innovation Action.

Financing from Structural funds

Latvia supports complementary funding up to € 80 000 from ESI Funds investment programme¹⁷ per project to cover specific cost items contributing towards the milestones and deliverables of the Action including one or more of the following activities:

- prototyping;
- testing;
- validation;
- demonstration in Latvia located facilities;
- piloting.

The use of ESI Funds funding must comply with the rules defined above in the subsection “Eligibility of costs”.

Latvian partner requesting funding from ESI Funds investment programme should follow the rules of Cabinet of Ministers regulation No 315 “Operational Program "Growth and Jobs" 1.1.1. the specific support objective "To increase the research and innovation capacity of Latvian scientific institutions and the ability to attract external financing by investing in human resources and infrastructure" 1.1.1.5. Implementing rules for the first, second and third stage of the project selection procedure for the measure "Support for international cooperation projects in research and innovation"” (approved on June 6, 2017) (<https://likumi.lv/ta/id/291823>) and corresponding call ECSEL-JU “Guide for applicants” document.

¹⁷ According to ESI funds investment programs implementation rules:

- (1) funding sources are ERDF investments (up to 85%) and national co-financing (15%);
- (2) for projects related to economic activity only ERDF funding is available (up to € 68 000).

Luxembourg

National contact person for ECSEL JU program

Country	Name	First name	Tel	E-mail
LU	Crean	Gabriel	00352 247 74147	Gabriel.crean@eco.etat.lu

Funding authority websites:

The full version of the national eligibility criteria can be found at :
<https://guichet.public.lu/en/entreprises/financement-aides/aides-recherche-developpement/rdi/aides-rdi.html>

Legal requirements for the eligibility of a partner or a project

1) Type or nature of participants

The participant must be a company established in Luxembourg, with a sustainable economic activity in Luxembourg, based upon a sound business model.

2) Legal, administrative and financial conditions

The participant can have no other public funding for the same activities apart from the ECSEL funding.

The funding for R&D activities is provided in accordance with:

- the Commission Regulation (EU) No 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty,
- the modified Law of 17 May 2017 relating to the promotion of Research, Development and Innovation activities.

Luxembourg partners are requested to contact Luxinnovation before the deadline of the project outline submission and before the deadline of the Full Project Proposal submission respectively.

Luxinnovation will check the financial viability of the participating enterprises. It is not possible to provide funding to undertakings in difficulty. Luxembourg enterprises have to provide the following documents:

- Annual statement of accounts (balance sheet, profit and loss account) from the past 2 financial years
- Organisational chart of the group's structure (if applicable), specifying existing links, the percentage of participating interests and the company name, address, distribution of the share capital, workforce, turnover and total balance sheet (data for the last accounting year ended) for each undertaking. The company size is to be determined according to the SME definition as specified by EU competition law.

3) Other conditions:

- Participants need to prove adequate (financial) means to execute the project and a potential to use the results.
- Participant should develop all or some of its R&D activities within the territory of Grand Duché de Luxembourg
- The project should yield socio-economic effects, which can be quantified by activities or investments by the Luxembourg participants after the completion of the project.

Eligibility of the costs and funding**1) Eligibility of costs**

All costs directly related to the R&D projects are eligible:

- payroll expenses: researchers, technicians and other support staff employed for the project or programme;
- expenses for instruments and equipment, if and for as long as they are being used for the project or programme. If such instruments and equipment are not used for their full life within the framework of the project or programme, only the depreciation costs corresponding to the duration of the project or programme, calculated in accordance with the generally accepted accounting principles, shall be deemed admissible.
- expenses for contract research or research services, the purchase of knowledge and patents or licences from external sources under conditions of full competition as well as costs of consultancy and equivalent services used exclusively for the project or programme;
- additional overheads and other operating expenses (in particular, cost of materials, office supplies and similar products) incurred directly as a result of the project or programme.

2) Funding rates

	Percentage of the national subsidy to the beneficiaries ¹⁸		
	Large enterprises	Medium enterprises	Small Enterprises
Industrial Research (Research and Innovation action)	45%	40%	40%
Experimental Development (Innovation action)	50%	45%	45%

¹⁸ These percentages are maxima and given under the constraints that the project proposal fulfils the ECSEL eligibility criteria and that no participant in the ECSEL project holds more than 70% of the total (international) ECSEL project budget.

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Additional information to be provided at submission and other conditions

Every participant in Luxemburg should submit a separate funding application to the ministry of the Economy within 14 days of ECSEL call closure date. Application forms available on: <https://guichet.public.lu/fr/entreprises/financement-aides/aides-recherche-developpement/rdi/aides-rdi.html>

Malta**National contact persons for ECSEL JU programme:**

Country	Name	First name	Tel	E-mail
Malta	Foden	James	356 23602176	james.foden@gov.mt
Malta	Dimech	Maria	356 23602132	maria.b.dimech@gov.mt

Netherlands

National contact person for ECSEL JU programme

Country	Name	First name	Tel	E-mail
Netherlands	van der Bijl	Bob	+31 88 042 5965	robert-jaap.vanderbijl@rvo.nl

Background documents and other information can be downloaded from the website of Netherlands Enterprise Agency: www.rvo.nl/subsidies-regelingen/jti-ecsel. The Dutch text on this web-site takes precedence over the English text below.

Legal requirements for the eligibility of a partner or a project

1) Admission conditions

The Netherlands will support the Dutch partners in projects selected by the ECSEL Joint Undertaking when:

- the project concerns industrial research, experimental development or a combination of these;
- in the project one or more Dutch partners are involved which include minimal one industrial partner. In the case of only one Dutch partner it has to be an SME;
- the industrial partners of the Dutch consortium provide the major contribution to the Dutch part of the project in such a way that the major part of the public funding (ECSEL + NL) involved goes to the industrial partners of the Dutch consortium;
- the objectives of the Dutch part of the project fit within the Innovation Contract High Tech Systems and Materials (HTSM) and its underlying Roadmaps (<https://www.hollandhightech.nl/htsm-roadmaps>);
- the project complies with the “Algemene wet bestuursrecht” and the “Kaderwet EZ-subsidies”.

Dutch partners in a proposal must include in the Project Outline (PO) sent to the Joint Undertaking the following information:

- Explanation of the contribution to the objectives of the Innovation Contract High Tech Systems and Materials (HTSM) and its underlying Roadmaps (<https://www.hollandhightech.nl/htsm-roadmaps>);

Dutch partners in a proposal must include in the Full Project Proposal (FPP) sent to the Joint Undertaking the following information:

- Authorisation form;
- Explanation of the contribution to the objectives of the Innovation Contract High Tech Systems and Materials (HTSM) and its underlying Roadmaps (<https://www.hollandhightech.nl/htsm-roadmaps>);
- Model overview of the costs.

Note that in case that there are several Dutch partners in the proposal, the Dutch partner coordinating them (the so-called "Dutch coordinator") will be in charge of submitting the above information on their behalf. The information and forms will be submitted as Part C of the PO/FPP in a ZIP file through the ECSEL Proposal Submission system, as indicated in the Guide for

Applicants in the section for The Netherlands. There will be only one ZIP file for all Dutch participants in a given proposal.

The required forms can be downloaded from the website of Netherlands Enterprise Agency: <https://www.rvo.nl/subsidies-regelingen/aanvragen-jti-ecsel>

2) Rejection conditions

An application for support of the share of Dutch participants of a project is rejected when:

- the partner that submits the application on behalf of all Dutch partners (the "Dutch coordinator") is not an enterprise;
- it is not credible that the Dutch partners can finance their share in the project;
- it is credible that the project without subsidy would have been finished without substantial delays;
- there is insufficient trust that Dutch partners have the necessary capacities to fulfil the project as submitted;
- the project has insufficient positive effects on the Dutch economy;
- the Dutch part of the project contributes insufficiently to the objectives of the Innovation Contract High Tech Systems and Materials (HTSM) and its underlying Roadmaps (<https://www.hollandhightech.nl/htsm-roadmaps>).

Eligibility of the costs and funding

1) Eligibility of costs

- The **eligible costs for subsidy** are in compliance with the R&D&I State Aid Rules, the "Algemene wet bestuursrecht" and the "Kaderwet EZ-subsidies".
- The Dutch subsidy percentages are indicated below in the section Funding Rates.
- In case another Dutch administrative body has already granted a subsidy for the eligible costs of the Dutch part of an ECSEL project or part of such project, the contribution by the Ministry of Economic Affairs will be granted so that the total amount of subsidy will not exceed the before-mentioned Dutch subsidy percentages.
- In case that a contribution has been already granted for the eligible costs for subsidy to the Dutch part of an ECSEL project or part of it on the basis of a subsidy scheme of the Ministry of Economic Affairs, no additional subsidy will be granted by the Ministry of Economic Affairs for the already subsidized part.
- Per individual Dutch partner the subsidy percentages will be applied according to the activities (industrial research, experimental development). The project eligible costs per partner will be defined and the corresponding percentages will be applied.
- The available Dutch initial budget for the ECSEL Calls 2020 of € 19,636 million will be initially split as follows: € 10 million for ECSEL Call 2020-1 (IA) and € 9,636 million for ECSEL Call 2020-2 (RIA).
- Per ECSEL project in which a Dutch consortium takes part a total national maximum of € 5 million funding for the Dutch consortium will be initially applied.

2) Funding rates

	Large Enterprises, Groups and Associations of Enterprises	Medium Enterprises	Small Enterprises	Public Research Institutes and Universities
Fundamental/Basic Research activities	0%	0%	0%	0%
Industrial/Applied Research activities	21%	26%	26%	24%
Experimental development activities	11%	16%	16%	11%

Rates apply to the Calls 2020-1 and 2020-2.

In case the EU funding rates and/or conditions are modified the national funding rates may be amended.

Additional Information to be provided at submission and other conditions

Norway

National contact person for ECSEL JU programme

Country	Name	First name	Telephone	E-mail
Norway	DAVIS	Kim	(+47) 22037285	kid@rcn.no
Norway	AUNE	Agnes	(+47) 22037165	aau@rcn.no

Legal requirements for the eligibility of a partner or a project

1) Type or nature of participants (project partners)

- Norwegian companies: Commercial enterprises registered in Norway (The Register of Business Enterprises).
- Research organisations, recognized as such by the Research Council of Norway: Universities, Higher education institutions (HEI), Public research institutes.

2) Legal, administrative and financial conditions

- General eligibility criteria and conditions for receiving project funding from the Research Council of Norway will apply (i.e. the beneficiary must be a registered legal entity, have credible capacity to execute the project activities, demonstrate financial viability, and provide transparency as to funding requested or received from other sources).
- Companies must be established with a considerable business activity in Norway within the scope of the ECSEL project.
- All project partners must possess relevant research & technology development capabilities.
- All participants must contact the Research Council *before committing to participate in any proposal* and complete and submit Form C.

3) Consortium configuration

- At least one Norwegian company must be involved as a partner in the project, and at least 50 % of the efforts (eligible costs) of Norwegian partners in the project must be from business partners. National funding priority will be given to projects with business partners that are new to ECSEL.
- The industrial relevance of the participation of a research organisation must be justified by declarations from the Norwegian business partner(s) in the project or from some other enterprise(s) that would be eligible according to the criteria 1) and 2) above and be submitted to the Research Council *before submission of the proposal*.

4) Other conditions

- Companies (business partners in the project) must provide specific information on the possible industrial and commercial impact of the project and justify that they have the necessary means to exploit the project results and be submitted to the Research Council before submission of the proposal.
- Research organisations must specify national industrial impact in terms of exploitation opportunities for Norwegian businesses and be submitted to the Research Council before submission of the proposal.
- This information must be completed in Form C.

Eligibility of the costs and funding**1) Eligibility of costs**

Horizon 2020 rules and guidelines on eligible costs will apply.

2) Funding rates

The maximum funding rates for the national funding provided by the Research Council of Norway will be as listed in the table below

	Large enterprises	SMEs	Research organisations
ECSEL 2020 IA	25 %	30 %	65 %
ECSEL 2020 RIA	25 %	30 %	65 %

Additional Information to be provided at submission and other conditions

1. The total Norwegian funding budget for the above ECSEL Calls is 2,2 mill. €.
2. There is no pre-allocated distribution of the Norwegian funding budget between RIAs and IA, excellence is the primary criteria.
3. Norwegian applicants should consider 0,9 mill. € as a maximum amount of national funding for one single project, and that more than one Norwegian partner must be involved to reach this level of national funding.
4. National funding will be subject to conditions in current state aid rules (Commission Regulation (EU) No 651/2014). If other public funding, besides the EU funding, will be granted for the project, the listed maximum rates for national funding will be reduced if required to ensure that aid intensity limits in the state aid rules are respected. Beneficiaries must submit declarations regarding company size and financial situation. See more details at: www.forskningsradet.no/no/Statsstotterregelverket/1254004171884
5. Information providing the justifications required according to items 3) and 4) in the above eligibility criteria must be provided as a separate attachment (Part C) at submission, both at the PO and at the FPP submission stage.
6. Information necessary to confirm whether eligibility criteria mentioned in item 2) above are fulfilled shall be submitted to the Research Council of Norway *before submitting a proposal*, along with Form C, before a National Grant Agreement can be established.

Poland

National contact person for ECSEL JU programme

Country	Name	First name	Tel	E-mail
Poland	Maciejko	Krystyna	+48 22 39 07 489	krystyna.maciejko@ncbr.gov.pl

National Centre for Research and Development (Narodowe Centrum Badań i Rozwoju)

Department of International Cooperation

Legal requirements for the eligibility of a partner or a project

1) Type or nature of participants

Following entities are eligible to apply:

- Research organizations;
- Micro, Small, Medium and Large Enterprises

Organization must be registered in Poland.

2) Legal, administrative and financial conditions

All proposals must be aligned with National regulations, inter alia:

- The Act of 20 July 2018 on the Law of Higher Education and Science, published in Journal of Laws item 1668, 2018, as amended;
- The Act of 30 April 2010 on the National Centre for Research and Development, published in Journal of Laws item 1770, 2019;
- The Regulation of the Minister of Science and Higher Education of 25 February 2015 on criteria and rules on granting state aid and “de minimis” aid by the National Centre for Research and Development, published in Journal of Laws item 299, 2015.

3) Consortium configuration

None

4) Other conditions

None

Eligibility of the costs and funding

1) Eligibility of costs

According to the rules for H2020

2) Funding rates

Funding quota of Polish participants can be up to 100% for research organisations. In the case of enterprises, funding quota will be decided on a case-by-case basis depending on the size of the company, type of research/development, risk associated with the research activities and commercial perspective of exploitation. Organization must be registered in Poland.

	Large Enterprises	Medium Enterprises	Micro/Small Enterprises	Research Organizations
Fundamental/Basic Research	0%	0%	0%	0%
Industrial/Applied Research	Up to 50+15 (max 65 %)	Up to 50+10+15 (max 75 %)	Up to 50+20+15 (max 80 %)	Up to 100 %
Experimental development	Up to 25+15 (max 40 %)	Up to 25+10+15 (max 50 %)	Up to 25+20+15 (max 60 %)	Up to 100 %

Additional Information to be provided at submission and other conditions

Please note that for each Polish participant you need to create a file with administrative and financial information requested by the Polish authorities and upload this in the ECSEL Proposal Submission system as **Form C** (one file for each participant) and send directly to the NCBR (krystyna.maciejko@ncbr.gov.pl).

Instruction can be found at:

<https://www.ncbr.gov.pl/programy/programy-miedzynarodowe/wspolpraca-wielostronna/inne-inicjatywy-wielostronne/ecsel-ju/>

Portugal

TO BE DEFINED

National contact person for ECSEL JU programme

Country	Name	First name	Tel	E-mail
Portugal	Durão	Rui	+351 213 911 543	rui.durao@fct.pt

Romania

Function	Name	First name	Tel	E-mail
Lead delegate	ANANIA	Cristina	+ 40.21.303.21.28/2 + 32.2.303.30.03	cristina.anania@research.gov.ro
Member	DINU	Elena	+ 40.21.303.21.23/ 416	elena.dinu@research.gov.ro
Member	HILGEN	Sanda	+40. 21 303.41.70 / Fax.: +40. 21 318.30.60	sanda.hilgen@research.gov.ro
Member	GHEORGHIAN	Daniela	+ 40.21.303.41.70/ +40.21 303.41.99	daniela.gheorghian@research.gov.ro
Member	STATE	Ruxandra	+4021 303.41.99 int: 307	ruxandra.state@research.gov.ro

Ministry of Education and Research

Website reference: <http://www.research.gov.ro/>

Legal requirements for eligibility of a partner or a project

1. Type or nature of participants

All Romanian entities which are legally set as research organizations or companies with R&D activities which meet the national eligibility requirements may participate in calls for proposals.

2. Legal, administrative and financial conditions

Research and innovation projects for both research organizations as well as business sector which are selected for funding by the ECSEL Joint Undertaking calls within Horizon 2020 Program.

At the national level, RO-ECESL projects are financed through the Competitiveness Operational Programme 2014-2020, Axis 1, Action: 1.1.3 Creating synergies with research, development and innovation actions within H2020 Framework Program of the European Union and other international programs of RDI.

The total budget allocated to RO-ECSEL projects for the open call is 12.000.000 Lei (2.6 mil. EUR) (the budget can be amended according to the projects submitted in MYSMIS platform dedicated to ERDF). It can be supplemented by reallocation from other types of projects if necessary.

The value of non-reimbursable financial assistance granted by Romania for an RO-ECSEL project shall not exceed 6.000.000 Lei (1.3 mil. EUR). The costs of the Romanian partners

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in the projects are eligible only after signing the contracts in Romania under the Competitiveness Operational Programme 2014-2020, Axis 1, Action: 1.1.3.

Funding rates

In the table below there is a synthesis of the maximum aid intensities, on categories of activities and beneficiaries, applicable to all eligible costs of the project from public funds:

<i>Activity</i>	<i>Enterprise</i>		
	<i>Large</i>	<i>Medium</i>	<i>Small</i>
Fundamental research	100%	100%	100%
Industrial research	50%	60%	70%
Industrial research subject to effective collaboration or disseminating results	65%	75%	80%
Experimental development	25%	35%	45%
Experimental development subject to effective collaboration or disseminating results	40%	50%	60%
Carrying out feasibility studies to prepare RD activities	50%	60%	70%
Obtaining, validating and protecting industrial property rights	-	50%	50%

The duration of a project is the period of the project funded by ECSEL JU associated with HORIZON 2020, but not later than June 30, 2023.

The applicant must provide a statement that they did not receive funding from ECSEL Joint Undertaking for RDI evaluated and selected activities that are financed within structural funds.

Eligibility of Applicant / Partners - for undertakings

The eligibility conditions of the participants/partners must be in accordance with the Guidelines for Applicants (*Action: 1.1.3 Creating synergies with research, development and innovation actions within H2020 Framework Program of the European Union and other international programs of RDI*), it can be accessed at the following website: <http://www.poc.research.gov.ro/ro/articol/4150/actiunea-1-1-3-crearea-de-sinergii-cu-orizont-2020>

Slovak Republic

National contact person for ECSEL JU programme

Country	Name	First name	Tel	E-mail
Slovakia	Kontrik	Martin	+421 2 59374 574	martin.kontrik@minedu.sk

Legal requirements for the eligibility of a partner or a project

1) Type or nature of participants

Large company, SME, university; research institutes registered in the Slovak Republic are eligible.

2) Legal, administrative and financial conditions

The national co-funding of ECSEL JU projects is provided according to:

the Act No 172/2005 Coll. on the Organization of State Research and Development Support and Supplementation of Certain Acts

Community Framework for State Aid for Research and Development and Innovation (2006/C 323/01)

Eligible to ask for national co-funding is an R&D organization from every sector according to §7 of Act No 172/2005 Coll. and legal entity according to §2 art. 2 of the Slovak Code of Commerce.

3) Consortium configuration

Slovak partners are allowed to participate in projects alone or in cluster.

4) Other conditions

-

Eligibility of the costs and funding

1) Eligibility of costs

The eligible costs are: all personal costs, material costs, services, travel expenses, equipment amortization costs and indirect costs related to project solution within a period of project duration.

2) Funding rates

Type of partner	Max. Total funding (EU Contribution+ National) % of the national eligible cost
Large industry	50% for * RIA 40% for *IA
SME	70% for * RIA 60% for *IA
University & Research Organization	100%

* RIA = Research and Innovation Action; * IA = Innovation Action

Additional Information to be provided at submission and other conditions

The proposed projects should be within the scope of the national RIS3 initiative.

Spain

Two funding organizations will grant Spanish applicants to the ECSEL 2020 calls:

1. The Ministry of Economic Affairs and Digital Transformation (MINAETD) taking over competences from the former MINECO will support enterprises and other private agents.
2. The State Research Agency (Agencia Estatal de Investigación, AEI) depending on the Ministry of Science and Innovation (MICINN) will support research centers, universities and non-profit private research entities.

Each Spanish participant in an ECSEL Consortium needs to request the national funding from the corresponding funding entity at a later stage, in case the project is approved.

It is strongly recommend that all the possible applicants inform national contact person at the beginning of the proposal preparation.

National contact persons for ECSEL JU programme

Country	Name	Tel	E-mail
SPAIN	David Ginard		id.tic@mineco.es
	Beatriz Gómez Miguel Estrella Fernández	+34916037238	beatriz.gomez@aei.gob.es estrella.fernandez@ aei.gob.e s
	Enrique Pelayo	+34 915815566	enrique.pelayo@cdti.es

Common conditions MINAETD and AEI

It will be mandatory to fulfil all European current legal requirements for applying for public grants:

- Marco Comunitario sobre Ayudas Estatales de Investigación y Desarrollo e Innovación (DOUE 2014/C198/01).
- Reglamento 561/2014 del Consejo, de 6 de mayo de 2014, relativo a la Empresa Común ECSEL.
- Convocatorias de propuestas referentes al Programa ECSEL 2020.

Moreover, in everything not viewed in the ECSEL and European regulation, it will mandatory to fulfil other Spanish current applicable legal requirements ruled in the following legal texts:

- Ley 38/2003, de 17 de noviembre, General de Subvenciones
- Real Decreto 887/2006, de 21 de julio, por el que se aprueba el Reglamento de la Ley 38/2003, de 17 de noviembre, General de Subvenciones.
- Leyes anuales de Presupuestos Generales del Estado.
- Ley 47/2003, de 26 de noviembre, General Presupuestaria.
- Ley 39/2015, de 1 de octubre, del Procedimiento Administrativo Común de las Administraciones Públicas.

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- Ley 40/2015, de 1 de octubre, de Régimen Jurídico del Sector Público.
- Ley 9/2017, de 30 de octubre, de Contratos del Sector Público.

The Spanish legal texts can be found on <http://WWW.BOE.ES>

I- Requirements of the Ministry of Economic Affairs and Digital Transformation (MINAETD)

Legal requirements for the eligibility of a partner or a project

1) Type or nature of participants

The Ministry of Economic Affairs and Digital Transformation (MINAETD) is the national authority, which funds in ECSEL calls the following participants:

- Spanish enterprises (SME, LE, GE)
- Private Technology Centers (TC, RD 2093/2008 29th December)
- Private Universities

According to the Spanish Regulation, enterprises and TC (RD 2093/2008 29th December) should follow the rules and procedures for loans and grants.

2) Legal and administrative conditions

- Every national participant should be established in Spain, satisfy the Art. 13 of Ley 38/2003, de 17 de noviembre, General de Subvenciones (LGS) and not be in bankruptcy or not have requested the declaration of bankruptcy.

For that reason, national participant should sign a Statement of Compliance, as well as authorize the access and consultation of data linked with tax obligations, obligations with Social Security, fiscal residence and Full Statement of National Insurance contributions of the workers imputed to the project and/or the verification of any other data provide during the granting and monitoring of the aid. This document will be available in the following website and should be sent with the Part C (<http://www.mincotur.gob.es/portalayudas/ecsel/Paginas/index>).

In case the participant do not authorize the consultation, this one should submit the corresponding documentation.

Spanish participants should be included in the Registry for R&D entities (RESA). Ministerial Order ITC/570/2006.

In case they are not, they should submit the financial statements for the years 2018 and 2019:

- The participating entities must have presented in the Mercantile Registry or equivalent register the closed accounts for the years 2018 and 2019.
 - They must also present, together with the rest of the documentation, a copy of the financial statements of 2019, signed by the administrators of the entity, audited if legally required, and with the financial statements of "Balance Sheet", "Profit and Loss Account" and "Explanatory Memory", at least, according with Art. 254 of Real Decreto Legislativo 1/2010, de 2 de julio, por el que se aprueba el texto refundido de la Ley de Sociedades de Capital.
 - In the event that the submitted accounts do not have the minimum financial statements indicated in the previous paragraph, the request for assistance may be requested, the risk report of the Risk Information Center of the Bank of Spain (CIRBE) and / or the 303 VAT return model for the four quarters of 2018. Likewise, in the case of not being able to access the accounts presented to the Mercantile Registry, the applicant may be required to make a copy of these accounts.
- For the PO phase, the following documentation has to be submitted to the JU ECSEL:
 - Part C
 - Responsible declarations, as well as authorization for the consultation of data. Both templates documents will be available at:
<http://www.mincotur.gob.es/portalayudas/ecsel/Paginas/index>.
 - For the FPP phase, the following documentation has to be submitted to the JU ECSEL:
 - Part C
 - Responsible declarations, as well as authorization for the consultation of datas. Both templates documents will be available at:
<http://www.mincotur.gob.es/portalayudas/ecsel/Paginas/index>
 - Financial Statements for the years 2018 and 2019

After the evaluation and selection of the projects, MINAETD will get in touch with the participants in selected projects, which are not eligible to communicate the reason they are not and to offer them the possibility of correcting.

After the signed of the Grant Agreement MINAETD will get in touch with every beneficiary to complete all the forms and documents requested by the Spanish Public Authorities, in order to conclude the national grant agreements.

Payment of the national contribution will be done in accordance with national rules in force.

The payment will be carried out after the establishment of the National Grant Agreement. This option will require collaterals up to 100% of the amount of national fund, according to a solvency assessment (see Additional information).

Collaterals must be in the form of guarantees provided by credit institutions or mutual guarantee societies.

- Proposals could be rejected when:
 - It is not considered credible by the Spanish Public Authorities that partners could adequately fund their share in the project.
 - It is not credible by the Spanish Public Authorities that the project could be completed on time.
 - Spanish partners do not provide sufficient trust in their capacities from the technical or financial point of view, to fulfil the project as submitted.
 - The effect or positive impact on the local economy is considered insufficient by the relevant authorities

Eligibility of the costs and funding

1. Consortium configuration

To be eligible, a project must account for some kind of Spanish leadership:

Minimum share of the Spanish consortium 5% in terms of eligible costs.

Participants should set up a national sub- consortium with the following rules:

- a. All members must show knowledge and expertise in their relative project matters.
- b. At least Fifty (50) % of the Spanish participation (Budget) must be enterprise.
- c. The participating entities must be legally established before 31/12/2017.
- d. At least one SME in the Spanish consortium.
- e. Each participant will send the form of its own part and must comply with the conditions of beneficiary.
- f. Budget of each Spanish participant: minimum 200.000 €, in terms of eligible costs.

2. Solvency and Financial Conditions

- MINAETD will check if the participants are eligible making sure they are not in crisis as defined by EU regulation 651/2014.
- Each Spanish participant should be solvent and have financial capacity to carry out the project and the Spanish Public Authorities has to assess it positively. That is the reason why MINAETD will carry on a financial analysis and will define for each participant a solvency-rating factor. Depending on that factor, the level of possible collaterals shall be established. The amount of required collaterals is defined at the end of the Spanish part of this document.
- MINAETD could require collaterals up to 100% the amount of national funding.

3. Funding rates

Maximum percentage of costs covered by ECSEL grants
As a percentage of the eligible costs
FOR THE CALL ECSEL 2020

	Maximum percentage of costs covered by National Funding Authorities (%)		
	Industry, LE,	SME	Private RTO and Private Universities
RIA (EPS) Research and Innovation Action	25	30	35
IA (EPS) Innovation Action	20	25	35

Additional Information to be provided at submission and other conditions

The Ministry will try to support projects with the following characteristics:

- Coordinated by a Spanish entity.
- With PYMEs working in the core of the project.
- With entities that have never participated in the ECSEL program in the past.

Although MINAETD will support projects that meet these characteristics at a higher level, it will continue to support all projects with national entities.

- Amount of required collateral by MINAETD:

Financial qualification	Collateral required
AAA	0%
AA	0%
A	15 %
BBB	45 %
BB	70 %
B	80 %

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CC	100 %
CC	100 %
C	No funding
D	

II- Requirements of the State Research Agency (AEI)

Legal requirements for the eligibility of a partner or a project

1) Type or nature of participants

The AEI, depending on the Ministry of Science and Innovation (MICINN), (<http://www.ciencia.gob.es/portal/site/MICINN/aei>) is the national authority which funds non-profit public R&D organizations such as:

- Public Research Centres
- Public Universities
- Other non-profit R&D organizations in which R&D activities are implicitly defined as the main objective.

2) Legal and administrative conditions

ECSEL JU calls 2020 will be managed by the [Subdivisión de Programas Científico-Técnicos Transversales, Fortalecimiento y Excelencia](#).

Applicants requesting national funds from AEI shall comply with the following regulations on grants:

- General Subsidies Law ([Ley 38/2003](#))
- Science Law ([Ley 14/2011](#))
- AEI Statutes ([Real Decreto 1067/2015](#))
- Basis Order and National PCI calls ([PCI regulations](#))

The projects granted by the AEI must be aligned with the main objectives described in the Programa Estatal (PLN) National Plan for Scientific and Technical Research and Innovation 2017-2020.

The instrument for funding the Spanish groups will be the national call on International Joint Programming or its equivalent (Programación Conjunta Internacional, PCI), which is expected to be launched in 2021. As a reference, applicants are advised to read the call [PCI 2019](#).

Organizations must be included in the Unified Register of Applicants (RUS).

The participation on this program means the acceptance and compliance with all the conditions stated on this document.

Any publication or dissemination activity resulting from the granted projects must acknowledge AEI funding even after the end of the project: "Project (reference nº XX) funded by AEI through PCI XX/..."

3) Consortium configuration

Spanish non-profit research organizations funded by AEI must participate in consortia with at **least one Spanish profit organization partner**, which will be funded by the MINAETD.

Spanish Principal Investigators must demonstrate experience as investigators in projects funded by the Plan Estatal I+D+i 2013-2016, the Plan Estatal I+D+i 2017-2020, ERC Grants, European Framework Programmes or other relevant national or international programmes.

Incompatibilities:

- Principal Investigators can only apply for funding in one proposal in all four ECSEL 2020 calls. The limit is NOT one proposal per subprogram, but one proposal in all four subprograms.
- Principal Investigators will not be eligible for funding in more than one proposal in the same PCI call or in two PCI calls in consecutive years. This should be taken into account when participating in other ERANETS or international programmes funded through the PCI call.
- Principal Investigators must remain unchanged between the proposal to this transnational call and the PCI2021 call. Only *force majeure* reasons will be accepted to change a principal investigator.
- To this end, and to avoid any issue, the Principal Investigator must be clearly identifiable in the ECSEL documents and must comply with these rules. Otherwise, he/she will be declared ineligible for funding by the AEI.

Eligibility of the costs and funding

AEI grants follow the rules of marginal costs, with a maximum request of 175.000 € per participant or 40% of the total costs of the Spanish part of the project (whichever amount is lower):

- Personnel costs for temporary contracts (fellowships are not eligible).
- Current costs, small scientific equipment, disposable materials, travelling expenses and other costs that can be justified as necessary to carry out the proposed activities.
- Indirect costs (overheads) are not eligible for funding in the PCI call.

If the Spanish participant is the ECSEL project coordinator, the grant can be increased up to 100.000€.

Centers formed by different Spanish legal entities will be considered as a unique entity, and thus the maximum funding should not exceed the limits per proposal established above (for example mixed centers).

Double funding (overlapping with other EU or National funding) will be avoided and projects or parts of projects already funded will be not granted.

The final funding will take into account the transnational evaluation of the collaborative proposal, the scientific quality of the Spanish group, the benefit of the international collaboration, the participation of the industrial sector, and the financial resources available.

Sweden

National contact person for ECSEL JU programme

Country	Name	First name	Tel	E-mail
Sweden	Allström	Andreas	+46 8 473 30 93	andreas.allstrom@vinnova.se
Sweden	Saavedra Granholm	Adela	+46 8 473 31 50	adela.saavedragranholm@vinnova.se

Detailed information for Swedish applicants in ECSEL JU is available at: <https://www.vinnova.se/m/horison-2020/partnerskapsprogram/ecsel/>

Legal requirements for the eligibility of a partner or a project

1) Type or nature of participants

Calls are open for public and private companies of all sizes as well as for universities and research institutes in Sweden.

2) Funding conditions

Only legal entities are eligible for funding, natural persons will not be funded.

Participating companies must be registered in Sweden as a limited company (*aktiebolag, AB*).

3) Legal, administrative and financial conditions

Participating companies must have a stable financial status with fulfilled fiscal obligations and must be able to cover their own expenses for the duration of the project.

Swedish SMEs must also show that they:

- Have an annual net turnover of 1 million SEK according to the latest annual report
- Have a minimum of three full time employees

4) Consortium configuration

The total eligible national costs of participating Swedish companies must amount to at least 50% of the aggregated eligible national costs of all Swedish participants in the project consortium.

5) Other conditions

Vinnova have a mission to contribute to sustainable growth and to strengthen Swedish competitiveness. All projects that Vinnova fund within ECSEL JU must contribute to this mission. Participating companies are required to provide a credible description of the project's impact on the company's technological knowledge, economic growth and future assets in Sweden. Participating universities or research institutes are required to provide a credible description of the project's impact on the university's or research institute's scientific and technological knowledge base and for the positive impact on Swedish society in general. Accordingly, an impact description

must be submitted by each Swedish participant together with the application (part C). A template for the impact description is available at the [Vinnova website](#). The impact description is an important part of the eligibility check performed in the FPP phase.

Eligibility of the costs and funding

Eligibility of costs

[The standard conditions of Vinnova](#) for eligible costs will be applied.

Funding rates

In the table below the national funding rates for Swedish participants in ECSEL JU is presented. The funding rates have to be within the limits given by [State Aid Rules](#). Please be aware that EU contribution doesn't count as state aid.

	Large Enterprises	Small and Medium Enterprises	Universities and Research Institutes
RIA - Research and Innovation Action	25 %	30 %	50 %
IA - Innovation Action	20 %	25 %	50 %

Additional funding

- Proposal preparation grant for technical coordinators of the whole international proposal: up to 300 000 SEK (the proposal has to be submitted at FPP stage). The costs have to be traceable in the organization's economy system ([Vinnova conditions](#) apply).
- Management grant for technical coordinators of the whole projects: up to 300 000 SEK/yr. The costs have to be traceable in the organization's economy system ([Vinnova conditions](#) apply).
- Travel grant to selected brokerage events

Additional Information to be provided at submission and other conditions

- Maximum Vinnova contribution to one project is limited to EUR 2 500 000.
- Vinnova use the exchange rate for Euro of the Swedish national bank on the date of ECSEL call FPP phase deadline.

Switzerland

Switzerland is committing max. CHF 2'500'000.00 (approx. EUR 2'100'000.00) as grants for the **ECSEL Call 2020-1 IA** and **Call 2020-2 RIA**. There is no pre-allocated distribution of the Swiss funding budget between these two calls.

National contact person for ECSEL JU programme

Country	Name	First name	Tel	E-mail
Switzerland	BUEHLER	Roland	+41 58 466 77 03	roland.buehler@innosuisse.ch

Legal requirement for the eligibility of a partner or a project

1) Type of nature of participants (project partners)

- Swiss companies: commercial enterprises registered in Switzerland,
- Swiss SME according to EU definition,
- Swiss non-commercial public academic research institutions, Universities, Universities of applied sciences as well as other accredited research institutions.

2) Legal administrative and financial conditions

- General eligibility criteria and conditions for receiving project funding from Innosuisse will apply: the beneficiary must be a registered legal entity in Switzerland, have credible capacity to execute the project activities, demonstrate financial viability, and provide transparency as to funding requested or received from other sources.
- Companies must be established with a considerable activity in Switzerland within the scope of the ECSEL project.
- Independency requested between public research partner and private company (check conformity with Innosuisse [rules](#))

3) Consortium configuration

- At least one Swiss company must be involved as a partner in the project consortia and at least 50% of the efforts (eligible costs) of the Swiss partners in the project must be from companies.
- Academic public research partners from Switzerland are eligible for funding if a Swiss company as specified above is involved in the project.

Eligibility of the costs and funding

1) Eligibility of costs

The applicable **CHF - Euro conversion rate** for the cost calculation is the average rate published by the European Central Bank ([ECB Link](#)) of **August 2020**, the month before the full proposal submission deadline respectively **April 2020** for the preproposal.

Direct personnel costs

a) Effective gross salary or effective gross hourly rate up to the following maxima:

Function	Maximum effective gross hourly rate [CHF]	Maximum gross annual salary [CHF]
Project leader, experienced scientist	119	220'500
Scientific collaborator	68	126'000
Skilled worker	61	113'400
PhD and auxiliary	45	85'100

b) Public research organisations use their personnel cost calculation scheme approved from Innosuisse, which is valid at the time of the call launch (5 February 2020).

c) Employers contribution to social insurance

d) Overhead costs: 15% of the total of effective gross salary costs (a) and social insurance costs (c).

Direct costs of subcontracting

Direct costs for subcontracting are limited to 20% of total eligible costs.

Other direct costs

- Material cost are chargeable if project-specific and non-standard consumables used exclusively for this project.
- Travel costs outside Switzerland.
- Utilisation of specific research infrastructure chargeable as utilisation rate calculating a linear depreciation over time.

Non eligible costs:

- Direct costs of financial support
- Costs for publications,
- Use of research infrastructure fully depreciated or fully financed by other sources
- Certification of products (CE labelling),
- Patent securing related work

1) Funding rates

The maximum national reimbursement rates for eligible costs according to Innosuisse rules are:

	Large Enterprise	SME	University/Other (not for profit)
ECSEL 2020-1 IA	10%	25%	35%
ECSEL 2020-2 RIA	10%	30%	35%

The maximum national grant per project has to be smaller than CHF 1 Mio.

Additional information to be submitted together with the Pre-/Full proposal in “Part C” of proposal:

- **Financial plan** considering Innosuisse rules (template at: www.innosuisse.ch; Go global/ECSEL). At Preproposal stage names of project team can be N.N. and costs indicative.
- **Short description** of each participant about, working field, motivation to participate, track record within this call topic, what resources (people, lab, infrastructure, financial issues etc.) are available to participate in the project. Information about relations (financial/personnel) between partners (company-University) participating in the same project.
- Last available issue of **annual report**: requested from companies only.
In case several CH partners participating in the same ECSEL project please coordinate, link together and submit **one budget template** of Swiss partners per project.

Turkey

National contact person for ECSEL JU programme

Country	Name	First name	Tel	E-mail
Turkey	BENER	Ezgi	90 312 298 17 85	ncpict@tubitak.gov.tr
Turkey	CETIN	Utku	90 312 298 17 75	ncpict@tubitak.gov.tr

The National Funding Authority (NFA) of the Turkey for the ECSEL JU program is the Scientific and Technological Research Council of Turkey (TUBITAK). Principal legal regulations and documents on the public funding of research, development and innovation in the Turkey are available on the TUBITAK websites.

Legal requirements for the eligibility of a partner or a project

1) Type or nature of participants

Calls are open for public institutions and private companies of all sizes as well as for universities and research institutes in Turkey.

2) Funding conditions

Only legal entities are eligible for funding. Natural persons will not be funded.

3) Legal, administrative and financial conditions

Eligible participants can be funded via TUBITAK 1071 Programme. The national rules and the procedure for application will be available on TUBITAK Horizon2020 website at: <https://ufuk2020.org.tr/tr/haberler/>

4) Consortium configuration

There is no limitation for the consortium configuration.

Eligibility of the costs and funding

1) Eligibility of costs

- Personnel cost
- Travel costs
- Expenditures for Consumables
- Expenditures for instruments, equipment that would be used for R&D purposes
- Expenditures for subcontracting and other services need for R&D work

2) Funding rates

Type of activity/organisation	Large Enterprises	Small and Medium Enterprises	Universities and Research Institutes
Call in 2020	%60-EU Contribution	%75-EU Contribution	%100-EU Contribution

Additional Information to be provided at submission and other conditions

- The total Turkish funding budget for the ECSEL Calls in 2020 is 5 million €. Check the national rules for the total funding per project.
- There is no pre-allocated distribution of the Turkish funding budget between the Calls in 2020
- Participants are subject to TUBITAK 1071 Programme rules.

United Kingdom

National contact person for ECSEL JU programme

Country	Type of Information	Name	First name	Tel	E-mail
UK	General Information	Papadakis	Georgios	+44(0)7824626788	georgios.papadakis@innovateuk.ukri.org

UK Funding Body – Innovate UK (part of UK Research and Innovation)

For information about the latest Innovate UK competitions: <https://apply-for-innovation-funding.service.gov.uk/competition/search>

For general Innovate UK national eligibility conditions <https://www.gov.uk/guidance/innovate-uk-funding-general-guidance-for-applicants>

- No budget has been allocated by Innovate UK to the ECSEL 2020 call for proposals.
- UK organisations wishing to participate in ECSEL 2020 call will have to self-fund.