

Core 3 Spearhead Projects (SHP) Call

Opening date: 1 August 2018

Deadline: 31 October, 2018 at 1700 CET. (email submissions to admin@graphene-flagship.eu must be received before 8am CET on 1 November or files must be uploaded in [Onboard - Uploads](#) before 8am CET on 1 November)

Duration: 36 months from 1 April, 2020.

Overall indicative budget: up to 43.6 M€

Indicative budget per SHP: The budget should be appropriate to reach the project goals. As a guideline, 10-15 SPH are expected to be funded, however this range is non-restrictive and more or fewer projects can be funded.

Contact: admin@graphene-flagship.eu (subject: "Core 3 SHP call")

1 Definition

A SHP is an ambitious, well-defined application-oriented subproject of the Graphene Flagship (GF). It must meet the following criteria:

- Led by industry or a research institute focusing on technology transfer. It cannot be led by a Secondary or Higher Education Establishment.
- Clear and well-defined objectives, technological outcomes and deliverables.
- Motivated by market opportunities created and directly addressable by SHP partners, addressing topics where graphene and related materials (GRMs) have a clear competitive advantage and where the market size/value is sufficient to warrant a substantial effort.
- Targets TRL 6 or above (TRL 6: technology demonstrated in relevant environment; TRL 7: system prototype demonstration in operational environment);
- Topic where European industry can be expected to take the prototype or demonstrator further, or issue licensing.
- Addressable/identified value chain. If the value chain is not completely present within the GF consortium, inclusion of required new partners may be achieved through an invitation for Expressions of Interest (Eoi) on specific competences.

- It may involve partners from a single WP, or from different WPs of the GF.
- Deliver results by the end of Core 3.

2 Submission and Timeline

The SHP must be uploaded, in PDF format and by an existing Core 2 partner, in [Onboard - Uploads](#) or emailed to admin@graphene-flagship.eu before 8am CET on 1 November, 2018.

When uploaded in [Onboard - Uploads](#), the document must be shared with Macarena Muñoz. To share the document, select the document, click on “Share”, insert the name “Macarena” or “Macarena Muñoz Ruiz - CUT” and click on “Send”.

Proposals uploaded in other sections of Onboard will not be admissible.

The document uploaded in [Onboard - Uploads](#) or emailed to admin@graphene-flagship.eu must be named as “C3 SHP Surname of the applicant”. E.g., Walter White will name his SHP document “C3 SHP White”.

Technical problems when uploading must be addressed to it@graphene-flagship.eu.

Between 1 August 2018 and 31 October 2018, potential SHP leaders may provide an abstract onboard so that all GF partners who might be interested can contact the SHP leader to join a potential consortium. The abstract and call for competences may be uploaded in [Onboard – Documents – Partner search SHP](#) as pdf.

Should new partners with specific competences still be needed by 31 October 2018, an EoI should be included in the SHP, with a clear indication of the missing competences.

The Director will inform, not later than 14 December 2018, the shortlisted SHP leaders of the invitation to present the SHP at the Science and Technology Forum (STF) as detailed in the evaluation description, see section 6.

STF will take place on 9-11 January 2019 (The precise date and time of the presentation will be notified to the shortlisted SHP leaders by 14 December 2018).

3 Eligibility

A SHP proposal is eligible if:

- It includes all contents of Section 4.
- It involves a minimum of one Core 2 partner.
- It complies with the same eligibility conditions as for Core 3 partners.
- The essence and foundation of SHPs must rely on sound and validated results. No future expectations, speculations, assumptions, probabilistic forecasts and conjectures should be the basis/starting point for a SHP.

All proposals will be treated the same, even if they are related to an ongoing Core 2 SHP. However, the starting point of a new SHP must be demonstrated at the time of submission and its final goal must be different from that of existing Core 2 SHPs. A Core 3 SHP cannot be an extension of an existing Core 2 SHP to achieve the same goals in a longer time.

SHP eligible entities can be either existing Core 2 partners or any legal entity established in a EU Member State or associated country, or created under EU law, and any international European interest organisation.

Entities not part of the GF Core 2 consortium can enter SHPs only if a demonstrable competence is needed but not present in the Core 2 consortium. The selection of new partners through Eols will happen after the final deliberation at the STF.

The minimum number of partners in a SHP is one. All SHPs should include at least one Core 2 partner, who will upload the SHP proposal in [Onboard - Uploads](#) or email to admin@graphene-flagship.eu. If invited for the final selection stage, only Core 2 partners will be allowed to present to the STF.

If a new competence is needed and new partners are required in Core 3, they will be selected via an Expressions of Interest (Eol), i.e. the process allowing a new entity to become part of the GF consortium. The Eol will be launched after the final SHP selection in January 2019. The Eol process will be transparent and give all applicants equal treatment, selecting only the most competent applicants.

A non-existing partner can enter the GF and, therefore, be part of the Core 3 SHP only if:

- 1) A demonstrable competence is needed but not present in the existing GF consortium.
- 2) Its inclusion is approved by the GF through its General Assembly

New GF partners will be required to sign the GF Consortium Agreement, prior to the signature of the Framework Partnership Agreement.

To ensure a transparent selection, SHPs cannot single out a potential new partner to be added to the GF consortium through an Eol. They can however give examples of possible partners, but with a minimum of

3 alternative options. Failure to provide either zero, or 3 or more options will make the proposal not eligible (i.e. proposals indicating explicitly 1 or 2 possible new partners will fail eligibility).

4 Content

The SHP should be written as a Business Plan (not as a research project proposal) about a GRM-based technology that will reach at least TRL6 or 7 by the end of Core 3. Research-based proposals should be part of the tasks and WPs of Core 3, but cannot be submitted for a SHP.

SHP should be typed in single line spacing, font Arial 11, page margins 2cm (top, bottom and side). Figures, schemes and tables are allowed within the given page limit. References should be all at the end and do not count towards the page limit.

The SHP should have a total of 11 Pages + References

The 11 pages will comprise:

1) Cover page with: title of the SHP; full name of SHP leader and submitter + organisation + contact (e-mail, phone); list of all partner organizations; number of new-partners to be identified via Eol. **(1 page)**

2) Description of end goal, reachable within Core 3 (36 months). This must be such that the developed technology achieves at least TRL 6 or above. Clear description of the final product and its technical implementation. Deliverables should be stated for individual partners and collectively for the SHP.

(1 page)

3) Description of competitive advantage to European industry that emerges if the end goal is reached. This includes analysis of the market that can be addressed, comparison with competing technologies, and description of relevant European industrial landscape that may benefit from the technology, analysis of freedom to operate, i.e. own protection vs existing blocking patents /identified competitors. SHP should also address these questions: i) is the product/technology creating clear added value?; ii) is it competitive and why?; iii) what is the added GRM value?

(2 pages)

4) Description of how to reach the market, go-to-market strategy and indicative specific addressable market with value and timeframe: e.g. technology licensing, new companies, existing partners' core business. The market should be created by, and/or directly addressable by, the SHP partners. Explain what happens after the SHP ends.

(1 page)

5) Identification of risks, in terms of technology, market and societal acceptance. Contribution to sustainable development.

(1 page)

- 6) Value chain, strategy for positioning, foreseen partners and – if needed - new competences that must be brought to the consortium through Eol. It is crucial that the team demonstrates to have all necessary competences also for the business side. **(1 page)**
- 7) Demonstration of industrial leadership and relevance of the proposed SHP. Industrial interests need to be demonstrated beyond project leadership, e.g. by co-financing. **(1 page)**
- 8) Description of how the SHP is complementary to Core 3 WP activities, and how duplications are avoided. If duplications are required, these need to be justified. E.g., multiple industrial material suppliers to ensure a secure value chain are allowed, but need to be clearly justified. **(1 page)**
- 9) Budget per partner. The budget must also indicate the allocation of resources to materials production, component development, final product development (system integration) and business development. **(1 page)**
- 10) Co-funding. This should demonstrate the additional resources committed by the partners, and, in particular, by the industrial partners **(1 page)**

5 Confidentiality

Submitted proposals will be considered confidential, and made available only to the SHP evaluation committee.

Shortlisted proposals invited for the STF will be made available to all members of the STF on 14 December 2018.

The content of the SHP will not be shared with the rest of the Core 2 partners.

If a partner search is needed – either within the Core 2 consortium or through an Eol – only a brief summary of the proposal will be made available through Onboard and the GF website.

6 Evaluation

The SHPs will be evaluated by a committee comprising individuals who have no financial stake on the outcome (both personally as researchers and institutionally). This means the committee members are forbidden to be included in any way or form, even in an advisory form, in any of the submitted proposals. Furthermore, even in presence of un-allocated budget after the STF, the committee members and their WPs will not receive further funding beyond the allocation given by the Director on 14 December 2018.

The Committee comprises 5 members:

Dr Kari Hjelt, Chalmers Industriteknik (Chair).

Dr Thomas Reiss, Fraunhofer Institute.

Dr Anne Goldberg, Solvay, SAC member.

Dr Luigi Colombo, SAC member.

Fifth member TBC.

Secretary (TBC). Note the secretary will have neither speaking nor voting rights, but purely act to facilitate the administrative part of the committee work.

After 1 November 2018 the committee will evaluate and discard proposals that do not meet the minimum standard according to business criteria. At this initial stage the committee will assume the science and technology to be sound and only evaluate the proposals based on the business case. In particular the committee will consider: TRL levels; the risks (technological and market); balanced portfolio that combines SHP with high risk, high impact for EU industries and SHP with lower risks and lower impact; SHP criteria, as for Section 1.

Proposals that do not meet the business criteria will be rejected and receive feedback by 14 December 2018. The decision of the committee will not be subject to appeals.

Eligible proposals will be invited to the STF by 14 December 2018.

The committee, in consultation with the Director, will identify those shortlisted SHP where new competences suggested by the EoI might incur a veto from existing Core 2 partners. The Director will facilitate a dialogue before the STF to ascertain the possibility of a veto. SHPs will not be penalized in case of a possible veto, if they can demonstrate alternative partners or non-partners not subject to veto can be available. Failure to do so will result in the proposal being dropped before the STF.

Eligible proposals will give presentations at the 9-11 January STF Meeting in Cambridge. The precise timing will be decided according to the number of invited proposals and communicated by 14 December 2018. Of the allocated time, a minimum of 50% will be devoted to questions. The presenter should be a representative of the SHP coordinator (industry or research institute focussing on technology transfer) if the proposed SHP coordinator is a Core 2 GF partner. Otherwise, another member of the SHP team already partner of Core 2 will present, but making clear that, once the EoI is complete, a representative of industry or research institute focussing on technology transfer will lead the project.

All STF attendees can ask questions, and give criticisms, but only relating to science and technology.

The committee will take into consideration the STF presentations and the Q&A sessions on science and technology and will retire to determine the final list of proposals.

The committee has no obligation to use all the money allocated for SHPs, but will recommend for funding only those proposals that qualify. Should the total budget of eligible proposals be lower than the total available, the remaining budget will be made available for the Director to allocate to WPs. Should the number of proposals qualifying for funding exceed the total budget, the committee will only recommend for funding the proposals ranked high enough until all the budget is used. The committee has the right to reduce the budget of the bottom ranked 2 proposals in order to fully use the allocated budget, should they feel this will provide a viable outcome. Otherwise they would fully fund the last but one proposal, and the left-over budget will be given back to the Director for reallocation to WPs.

The final decision will be communicated to the leader of each SHP by the GF Director no later than 31 January 2019.