



# Handbook on Singapore programmes for EU researchers

[www.epicproject.eu](http://www.epicproject.eu)

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#### *Disclaimer*

This handbook serves information purposes only. It is based on public information, expert input, and desk research by the EPIC team. It does not express any official views of the European Commission or its services.

#### *Note*

Although we took great care that the information in this handbook is correct at the time of its publication, the information contained herein is subject to change. Please contact the team of editors at [info@epicproject.eu](mailto:info@epicproject.eu) for any change requests and updates. Readers of this handbook should also visit the EPIC project web site at [www.epicproject.eu](http://www.epicproject.eu) for updates and further information. Note that the report also includes closed calls of programmes that have in past often had annual calls.

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## 1 About EPIC

The EPIC initiative was created in response to an EU call for projects to support dialogues between the EU/EC and its strategic partner countries to foster cooperation in ICT R&D. The aim of the call was to organise events, support policy dialogue meetings, strengthening cooperative research links and reinforce industrial collaboration as well as coordination with other EU level initiatives.

EPIC, therefore, aims to **improve the research and innovation collaboration** between the EU and its strategic partner countries **Australia, New Zealand, and Singapore** in the area of **information and communication technologies**. It targets both the strategic, more policy-oriented level and the direct cooperation of researchers/innovators in academia and industry. The aim is to exploit mutually beneficial opportunities and to prepare new grounds for future collaborations.

EPIC aims to help overcome the current lack of dedicated co-operation support actions and improve the low visibility of Europe's ICT RDI capabilities in the target countries. The project follows a topical methodology: the focus is on specific areas of ICT research of high strategic importance. Initial topics include artificial intelligence, internet of things including wearables, cybersecurity, ICT in transport, digital economy, next generation internet and spatial intelligence.

The specific objectives of the project are to:

- Identify priority research topics for collaboration and identify synergies between the *Digital Single Market* and 3<sup>rd</sup> countries/regions' ICT strategies
- Organise and support events targeting research, industry, and policy makers and an event demonstrating impact and highlighting recommendations for future cooperation
- Identify common policy opportunities and the potential for joint activities
- Create a roadmap for stronger cooperation building on researcher exchanges and joint projects for lasting cooperation
- Deliver a handbook for EU researchers on opportunities in Australia, New Zealand and Singapore and information material to disseminate the objectives and results of the project among relevant stakeholders.

This edition of the handbook, focusing on ICT RTDI programmes in Singapore, provides EU stakeholders with an overview of research programmes open to collaboration with Europeans, detailing the possibilities and the conditions to access, participate, or be funded.

## 2 Executive summary

This handbook for EU researchers offers an overview of local research programmes for Europe-based researchers who are interested in collaborating with their peers in Singapore. Local EPIC project partners, researchers and research managers have worked together to identify and describe RTDI programmes funded by national or regional authorities. In line with the objectives of the EPIC initiative, the focus is on information and communication technology programmes. However, where relevant, other initiatives that can provide funding are also included.

Researchers in Europe looking for opportunities to collaborate with Singapore will no doubt realise that finding a suitable funding scheme or domestic funding source for participation in European programmes is not always easy and can, in fact, be downright challenging. For this reason, this report includes some closed calls, especially for programmes that typically open for proposals once per year - and can thus be expected to be renewed in the future.

However, this should not mislead nor discourage EU researchers with an interest in collaborating with their colleagues in Singapore. Europe is still seen as a reliable partner with outstanding research competencies. Long historical relations and cultural ties contribute to a generally very welcoming atmosphere and environment for European researchers. Singapore has an excellent standard of university research, and many are keenly interested in collaborating with European colleagues.

Singapore is widely known for its business-friendly environment and targeted initiatives in the research sector. It invests strongly in digital technologies and exhibits strengths in several fields from electronics to robotics, AI, and security or networking research. In the past, Singapore has been very open to international researchers. It provides several interesting funding sources, although most are linked to either being based in Singapore or participation in a Singapore-led project. There are several joint research labs of European entities with organisations in Singapore. Together with some EU member states programmes, they support EU-SG ICT RTDI collaboration.

## 3 Introduction

### 3.1 Collaborate internationally

Recent studies have emphasised the trend towards internationalisation of RTD collaboration.<sup>1</sup> This is true for multinational enterprises, as well as for research organisations and government institutions. The reasons for this development are manifold and include economic aspects and technological advances, but also social developments. Economic drivers of international research in ICT are primarily relevant for companies and very broad by themselves. Cooperation is seen as a means of tapping into expertise not available elsewhere, including attracting scientists and engineers, adapting products for new markets and gaining access to local knowledge and competences. These are very different reasons for research collaboration with different characteristics.

At the academic research level, an important driver for researchers to collaborate across country borders is to exchange knowledge with their peers in the field. However, there are also many other reasons such as gaining access to students and young researchers and engineers or increasing the reputation and recognition as a researcher or as an institution. International benchmarking, stimulation of new ideas, or simply fun are even more reasons for academics to cooperate internationally.

### 3.2 Purpose and use of this handbook

The purpose of this handbook for EU researchers is to offer a clear overview of local research programmes open for European researchers who are interested in collaborating with their peers in Singapore. Local EPIC project partners, researchers and research managers have collaborated to collect a broad range of programmes funded by national or regional authorities. For completeness, we have added current and forthcoming EU calls in the H2020 programme of relevance to both Singapore and the EPIC focus topics.

The intended use of this handbook is as a reference to sources of funding for research collaboration. As a handbook, this manual can only provide a panorama of resources available at the time of its preparation. Most programmes listed are, however, fixed deadline calls that are only open for submission during certain periods. Users of this manual should check availability on the various programmes' homepages or on the EPIC website<sup>2</sup>, bearing in mind that the project will conclude in July 2019. Researchers looking for a support programme should note that most of the programmes described in this manual regularly open for submission, most of them at least once per year.

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<sup>1</sup> Cf. L. Georghiou, Global cooperation in research. In: Research Policy 27 (1998), 611-626. J. Hoekman, K. Frenken, R.J.W. Tijssen, Research collaboration at a distance: changing spatial patterns of scientific collaboration within Europe. In: Research Policy 39 (2010), 662-673.

<sup>2</sup> <https://epicproject.eu/> or <https://epicproject.eu/index.php?id=65>

### 3.3 The funding situation in general

Researchers in Europe looking for opportunities to collaborate with Singapore will no doubt realise that finding a suitable funding scheme is not always easy. Even fewer funding schemes are now offered than just a few years ago and some of the programmes are rather small. It is harder still to identify programmes targeting collaboration with European researchers specifically, there being few programmes of this kind in Singapore.

This situation at least partially also reflects the growth of research collaboration with other areas in the world, most notably perhaps with China or South Korea. In addition, global ICT leaders such as the U.S.A. remain high on the business and policy agenda for countries such as Singapore, not least for their huge financial investments in the technology sector, tech ventures and start-ups.

However, this should not mislead nor discourage EU researchers with an interest in collaborating with their colleagues in Singapore. Europe is still seen as a reliable partner with outstanding research competencies. Long historical relations and cultural ties contribute to a generally very welcoming atmosphere and environment for European researchers. This also leads a large number of EU nationals who have become long-term or even permanent residents. They have created an often-dense network of EU nationals that still maintains close connections with their home countries and in many cases also with national and European research and innovation initiatives including in particular the EU's Framework Programme for Research.

Consequently, (former) EU nationals now residing in Singapore are not only an important source of information and key entry point to networks for EU researchers; in many cases they are also drivers of EU projects and in general highly appreciative of maintaining, expanding or re-establishing collaborations with their colleagues from back home. Beyond the formal programmes described in this handbook, these (former) EU nationals therefore often provide informal and personal pathways to longer-term and potentially mutually beneficial research collaborations for Europeans with an interest in the work of their Singapore peers.

## 4 Singapore

### 4.1 Country overview

Singapore is considered one of the most successful science, technology and innovation systems in the region. National IT Plans by the National Computer Board together with the liberalisation of the telecom markets and e-Government actions in the 90s have resulted in excellent positions for Singapore in many international ICT rankings. Singapore is also a leader in publications in Southeast Asia. The general strengths of Singapore's ICT research at the aggregate level are further confirmed in recent studies on the individual researcher level. As would be expected, researchers from the Nanyang Technological University and the National University of Singapore – but also from the Institute of Infocomm Research, are among the best in the country.

It is therefore not surprising that Singapore – given the small size of the country – exhibits several strengths, including electronics and electrical engineering, robotics and artificial intelligence, security, networking, and digital media. These different areas are strong either from the point of view of individual researchers, dedicated research initiatives and institutes, or from a more market-oriented perspective.

Joining the different indicators here and based on discussions with experts from Singapore, a particularly strong case can be made for Interactive Digital Media (IDM). There are very good scientists located in Singapore contributing to the different subjects within this area. Also, the field is significantly broad so that this facilitates cooperation not just within a very narrow sub-domain. The long list of groups in IDM suggests significant enough size of the overall area to sustain collaborations also for a longer period – and thus also into the period of the forthcoming 8th EU Framework for Research.

A second priority area can be identified in the more hardware- and physical domain of Future Networks. There is a group of several institutes in the core area of networks and important related topics such as routing, security, optical technologies, and coding schemes. The case for this area is further strengthened by the excellent ICT infrastructure and innovative applications available in the island state and the policies in place to further invest in innovative networked solutions for the benefit of all citizens. Thirdly, several top researchers located in Singapore are active in different sub-fields of robotics with an emphasis on mobile, autonomous, and social systems and different areas within Embedded Systems.

## 4.2 Success stories

### **IPAL- Image & Pervasive Access Lab**

<http://ipal.cnrs.fr/>

IPAL is an outstanding example of a successful joint collaboration providing vast opportunities for both students and researchers from all over the world who are interested in personal and professional development in a research laboratory. This joint lab was established to promote and to manage synergic research projects between France and Singapore. IPAL depicts a best practice of bilateral cooperation in the field of infocomm and media.

The collaboration is supported by the Institute for Infocomm Research, a member of A\*STAR, as well as by the National University of Singapore (NUS), which is one of the leading universities in Asia. On the French side, the collaboration is backed by the French National Centre for Scientific Research, a government-financed research initiative under the administrative authority of France's Ministry of Research, as well as by the Pierre and Marie Curie University, the Institute Mines-Telecom and Joseph Fourier University. IPAL is supported by the Horizon 2020 Programme.

The joint lab is situated in Singapore, which is known for its very vivid but competitive research scene. The lab has a strong position on the national and international level and enables scientific exchanges of students and researchers between Europe and Singapore. IPAL offers French scientists, students and engineers a great opportunity to immerse themselves in the dynamic and rich research scene in the highly developed region of Singapore, which is simultaneously a bridge to the Southeast Asian region. This collaboration creates new opportunities, supports the development of innovative research and results in numerous publications, prototypes, intellectual property rights and copyrights.

The main research fields of IPAL identified by the French National Research Agency concern the Smart City for inclusive society, digital health and biomedical image analysis. New artificial intelligence solutions are developed to enhance the quality of life of elderly and frail society. As the number of older people is rapidly increasing, new initiatives and security measures must be taken in order to prepare cities like Singapore to face issues associated with an aging population.

IPAL also hosts several PhD students who conduct their research in the area of deep learning, modelling and analysis of tissue organisation to understand diabetes and sensor fusion, and to further impact on the quality of life of aged people.

The aim of the collaboration is to share and transfer the knowledge, expertise, experiences and human resources in order to connect the ICT and AI solutions with the needs of preventive healthcare.

### 4.3 Strategic topics for cooperation

EPIC priority topics for Singapore include in particular:

- Artificial intelligence and Data Science
- Cybersecurity and privacy
- ICT in transport
- Spatial intelligence

### 4.4 Priority constituencies (research groups, institutes, organisations)

Singapore provides a rich environment for research in many areas of ICT. In the following we list some groups with strong European links that can be useful as a starting point, but there are many more.

#### *Artificial intelligence and Data Science*

- EPIC partner NUS performs research in AI and robotics  
<http://www.comp.nus.edu.sg/about/depts/cs/research/ai/project/>
- EPIC partner I<sup>2</sup>R has a strong focus on machine learning and text analytics  
<https://www.a-star.edu.sg/i2r/RESEARCH/DATA-ANALYTICS>
- IPAL- Image & Pervasive Access Lab  
<http://ipal.cnrs.fr/>

#### *Cybersecurity and privacy*

- Cyber Security Research Centre @ NTU focuses on security-by-design for IoT, cyber risk management and governance.  
<http://cysren.ntu.edu.sg/Pages/Home.aspx>
- I<sup>2</sup>R of A\*STAR – one of the EPIC project partners – is very active in vulnerability discovery and security analysis, but also in IoT security and digital forensics.  
<https://www.a-star.edu.sg/i2r/RESEARCH/SECURITY-PRIVACY>
- NUS and Singtel have established a joint research lab to conduct research in predictive security analytics and IoT and cloud security.  
<https://nus-singtel.nus.edu.sg/>

### ICT in Transport

- TUMCREATE is a research platform for the improvement of Singapore's public transportation, including the deployment of electric and autonomous mobility. Researchers from the Technical University of Munich and Nanyang Technological University join forces and are funded by Singapore's National Research Foundation as part of the Campus for Research Excellence And Technological Enterprise (CREATE).

<https://www.tum-create.edu.sg/>

### Spatial intelligence

- EPIC partner I<sup>2</sup>R of A\*STAR is active in satellite image analytics, machine learning and data analytics as well as Satcom IoT.

<https://www.a-star.edu.sg/i2r/RESEARCH/SATELLITE>

## 4.5 Funding opportunities: programmes and calls

### 4.5.1 Overview of funding opportunities

Table 1- Overview of funding opportunities in Singapore.

| funding scheme  | international applicants | named partner with SG applicant | funding for international partner | max funding (SDG) |
|---|--------------------------|---------------------------------|-----------------------------------|-------------------|
| <b>A*STAR</b>   |                          |                                 |                                   |                   |
| 2nd Singapore-Germany Academic Industry (2+2) international collaboration | just Germany             | ✓                               | ✓                                 | \$500 000         |
| Singapore International Graduate Award (SINGA)                            | ✓                        | ✗                               | ✗                                 | \$2 500 /month    |
| A*STAR Research Attachment Programme (ARAP)                               | ✓                        | ✗                               | ✗                                 | \$2 500/month     |
| <b>National Research Foundation</b>                                       |                          |                                 |                                   |                   |
| Singapore NRF Fellowship Class of 2020                                    | ✓                        | ✗                               | ✗                                 | \$3 000 000       |
| Fellowship for Artificial Intelligence                                    | ✓                        | ✗                               | ✗                                 | \$3 000 000       |
| <b>NUS</b>  |                          |                                 |                                   |                   |
| USPC-NUS Call for Proposals 2019  | just France (Sorbonne)   | ✓                               | ✓                                 | \$80 000          |
| <b>Others</b>   |                          |                                 |                                   |                   |
| The PHC Merlion Programme 2020  | just France              | ✗                               | ✗                                 | \$750/monthly     |
| ANR-NRF Joint Grant Call  | just France              | ✓                               | ✗                                 | € 250 000         |
| Eureka  | ✓                        | ✓                               | ✓                                 | country-dependend |

In Singapore, there are two main organisations offering research funding to international scientists: A\*STAR and the National Research Foundation (NRF).

A\*STAR stands for Agency for Science, Technology and Research and is an important R&D agency under the Ministry of Trade in Industry of Singapore, with the mission of advancing scientific discovery and technological innovation. It connects academia and industry in terms of R&D to create meaningful and impactful outcomes. A\*STAR collaborates intensively with some EU countries and offers funding opportunities for bilateral cooperation projects.

The NRF is a department within the Prime Minister's Office and is responsible for setting the direction for research and development on the national level by planning, developing and implementing research and innovation policies and strategies. The role of the NRF is to fund key initiatives and to support young research talent.

#### 4.5.1.1 2<sup>nd</sup> Singapore-Germany Academic-Industry (2+2) International Collaboration

Call opens: 2 January 2019

Submission deadline: 27 March 2019

##### **Summary of initiative**

A\*STAR, the Science and Engineering Research Council (SERC) and the Federal Ministry of Education and Research (Bundesministerium für Bildung und Forschung, BMBF), jointly announced the 2nd Singapore-Germany Academic-Industry (2+2) International Collaboration call for proposals.

The goal of the call for proposals is to promote research and development bilateral collaboration between Singapore- and German-based public and private institutes and organisations, through joint scientific projects. Specifically, this collaboration calls for a union of four: one Singapore-based and one German-based public sector research performer, and representatives from one Singapore-based and one German-based industry collaborator. Against the backdrop of globalisation and the Singapore government's recent step up to help companies stay competitive through innovation and technology adoption, this "2+2" cooperation framework could incentivise Singapore-based companies to undertake open innovation partnerships and provide the additional avenue for them to internationalise.

For the 2nd Singapore-Germany Academic-Industry (2+2) International Collaboration joint grant call, A\*STAR and BMBF invited researchers based in Singapore and Germany to submit proposals for joint research projects in the area of Advanced Manufacturing. Applicants are required to submit their applications electronically via A\*STAR's Integrated Grants Management System (iGrants). The German-based public sector research performer must also concurrently submit the joint proposal to the BMBF.

All joint proposals are assessed and evaluated by scientific panels appointed by the respective implementing agencies from Singapore and Germany. For the Singapore component, the first stage application (at the pre-proposal phase) is evaluated by a combined panel comprising representatives from A\*STAR, EDB and SPRING Singapore. Selected proposals enter a second stage evaluation and will be cross ranked with nominated proposals from the BMBF. Industry collaborators of shortlisted proposals may then proceed to apply for appropriate funding support from EDB/SPRING Singapore (subject to assessment by the respective agencies).

## Initiative description

This grant call serves to further strengthen efforts in research and innovation between Singapore and Germany in the area of Advanced Manufacturing, based on the agreement on scientific and technological cooperation, to build a basis for mutual market access and sustainable economic alliance. The grant call is both competitive and multidisciplinary in nature and is aimed at encouraging engagements between the Singapore and German research communities and industry collaborators. Projects should also aim to achieve a Technology Readiness Level (TRL) between 5 and 7 upon completion. Key topics include:

- Advanced manufacturing and cyber-physical systems in production (Industry 4.0),
- New material and methods for additive manufacturing,
- Robust security systems for industrial Internet of Things, and
- Smart sensors and actuators for production.

Up to three projects can be jointly funded through this grant call. All projects can last up to 36 months in duration. For each project, a funding sum of up to SGD \$500,000 will be available for Singapore-based researchers, across the public sector research performer and industry collaborator, while the BMBF shall grant a funding sum of up to €300,000 for German-based researchers. A\*STAR would fund the Singapore-based public sector partner, while EDB and SPRING could use appropriate existing funding initiatives to provide funding support to the Singapore-based industry collaborator. The funding application will also be subjected to the respective agency's evaluation criteria.

## Proposal preparation and submission instructions

The objective of this initiative is to catalyse public-private partnerships between Singapore and German public sector research performers and industry collaborators.

It is A\*STAR SERC's intent that the proposed project leverage on existing infrastructure and other programmes previously supported and pre-positioned by SERC. No major investments in tools and equipment are envisaged. Allocation of manpower, service and share time charges for use of equipment should be factored in proposal submissions. SERC may assist and ensure that adequate time and resource provisions are made for services and shared activities.

## Eligibility

This call for proposal is a joint submission that must involve one public sector research performer and one industry collaborator from Singapore and Germany respectively. Eligible Singapore-based public sector research performers include the Institutes of Higher Learning (including universities and polytechnics), A\*STAR Research Institutes, and non-defence-related public sector agencies (e.g., Ministries, Statutory Boards). Applicants are required to submit their applications electronically via iGrants. The German-based public sector research performer must also concurrently submit the joint proposal to the BMBF.

Selected research projects under this 2nd grant call will be funded up to SGD \$500,000 by A\*STAR with its partner agencies (for Singapore-based public sector research performers and industry collaborators) and €300,000 by the BMBF (for the Germany component) for up to 36 months, and this includes funding for general overheads (20% indirect costs).

Companies incorporated in Singapore that are prepared to make significant investments in R&D activities in science and technology may submit an application to either EDB or SPRING Singapore (for local Small and Medium Enterprises). Companies will be assessed on the quantitative and qualitative merits of the proposed project. These include the employment of research scientists and engineers, total business expenditures in R&D which generate spin-off to the economy, investments in fixed assets, and the company's commitment to growing R&D capabilities in Singapore. The grant will be subject to incentive terms and conditions requiring the company to implement its plans to grow and sustain R&D activities in Singapore.

### **Proposal requirements**

Proposals must attempt to fully disclose the research ideas and approaches. It is important that proposals are well crafted and provide substantial description of the research plan for a fair review of the scientific and/or technical plans and approaches. Proprietary or confidential information must be clearly indicated in the proposal. Proposals must not be duplicative or substantially similar to any previous project or proposal submission, and public sector research performers should not be represented in more than one proposal.

The proposal shall contain the following:

- The overall detailed joint project description,
- Details on the involvement and contribution of the Singaporean public sector research performers,
- Details on the interaction among public sector research performers of both countries,
- Details for the funding required for the Singaporean effort.

### **Submission instructions**

Only complete proposals will be accepted for review, evaluation and assessment for awards.

All joint proposals must be submitted by the Singapore-based research performer electronically via iGrants. Proposals must be submitted with the appropriate endorsement by the respective Host Institution (by the Chief Executive Director, Executive Director, the Director of Research or equivalent) to ensure that the organisational support is clearly associated with the proposed research plan.

### **Criteria for evaluation of grant proposals**

Other factors will include the level of synergy of the proposed research to the collective set of activities, the abilities of the researchers, their past performances in prior awards,

comments of the referees (if required), effectiveness of project management, and appropriateness of the requested budget.

A formal contract involving the relevant Singapore-based public institutions and German institutions shall be drawn for each project. Each project shall inter alia:

- Implement research findings to the industry or society (TRL 5-7).
- Apply state-of-the-art methods and advance technologies.
- Be tackled in an interdisciplinary approach involving scientists with different backgrounds in basic research and/or applied/closed research.
- Involve a mix of experienced and young scientists.

Projects should preferably provide leverage in one or more of the following means:

- Provide access to unique and/or specialised characteristics of the overseas partner country (i.e. specific scientific knowledge or techniques), availability of key manpower, common interest in seeking a breakthrough in a specific field, etc;
- Tap on specialised capabilities of overseas partner agencies, and through this, create strategic linkages to tap on these capabilities in the future; or
- Provide opportunities to learn/share/benchmark research with your international public sector research performer.

### **Proposal selection and award process**

All joint proposals will be assessed and evaluated by scientific panels appointed by the respective implementing agencies from Singapore and Germany. These panels will consist of scientific experts who will review and recommend complete proposals for the award. Project proposals with clear strategies for implementing research findings to industry or society and showing greater prospects of attaining a TRL between 5 to 7 would be preferred.

A\*STAR SERC may seek referee reports, written submissions or presentations from some public sector research performers to justify, elaborate or clarify aspects of the research approach described in the proposal during the review process.

Notification of awarded projects will be sent to the respective employing organisations and copied to the respective public sector research performers.

### **Information ownership**

The following should be satisfied prior to commencement of the project:

- Cooperating parties should enter into a formal contract agreement which should specify the roles and tasks to be undertaken by each party to the cooperation; and
- Share the ownership of IP rights brought to and resulting from the cooperation, as well as the commercialisation rights agreed amongst cooperating parties, and will be subjected to the contract assigned by both parties in the joint collaboration within reasonable limitations before the commencement date of the project.

A formal Research Collaboration Agreement (RCA) between the collaborating parties from Singapore and Germany would need to be signed and forwarded to A\*STAR and the BMBF not later than twelve months after the Letter of Award of the project has been issued. Permission from A\*STAR and the BMBF must be sought at least one month in advance if further time extension is required for the completion of the RCA.

### **Project review, monitoring and evaluation**

Each awarded project will be evaluated and assessed for progress to ensure that proposed milestones and deliverables can be achieved. Successful grant applicants will be required to submit an annual progress report and a final report upon project completion to the review panel comprising of scientific experts appointed by A\*STAR and BMBF representatives.

The assignment of commercialisation rights and distribution of any intellectual property (IP) (made according to the contributions by the respective parties) shall be established in an RCA between Singapore and German research entities within one year of the issuance of a Letter of Award. The RCA will include the following:

- Specify roles and tasks to be undertaken by each party within the cooperation; and
- State the sharing and ownership of relevant IP and commercialisation rights brought to and resulting from this cooperation.

Presentations and public seminars may also form part of the progress review of a project.

### **Deadlines**

This call for proposal closed on 27 March 2019.

German-based applicants are required to submit their applications through the BMBF's online system.

Grant recipients were notified in October 2019. The third edition of the call for proposals is expected in January 2020.

An indicative timeline of grant call activities is as follows:

| <b>Activity</b>                           | <b>Timeline (SGT)</b> |
|---|-----------------------|
| Call for applications                     | 2 January 2019        |
| Deadline for submissions                  | 27 March 2019         |
| First stage peer review and cross-ranking | 01 July 2019          |
| Announcement of outcomes                  | October 2019          |

### 4.5.1.2 Singapore NRF Fellowship, Class of 2020

Call opens: 14 January 2019

Submission deadline: 5 March 2019

The Singapore NRF Fellowship provides opportunities for early career researchers from all over the world to lead impactful research in Singapore. The Singapore NRF Fellowship offers:

- A five-year research grant of up to SGD 3 million (approximately USD 2.15 million), inclusive of general overheads.
- Freedom to lead ground-breaking research in a host institution of choice in Singapore.

This call will have two tracks:

**Track A:** Applicants from all disciplines of science and technology (Computer Science, including Infocomm Technologies and Interactive Digital Media, Engineering, Life Sciences and Natural/Physical Sciences).

**Track B:** Applicants with research experience in the field of Science of Learning (SOL). The NRF's SOL seeks to develop a science-based understanding of the effectiveness of Singapore's education methods, as well as develop new methods to realise better learning outcomes. Applicant's proposals could be based on, but need not be limited to, research in the following priority areas:

- Developing neuroscience-informed interventions for translation – This refers to the development of interventions built on existing related neuroscience knowledge.
- Validation of cognitive theories or interventions with neuroscientific evidence – This refers to the corroboration of existing interventions/theories with the development of new neuroscience knowledge.
- Development of platform technologies as tools to support scaling of interventions with neuroscientific evidence – This focuses on methods to scale up application of established intervention methods.

#### **Eligibility**

Outstanding researchers of any nationality, in the early stage of their research careers and ready to take on their independent research, are eligible to apply.

PhD holders with research experience in any discipline of science and technology or Science of Learning.

#### **Application Details**

Applications for the NRF Fellowship must have been submitted through the Integrated Grant Management System (IGMS) (<https://researchgrant.gov.sg>) by 5 March 2019, 3.00pm (GMT+8). Late submissions are not accepted. Applicants shortlisted to the final

rounds will be invited to Singapore in October 2019 for an interview by the NRF Fellowship Evaluation Panel (FEP), an international panel of eminent scientific leaders.

#### 4.5.1.3 Singapore International Graduate Award (SINGA)

Call opens: June 2019

Submission deadline for August 2020 intake: 1 December 2019

The Singapore International Graduate Award (SINGA) is a collaboration between the Agency for Science, Technology & Research (A\*STAR), the Nanyang Technological University (NTU), the National University of Singapore (NUS) and the Singapore University of Technology and Design (SUTD).

PhD training will be carried out in English at your chosen lab at A\*STAR Research Institutes, NTU, NUS or SUTD. Students will be supervised by distinguished and world-renowned researchers. Upon successful completion, students will be conferred a PhD degree by either NTU, NUS or SUTD.

SINGA fosters a vibrant and culturally diverse research community of international students. PhD candidates be working in a multi-cultural environment alongside distinguished and world-renowned researchers in state-of-the-art facilities.

##### **Research areas**

- Biomedical Sciences
- Physical Science and Engineering

##### **Eligibility**

- Open for application to all international graduates with a passion for research and excellent academic results
- Good skills in written and spoken English
- Good reports from academic referees

The above eligibility criteria are not exhaustive. A\*STAR may include additional selection criteria based on prevailing scholarship policies. These policies may be amended from time to time without notice.

##### **Coverage**

The award provides support for up to four years of PhD studies including:

- Tuition fees
- Monthly stipend of SGD \$2,000, which will be increased to SGD \$2,500 after the passing of the Qualifying Examination
- One-time airfare grant of up to SGD \$1,500\*
- One-time settling-in allowance of SGD \$1,000\*

#### 4.5.1.4 USPC-NUS Call for Proposals 2019

Call opened: 24 September 2018

Submission deadline: 29 March 2019

The Université Sorbonne Paris Cité and the National University of Singapore (USPC-NUS) grant has been designed with the objective of fostering new collaborations in higher education and research between Europe and Southeast Asia. Since 2013, three calls for proposals have been launched every year to fund joint research initiatives, international doctoral student mobility and innovative projects in higher education. The aim of the calls for proposals is to support high quality and preferably interdisciplinary research between NUS and USPC. Its principal objective is to foster and promote a long-standing cooperation between its partners across diverse disciplines, from life, physical and engineering sciences to social sciences and humanities and to allow new topics and collaborations to emerge.

#### **Eligibility**

The new USPC-NUS call for joint research projects is open to researchers in all disciplines. Projects must be led jointly by full-time faculty members from both USPC and NUS wishing to start a new collaboration. Third parties from other institutions are welcome to take part in a research team but will not receive direct funding.

Proposals may include:

- Thematic workshops with graduate students and faculty members from both institutions.
- Joint conferences, seminars and publications.
- Travel allowances for USPC faculty wishing to spend significant time at NUS, or vice versa, as part of a research project.

Preference will be given to proposals that intend to build sustainable links between any of the USPC institutions and NUS. Each project will be funded on a two-year long basis in amounts of up to €50,000 (approx. SGD \$80,000). Doctoral students who are part of a joint research team are encouraged to apply through the doctoral mobility call for proposals for an additional individual stipend of €5,000.

#### **Grant Management**

- **Timeline:** the first project-related expenses should be incurred within two years of the date of award. Extensions may be considered on a case-by-case basis.
- **Progress reports:** recipients must report briefly on the activities for which the grant is being utilised and on any progress toward obtaining external support for the project.
- **Acknowledgement:** recipients are expected to acknowledge the support of the joint research project grant in any publication or presentation, which must be listed in the progress reports.
- **Payment request:** the payment and post-award financial management should be administered through the existing practice at the lead principal investigator's

institution, i.e. recipients from USPC will follow their institution's financial procedures and recipients from NUS their own financial rules.

#### 4.5.1.5 A\*STAR Research Attachment Programme (ARAP)

Call opened: continuously

Submission deadline: none

The A\*STAR Research Attachment Programme (ARAP) is a collaboration between A\*STAR and partner universities to provide research opportunities for PhD students at A\*STAR Research Institutes. Under this programme, PhD students from overseas universities will spend a minimum of one to a maximum of two years at A\*STAR Research Institutes under the joint supervision of staff from the A\*STAR Research Institutes and the overseas universities.

#### **Eligibility**

International PhD students with a bachelor's degree with at least a 2nd Upper Class Honours or equivalent may participate in this programme if their home university supervisor has a collaboration with an A\*STAR researcher.

#### **Coverage**

Awardees are provided with the following during their attachment in Singapore:

- Monthly stipend of SGD \$2,500
- One-time airfare grant of SGD \$1,500
- One-time settling-in allowance of SGD \$1,000
- Housing subsidy
- Medical insurance
- Conference allowance

#### **Application**

##### *ARAP-Partner University Scheme*

Students from partner universities should contact the respective student office for enquiries on the programme and application procedure. The list of partner universities and contact points can be accessed via the ARAP Partner Universities Contact List.

##### *ARAP-Individual Scheme*

Interested students from non-ARAP Partner Universities may also apply through the ARAP-Individual scheme. This programme runs throughout the year and offers the same terms of support as the ARAP-Partner University scheme.

Interested students and/or supervisors can contact the A\*STAR Research Institute (RI) coordinator directly for placement and/or collaboration opportunities. For the contact list of A\*STAR RI coordinators, please visit the A\*STAR Research Institutes Coordinator List.

Subsequent to this, the RI coordinator will nominate the selected PhD student for the ARAP-Individual programme with the following documents:

- Completed ARAP (Individual) nomination form
- PhD matriculation letter
- Background of how this collaboration was established
- Curriculum Vitae
- English-translated bachelor and master transcripts and certificate
- Copy of identity card/passport
- Recommendation letters from proposed supervisors

Once the completed application is submitted, assessed and approved, the student will be notified of the outcome. Successful applicants can subsequently start the attachment at the A\*STAR RI.

#### 4.5.1.6 The PHC Merlion Programme 2020

Call opened: 24 September 2018

Submission deadline: 20 September 2019

The Merlion Programme (Hubert Curien Partnership), managed by the Institut Français of Singapore, initiates and fosters the development of scientific collaborations between French and Singaporean laboratories.

It finances different kinds of operations:

- Short term missions for researchers, postdoctoral and PhD students,
- Seminars or workshops in France or Singapore on a common theme,
- Several-month stays for PhD students in Singapore who wish to undertake a part of their thesis in France.

*Merlion Project:* Funding of missions between France and Singapore for researchers, postdoctoral and doctoral students involved in a joint research project.

The financial support of a Merlion project is done in two ways:

- Travel to Singapore for France-based researchers. The travel costs are borne by the French side and cover exclusively the allowances (€200/day for a maximum of 10 days) and travel expenses of the researchers in the French teams (reimbursement of the actual expenditure subject to a maximum of €1,150 per return ticket).
- Travel to France for Singapore-based researchers. The travel costs are borne by the Singaporean partners, according to the rules of each institution, the daily allowances will be given for a maximum of 10 days.

Up to €30,000

*Merlion Workshop:* The workshop is to be jointly organised by both partners - the French and Singapore institutions. The aim is to lead to an eventual bilateral research agreement post workshop. The workshops could be held in either France or Singapore.

Up to €20,000

#### *Merlion PhD:*

This grant allows the PhD student to spend up to 18 months over a period of three years in France, subject to a maximum of six months in any given year.

The student will receive:

- One return air ticket subject to a maximum of €1,150,
- A monthly allowance of about €750 per month,
- A free visa,
- Assistance to find accommodation,
- Medical and civil liability insurance coverage.

#### 4.5.1.7 NRF Fellowship for Artificial Intelligence

Application closed on 19 December 2018.

Final interview: March 2019

NRF is launching an NRF Fellowship for Artificial Intelligence (AI) to attract and recruit outstanding young researchers from around the world to lead impactful and independent AI research in Singapore.

#### **The Fellowship offers:**

- A five-year research grant of up to SGD 3 million, inclusive of general overheads.
- Freedom to lead ground-breaking research in host institution of choice in Singapore.

#### **Eligibility**

- Outstanding researchers of any nationality, in the early stage of their research careers and ready to take on their independent research, are eligible to apply.
- PhD holders with research experience in AI or AI-related fields.
- Applicant must not be holding an Assistant Professor or equivalent position at local research institutions for more than one year at the point of submission (i.e. defined by grant call closing date).
- Applicant must not be at the RSE 3 level and above for more than one year at the point of submission (for A\*STAR applicants).
- Applicant must not be a recipient of a similar early career award in Singapore.

Applications should be submitted through the Integrated Grant Management System (IGMS). Applicants are also expected to upload a Letter of Support by the Faculty Dean / Head of Department or equivalent from their host institution of choice. This Letter of Support describes the level of commitment the host institution would provide to the candidate, contingent on their successful award.

Applicants must also arrange to have at least three, but no more than five letters of reference submitted to the NRF on their behalf. These letters should be sent confidentially by your referees directly via email to the National Research Foundation. The referral letters should include assessment on your leadership potential, ability to independently carry out impactful research, and personal attributes.

#### 4.5.1.8 ANR-NRF Joint Grant Call

Call opened: 24 September 2018

Submission deadline: 30 October 2018

**The 5<sup>th</sup> ANR-NRF Joint Grant Call was the last one. There is no information available whether the programme is going to be continued in the future.**

#### **Background and objectives of cooperation with Singapore**

By developing bilateral agreements with foreign funding agencies, the French National Research Agency (ANR) enables French researchers to initiate or intensify their collaborations. Such cooperation fits into its plans to foster and give rise to outstanding teams in Europe and throughout the world.

Bilateral agreements are designed to support innovative bi-national projects which break away from existing national projects and show seamless synergy between both countries' teams and genuinely integrated joint research.

In order to simplify and streamline working arrangements and create frontier-free research funding, the ANR and NRF have forged a new partnership. An agreement was signed between the two organisations making it easier to set up and implement high-quality scientific projects jointly proposed by French and Singaporean research teams. Under this agreement, each country's agencies evaluate the proposals and fund their respective national teams according to their own procedures.

The purpose of the partnership between ANR and NRF is to support projects in which there is effective collaboration between Franco-Singaporean partners. Partners will ensure that each country provides equitable contributions and scientific inputs. The same will apply to grant applications made to agencies. French and foreign partners should strive to align projects' start and end dates. Please note that the NRF has a maximum project length of 36 months.

#### **Research priorities**

The bilateral accord signed with NRF is only open to the following themes:

- Materials nanotechnologies;
- Nanosystems applied to challenges;
- Clean, secure and efficient energy;
- Industrial renewal;
- Sustainable mobility and urban systems; and
- Sustainable information and communication society.

### **Submission of proposals**

The French and Singaporean partners shall prepare a joint scientific project. Each country's teams must designate a national scientific coordinator. The acronym and title of the project provided to each agency must be the same. Projects should be submitted all at once to respective funding agencies.

#### French partners:

Projects will be submitted under the "PRCI: International Collaborative Research Projects" funding instrument of the ANR's Generic Call for Proposals 2018.

#### Foreign partners:

It is essential to comply with the foreign agency's procedures for submission, format, and eligibility, as well as their opening and closing dates.

### **Submission of full proposals**

The French scientific coordinator must submit a full proposal to ANR, together with applicants to the PRC, PRCE and JCJC funding instruments selected at the first stage's outcome. The deadline and the URL of the submission site will be communicated later on the web page dedicated to the 2018 Generic Call for Proposals. Writing in English is highly recommended, as evaluation is carried out within a bilateral cooperation with the foreign agency. If a scientific document is drafted in French, a translation may be requested. The full proposals for international projects must comply with the rules on format and content set out in the Guide for Applicants 2018. The choice of the committee in which the project will be evaluated is carried out by the French scientific coordinator while submitting the full proposal and cannot be modified during the process. The French coordinator should be listed as scientific coordinator on the ANR submission site, with the foreign coordinator listed as "country referent". The French coordinator shall be subject to the rules (incl. eligibility) applicable to all national scientific coordinators under the Generic Call for Proposals. The following is the minimum information required concerning foreign partners: the name and address of the institution, its category (public/private), the address where research is carried out, and information concerning the foreign coordinator (country referent) - all must be filled in using the online form. Only the amount of funding requested by foreign partners must be stated in the online form. No detailed financial breakdown is required online.

Furthermore, applicants must absolutely provide the following information in the scientific document:

- The scientific contribution of the foreign teams;

- Financial data, broken down by item of each expenditure for both foreign partners and French partners.

Finally, applicants are requested to provide a summary table for each French and foreign partner (with amounts indicated in each national currency and their equivalents in euro, if necessary):

- The total amount of expenditures;
- The amount of funding requested from each funding agency (ANR, NRF).

### **Eligibility of full proposals**

Each agency decides on projects' eligibility according to its own rules. For foreign agencies with separate eligibility criteria, partners are strongly recommended to read the call text published by the Singaporean Agency [www.nrf.gov.sg/funding-grants/international-grant-calls](http://www.nrf.gov.sg/funding-grants/international-grant-calls).

ANR verifies the full proposals' eligibility taking into account both the criteria set out in the 2018 Generic Call for Proposals and the estimated duration of the project, which must be the same for both countries' partners.

These eligibility criteria apply in addition to those of the foreign agency (and must be verified with foreign agency).

A project will be funded by the ANR only if it meets the eligibility rules of the NRF and the ANR and the terms of its funding regulations.

### **Evaluation**

Projects are evaluated in parallel by ANR and the foreign agency according to their own evaluation procedures. As regards ANR, projects are evaluated according to the same criteria as projects submitted under other General Call 2018 funding instruments. The specific criteria for international collaboration detailed in the Guide for Applicants are also taken into account.

With regard to the "Balanced scientific and financial contributions from respective countries' partners" criterion, the economic context of the partners' countries is taken into account. Project coordinators are informed that under the bilateral agreement, NRF will provide Singaporean partners with up to €250k (SGD \$430,000) per project for the duration of the project. Applicants are invited to present projects justifying ANR funding for indicative maximum amounts of €250k, including for fundamental research projects.

Additionally, ANR and the foreign agency shall decide on the projects to be jointly funded, on the basis of those selected under both selection processes, specific to each agency.

### **Funding**

Each agency will cover expenditures for their respective country's teams according to its own rules. Applicants will ensure that their budget includes participation in at least

one mid-term and / or end of-term symposium in France and abroad. ANR's funding regulations are available at: <http://www.agence-nationale-recherche.fr/RF>

### **Submission**

- Submission of full proposals to ANR:
  - Opening of the submission site: end of February 2018
  - Closing of the submission site: end of March 2018
- NRF calendar: it is essential to consult the Singaporean agency website
- Joint decision and publication of results: September 2018 (indicative date)
- Tentative project launch time: year-end 2018/adjustable depending on foreign partners' constraints.

### **4.5.1.9 EUREKA**

Call opened: 15 May 2019

Submission deadline: 26 September 2019

### **Call description**

Within the GlobalStars initiative of EUREKA, based on mutual consent:

- Singapore,
- United Kingdom,
- Netherlands,
- Denmark,
- Belgium,
- Spain,
- Czech Republic and
- Turkey

are launching a common call. Participants from Singapore and the respective EUREKA member countries are invited to submit joint project proposals in the research and development of innovative products and applications with strong market potential.

### **Scope**

The call for proposals will be an open call with focused attention upon:

- Medical technology
- Smart mobility and logistics
- Advanced manufacturing

### **Time Schedule:**

International Announcement of the Call: 15th May 2019

National Announcements of the Call: Country Dependent

Deadline for EUREKA Application: 26th September 2019

Consensus Meeting of Funding Agencies: Prior to 25th November 2019

Applicants Informed: 15th December 2019

EUREKA label procedure and approval: December 2019 – January 2020

## **Eligibility criteria**

Partners must meet the following qualifications:

- The consortium should include at least two companies that are independent from each other, with one company from Singapore and one company from one of the EUREKA member countries participating in the call.
- The project partners must express their will to cooperate on a win-win/fair basis in an R&D project leading to a new product, industrial process or service.
- The product, process or service must be innovative, and there must be a technological risk involved for all involved partners.
- The project must benefit all involved partners.
- The project should have an obvious benefit and added value resulting from the technological cooperation between the participants from the different countries (e.g. increased knowledge base, commercial leads, access to R&D infrastructure etc.).
- A signed consortium agreement is required upon approval, before the actual start of the project. It ought to include, amongst other things, the ownership and use of know-how and IPR settlements
- The maximum duration of a project may not exceed 36 months.
- Proposals which are backed by actual customers for commercialisation will be favourably considered.
- No individual organisation, or individual country, can claim more than 70% of the total eligible costs of a joint project.
- Military projects are excluded.

Any partner whose cooperative R&D project is consistent with the aforementioned criteria can apply to the present call in accordance with the national laws, rules, regulations and procedures in effect in each country, on a non-exchange of funds basis, and subject to budgetary availability. The amount of funding available per project partner is subject to national rules and regulations.

Project partners are strongly advised, prior to submitting the application, to contact their national/regional authority (see below) in order to check the eligibility of their project.

Partners from other EUREKA countries or countries outside of EUREKA can also participate, but they will not be funded by the participating funding bodies in this call. Subsequently, these partners must secure their own funding within the call deadlines.

## **Eligibility Criteria for Singapore**

Singapore will be supporting companies using the Enterprise Development Grant (EDG). To be eligible for EDG support, the applicant must fulfil ALL of the following:

- Be a business entity that is registered and physically present in Singapore, and;
- $\geq 30\%$  local equity held directly or indirectly by Singaporean(s) / Singapore PR(s), determined by the ultimate individual ownership and;
- Be financially able to see a project through completion. This is assessed by the following in their latest financial year:
  - Current ratio  $\geq 1$
  - Net equity position  $>0$
- Any other criteria as described in the Enterprise Development Grant page.

You can read more about funding in Singapore on the business grant and the enterprise Singapore websites

### **Submission**

There are four stages to the submission and assessment process.

#### **Stage 1: EUREKA application**

The coordinator of the international consortium must download and complete the EUREKA project application form on behalf of the entire consortium. The completed electronic form, including the required annexes, should be sent to [globalstars@eurekanetwork.org](mailto:globalstars@eurekanetwork.org) by 11:59pm Central European Summer Time with the following subject: EUREKA GlobalStars Singapore 2019.

##### **1. EUREKA Project Form**

The project consortium should fill out the project description in the 'EUREKA Project Form' (an electronic form available on <http://www.eurekanetwork.org/eureka-project-application-form>). The form must be completed in English.

For this call, specific instructions for filling out the 'EUREKA Project Form' are available (see Section A of the call text). The project consortium is strongly advised to follow these instructions and describe all necessary elements in the form as requested. You can contact your EUREKA national office to get support in preparing the document (see below for detailed information per funding agency)

A separate version of the application form with all signatures of the project partners should be added as an integral part of the application.

##### **2. Project Plan**

Additionally, the project consortium must complete the 'Additional Project Info'. See Annex B of this call text.

#### **Stage 2: National applications**

In parallel to the submission of the EUREKA project form, all project partners are required to submit a related funding application, if required, to their respective funding bodies, taking into account all relevant procedures and submission rules. Deadline for submission might differ between the participating funding bodies (see below for detailed information per funding agency)

Singaporean lead applicants must submit the EDG application on the Business Grant Portal by 26 September 23:59 SGT along with the supporting documentation listed in the guidance for applicants.

### **Stage 3: International and national evaluation**

All applications are assessed against the eligibility criteria of the call before being put forward for the national assessments according to the national evaluation criteria.

Singaporean applications will be evaluated by a panel of internal and external evaluators.

A multilateral consensus panel made up of Innovate UK, Enterprise Singapore and Netherlands Enterprise Agency, Flanders Innovation and Entrepreneurship (VLAIO), Service public de Wallonie (SPW-Research), Innovation Fund Denmark, the Scientific and Technological Research Council of Turkey (TÜBİTAK)), the Centre for the Development of Industrial Technology, E.P.E. (CDTI) and Ministry of Education, Youth and Sports (MEYS) evaluators agree which projects to approve based on the assessors' scores, using the EUREKA project assessment methodology (see annex C). The basis for the evaluation is the general EUREKA eligibility criteria, national eligibility criteria and evaluations, the EUREKA application form with annexes and if required, a national application form.

Successful projects are put forward for a EUREKA label. After a common list of funded and non-funded projects has been agreed upon, the EUREKA secretariat will inform applicants about the results.

### **Stage 4: National funding decision**

Funding will only be provided to labelled projects that are positively evaluated by all participating funding bodies, taking the common ranking list into account. Funding of project partners is subject to budgetary availability and national funding conditions stipulated by each funding body.

All project partners are notified of the funding decisions by their respective national funding bodies.

Any IPR arising from cooperative project activities under this call shall be regulated in a Consortium Agreement (CA) in accordance with the relevant laws of the countries participating in the project.

A signed CA on the execution of the project and commercialisation of the projects results is mandatory for selected projects and must be sent to the relevant national funding agencies no later than three months after the results of the evaluation have been communicated. In all cases, the project start cannot be prior to the approval of the signed CA.

## 4.6 Networks

The identified networks, institutes and organisations can deliver useful information and access to expert knowledge and networks in Singapore, although they are not focused solely on research collaboration. The following table lists associations and organisations located in EU member states that have active networks in Singapore.

Institut Francais de Singapour leads and supports cultural, scientific and educational cooperation between France and Singapore. It promotes the teaching of French language, the French creative industries and the French savoir-faire in the fields of higher education and research.

The Singaporean-German Chamber of Industry and Commerce (SGC) is part of a network of 130 offices of the German bilateral Chambers of Industry and Commerce abroad in 90 countries. The Chamber is one of the largest national Business Chambers in Singapore with a membership of close to 550 representatives from a variety of industries in Germany and Singapore. The SGC is a valuable and well-established networking platform and well connected with authorities in Singapore and Germany. Through its active industry committees SGC gives a voice to businesses.

Through its ground-breaking collaboration with Singapore's two leading universities, the Technical University of Munich (TUM) has pioneered globalisation of German universities with the presence of TUM Asia in partnership with the National University of Singapore (NUS) and Nanyang Technological University (NTU) to offer post-graduate programmes.

Facing a rapid increase of demand for skilled labour, TUM Asia has also launched programmes in TUM's expertise – bringing the best of German engineering to Asia. The degrees are taught by TUM faculty combined with relevant lectures from experts in German and Singaporean industries, integrating a globalised classroom environment.

*Table 2: Overview of networks linking Europe and Singapore including selected organisations in trade and research.*

| Network   | Country | Link  |
|---|---------|---|
| Institut Francais de Singapour                          | France  | <a href="https://www.institutfrancais.sg/en/">https://www.institutfrancais.sg/en/</a> |
| The Singaporean-German Chamber of Industry and Commerce | Germany | <a href="http://www.sgc.org.sg/">http://www.sgc.org.sg/</a>                           |
| TUM Asia  | Germany | <a href="http://www.tum-asia.edu.sg">www.tum-asia.edu.sg</a>                          |

## 4.7 Ideal-ist and EURAXESS contact points

**Ideal-ist** aims to help ICT companies and research organisations worldwide hoping to find project partners for participation in Horizon 2020. Ideal-ist offers a unique and

quality-labelled Partner Search, as well as other services that help proposers with participation in H2020.

The Singaporean representative in the Ideal-ist network supporting EU project consortia in finding partners is:

Institute for Infocomm Research

Phone: 0065 6408 2115

Web Address: <http://www.i2r.a-star.edu.sg/>

For further information about the Ideal-ist project and network refer to chapter 5.3 "Points of contact and further information".

**EURAXESS** is a European initiative aimed at researchers from all over the world, the role of which is to deliver information and support professional scientists. The aim of this initiative is to enhance the scientific cooperation between Europe and the rest of the world by offering mobility, travel and exchange grants and by supporting research careers. EURAXESS gives researchers a chance to connect and collaborate with others on the international level.

EURAXESS is present in Asia, Latin America and the Caribbean, China, India, Japan, North America (U.S.A. and Canada) and as of July 2018, in South Korea.

The members of the EURAXESS Worldwide Community have an opportunity to be updated with open calls, job positions and funding. They are continuously informed about events and news by newsletter and have the possibility to contact and connect with fellow researchers around the world.

EURAXESS ASEAN focuses on Singapore, Thailand, Indonesia, Malaysia and Vietnam and already has over 7,000 members (scientists, researchers, businesses and other people interested in research between Europe and Southeast Asia).

The representatives of EURAXESS ASEAN frequently visit universities research organisations, conferences and companies across Southeast Asia to inform about the services offered to researchers interested in career opportunities as well as in existing research collaboration in Europe.

To contact EURAXESS ASEAN and receive more information about research, funding opportunities and services in Singapore, please contact: [asean@euraxess.net](mailto:asean@euraxess.net)

## 5 Further resources

### 5.1 Partners from Singapore in H2020

The EC H2020 project database – CORDIS – provides an overview of previously successful partners in H2020. The following projects are listed on CORDIS as participating in H2020 with a Singaporean partner. From experience previously successful participants tend to return to the Framework Programme and therefore are recommendable networking contacts.

#### 5.1.1 Singapore

No ongoing projects.

### 5.2 EU calls targeting Singapore

Several H2020 calls target international collaboration.<sup>3</sup> Countries outside the EU with specific resources or expertise are explicitly mentioned in the call texts. The current H2020 programme specifically includes several calls in the area of ART – automated road transport.

In the case of the ART calls, Singapore is certainly of high interest as there is an autonomous vehicle test centre at NTU. Legislative and regulatory bodies are open for testing new technologies in real-life settings with a strong focus on rapid implementation and exploitation. This makes Singaporean organisations valuable partners for European developers.

#### 5.2.1 Testing, validation and certification procedures for highly automated driving functions under various traffic scenarios based on pilot test data.

Call opens on 31 October 2017

Deadline: 04 April 2018

#### Topic Description

The automotive industry commits significant efforts and resources to test and validate advanced driver assistance functions. For systems with high levels of automation, the need for testing and validation will drastically increase as a comprehensive range of

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<sup>3</sup> A full overview of international cooperation topics, not limited to but including Singapore can be found at:

[https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/ftags/international\\_cooperation.html#c.topics=callStatus/t/Forthcoming/0/1/0/default-group&callStatus/t/Open/1/1/0/default-group&callStatus/t/Closed/0/1/0/default-group&+title/desc](https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/ftags/international_cooperation.html#c.topics=callStatus/t/Forthcoming/0/1/0/default-group&callStatus/t/Open/1/1/0/default-group&callStatus/t/Closed/0/1/0/default-group&+title/desc)

driving situations and scenarios have to be considered. Currently available procedures do not provide an efficient and cost-effective solution. There is a great need for a comprehensive approach to develop common procedures for testing, validation and certification for highly automated driving functions in various traffic scenarios.

### **1. Eligible countries**

Singapore is eligible for funding, having specific provisions which make funding available for their participants in Horizon 2020 projects.

### **2. Eligibility and admissibility conditions**

To be considered admissible, a proposal/application must be:

- (a) submitted in the electronic submission system before the deadline given in the call conditions or rules of contest;
- (b) readable, accessible and printable;
- (c) complete and include the requested administrative data, the proposal description, and any obligatory supporting documents specified in the call/contest;
- (d) include a draft plan for the exploitation and dissemination of the results, unless otherwise specified in the call conditions. The draft plan is not required for proposals at the first stage of two-stage procedures

All requirements are specified in the Annex of the Work Programme.<sup>4</sup>

### **3. Evaluation:**

Evaluation criteria, scoring and thresholds are described in Annex H of the Work Programme.<sup>5</sup>

Proposals must be submitted electronically using the electronic submission system of the Participant Portal.

### **4. Indicative time for evaluation and grant agreements:**

Information on the outcome of evaluation (single-stage call): maximum five months from the deadline for submission.

Signature of grant agreements: maximum eight months from the deadline for submission.

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<sup>4</sup> Annex B: [http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-b-adm\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-b-adm_en.pdf)

Annex C: [http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-c-elig\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-c-elig_en.pdf)

<sup>5</sup> Annex H: [http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-h-esacrit\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-h-esacrit_en.pdf)

## 5.2.2 Support for networking activities and impact assessment for road automation

Calls open: 31 October 2017

Deadline: 04 April 2018

### Topic Description

Besides technological progress in developing new automated driving functions, there are still many challenges and uncertainties related to the deployment of connected and automated vehicles. Many of these challenges can be better addressed when European partners work together and cooperate with international partners. Therefore, a coordinated and harmonised approach to support the deployment of automated driving systems at European and international level is needed. More cooperation is also necessary to assess the impacts of connected and automated driving systems. Several methodologies to assess impacts of connected and automated transport systems have already been developed and applied. However, a commonly agreed methodology to assess the impacts of connected and automated driving systems that would allow for informed decision making does not exist.

### 1. Eligible countries

Singapore is eligible for funding, having made specific provisions for funding available for their participants in Horizon 2020 projects.

### 2. Eligibility and admissibility conditions

To be considered admissible, a proposal/application must be:

- (a) submitted in the electronic submission system before the deadline given in the call conditions or rules of contest;
- (b) readable, accessible and printable;
- (c) complete and include the requested administrative data, the proposal description, and any obligatory supporting documents specified in the call/contest;
- (d) include a draft plan for the exploitation and dissemination of the results, unless otherwise specified in the call conditions. The draft plan is not required for proposals at the first stage of two-stage procedures

All requirements are specified in the Annex of the Work Programme.<sup>6</sup>

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<sup>6</sup> Annex B: [http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-b-adm\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-b-adm_en.pdf)

Annex C: [http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-c-elig\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-c-elig_en.pdf)

### **3. Evaluation:**

Evaluation criteria, scoring and thresholds are described in Annex H of the Work Programme.<sup>7</sup>

Proposals must be submitted electronically using the electronic submission system of the Participant Portal.

### **4. Indicative time for evaluation and grant agreements:**

Information on the outcome of evaluation (single-stage call): maximum five months from the deadline for submission.

Signature of grant agreements: maximum eight months from the deadline for submission.

## **5.2.3 Human centred design for the new driver role in highly automated vehicles**

Call opens: 04 December 2018

Deadline: 24 April 2019

### **1. Eligible countries**

Singapore is eligible for funding, having made specific provisions for funding available for their participants in Horizon 2020 projects.

### **2. Eligibility and admissibility conditions**

To be considered admissible, a proposal/application must be:

(a) submitted in the electronic submission system before the deadline given in the call conditions or rules of contest;

(b) readable, accessible and printable;

(c) complete and include the requested administrative data, the proposal description, and any obligatory supporting documents specified in the call/contest;

(d) include a draft plan for the exploitation and dissemination of the results, unless otherwise specified in the call conditions. The draft plan is not required for proposals at the first stage of two-stage procedures

All requirements are specified in the Annex of the Work Programme.<sup>8</sup>

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<sup>7</sup> Annex H: [http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-h-esacrit\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-h-esacrit_en.pdf)

<sup>8</sup> Annex B: [http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-b-adm\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-b-adm_en.pdf)

Annex C: [http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-c-elig\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-c-elig_en.pdf)

### **3. Evaluation:**

Evaluation criteria, scoring and thresholds are described in Annex H of the Work Programme.<sup>9</sup>

Proposals must be submitted electronically using the electronic submission system of the Participant Portal.

### **4. Indicative time for evaluation and grant agreements:**

Information on the outcome of evaluation (single-stage call): maximum five months from the deadline for submission.

Signature of grant agreements: maximum eight months from the deadline for submission.

### **5.2.4 Developing and testing shared, connected and cooperative automated vehicle fleets in urban areas for the mobility of all**

Call opens: 04 December 2018

Deadline: 24 April 2019

#### **Topic Description**

Shared, connected and cooperative automated vehicles may become a game changer for urban mobility. They can provide seamless door-to-door mobility of people and freight delivery services, which can lead to healthier, more accessible, greener and more sustainable cities as long as they are integrated in an effective public transport system. Since a few years the development of shared automated vehicle pilots are emerging around the world. Today, most of these pilots are small-scale and involve either on-demand ride services or low-speed shuttles operating in controlled environments. In order to accelerate the uptake of high quality and user oriented mobility services, based on shared, connected and cooperative automated vehicles, there is a need for demonstrating these services in real life conditions to test the performance, safety and viability of these systems and services and to prove that they are attractive for and accepted by users. Furthermore, the potential impacts on reducing CO2 emissions and pollutants, safety and overall transport system costs need to be assessed.

#### **1. Eligible countries**

Singapore is specifically mentioned in the call – together with the U.S.A., Australia, Japan, and South Korea as countries that should be considered as a cooperation or project partner.

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<sup>9</sup> Annex H: [http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-h-esacrit\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-h-esacrit_en.pdf)

## 2. Eligibility and admissibility conditions

To be considered admissible, a proposal/application must be:

- (a) submitted in the electronic submission system before the deadline given in the call conditions or rules of contest;
- (b) readable, accessible and printable;
- (c) complete and include the requested administrative data, the proposal description, and any obligatory supporting documents specified in the call/contest;
- (d) include a draft plan for the exploitation and dissemination of the results, unless otherwise specified in the call conditions. The draft plan is not required for proposals at the first stage of two-stage procedures.

All requirements are specified in the Annex of the Work Programme.<sup>10</sup>

## 3. Evaluation

Evaluation criteria, scoring and thresholds are described in Annex H of the Work Programme.<sup>11</sup>

Proposals must be submitted electronically using the electronic submission system of the Participant Portal.

## 4. Indicative time for evaluation and grant agreements

Information on the outcome of evaluation (single-stage call): maximum five months from the deadline for submission.

Signature of grant agreements: maximum eight months from the deadline for submission.

## 5.3 Points of contact and further information

### 5.3.1 EPIC website

EPIC's website is the main online dissemination channel presenting the project and its goals in general and providing detailed information on EPIC's findings and activities.

The website delivers systematically updated information on funding opportunities, upcoming events, open calls, international partners and networks. A special 'Library' section also enables the sharing of EPICs deliverables, briefs, brochures and more with the public.

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<sup>10</sup> Annex B: [http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-b-adm\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-b-adm_en.pdf)

Annex C: [http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-c-elig\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-c-elig_en.pdf)

<sup>11</sup> Annex H: [http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-h-esacrit\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-h-esacrit_en.pdf)

The website connects all of EPIC's dissemination activities and addresses the project's target audiences. While the general description of the project and its goals is meant for an audience unfamiliar with the subject, other subpages such as events, funding and the library address users who are part of the research community.

The contact person for EPIC is the project coordinator Erich Prem.

[www.epicproject.eu](http://www.epicproject.eu)

### **5.3.2 Ideal-ist**

Ideal-ist is an international network encompassing ICT National Contact Points and supporting scientists, specialists, research and innovation institutes from the ICT sector within the EU Framework Programmes. The network consists of over 60 partners from inside and outside the European Union.

The services offered by Ideal-ist include support and expertise in the process of proposal writing. A team of international experts accompanies the proposers from the very beginning until the submission of a proposal. The Ideal-ist target groups are SMEs, large enterprises, research and academic organisations and public administrations. Ideal-ist helps with the interpretation of the ICT Work Programme of Horizon 2020 and coaches the proposers in the writing process.

In a nutshell, Ideal-ist plays an advisory role helping the proposal writers to undergo the application process. The applicants can receive relevant information about participation in the Horizon2020 and other ICT funding programmes.

<https://www.ideal-ist.eu/https://www.ideal-ist.eu/>

### **5.3.3 CORDIS**

CORDIS stands for Community Research and Development Information Service and is a data bank of the European Commission which includes information on all running and closed research project funded by the EU.

The website delivers public information such as factsheets, reports and deliverables; editorial content fostering communication and exploitation (news, events, success stories, magazines etc.); and links to external sources such as open data platforms and websites.

Another important task of CORDIS is delivery of project results based on a report summary. CORDIS provides short synopses of the results in different languages and fulfils an informative role.

[https://cordis.europa.eu/home\\_en.html](https://cordis.europa.eu/home_en.html)

## 5.4 Trade associations and missions

### *EU-ASEAN Business Council*

<https://www.eu-asean.eu/>

The EU-ASEAN Business Council represents European business in the ASEAN region, promoting trade, investments and various business groups. The aim of the council is to simplify rules, laws and policies so that it is easier for European businesses to invest and develop their capital in the region. The Business Council was formally established in 2014 and has been very successful in organising and promoting many activities between European Union and ASEAN member countries. The EU-ASEAN Business Council regularly interacts with trade, commerce and investment organisations in Europe.

### *EuroCham*

<https://eurocham.org.sg/>

EuroCham is the European Chamber of Commerce settled in Singapore. This independent, non-profit organisation was established in 2011 with a mission of promoting bilateral trade, investments and collaborations between Europe and Singapore. EuroCham supports European business in approaching Singaporean market and economic circles and creates networking opportunities for the European business community in Singapore.

## 5.5 Fairs and major annual events

The following provides a selection of particularly noteworthy large-scale fairs and conferences that take place every year. This does not include tech events or scientific conferences with changing locations or events that are more academic. Singapore is a bustling location for tech events and many larger conferences which change location between a selection of Asian cities. It is also known for its large number of start-up events. The following are some examples of annual events of particular interest for the innovation landscape.

### **CommunicAsia**

This large-scale event is one of Asia's most established meeting places for industry professionals in the telecommunications sector. It runs jointly with BroadcastAsia and EnterpriseIT.

<https://www.communicasia.com/>

### **Cybertech Asia**

This relatively young event aims to showcase innovative solutions in cybersecurity with a strong emphasis on IoT, vehicle-to-vehicle communication, Smart Homes and wearables.

<http://asia.cybertechconference.com/>