

The logo for EPSRC (Engineering and Physical Sciences Research Council) features the acronym 'EPSRC' in a bold, purple, sans-serif font. The letters are underlined by a thin, teal-colored horizontal line.

Engineering and Physical Sciences
Research Council

Quick Reference

**Please note that you must read the full Call document for guidance
before submitting your proposal**

Manufacturing the Future: Standard Research Proposals

Call type: Invitation for proposals

Funding Available: £3M Per panel

How to apply: Full Proposals

Assessment Process: Full proposals will undergo postal peer review, followed by panel, resulting in a rank ordered list as per EPSRC standard mode

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Manufacturing the Future: Standard Research Proposals

Call type: Invitation for proposals

Related themes: Digital economy, Energy, Engineering, Healthcare technologies, ICT, Manufacturing the future, Mathematical sciences, Physical sciences, Quantum technologies, Research infrastructure

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Summary

The EPSRC Manufacturing the Future theme invites standard research proposals for consideration at a manufacturing-focused prioritisation panel. A standard Manufacturing panel will be held every quarter (subject to sufficient demand). Proposals for any panel should address key research challenges facing manufacturing in the UK today and in the future. This activity is intended to highlight the theme's long term ambition to increase the number of investigator-led research ideas we support.

The Manufacturing the Future theme has prioritised funding to support investigator-led research ideas in manufacturing, with up to £3 million per panel available (dependent on demand and quality of proposals). Should there be

insufficient demand we reserve the right for proposals to be considered at the most appropriate capability theme panel meeting.

The next batching dates are:

- 16:00 on 11 April 2019
- 16:00 on 23 July 2019 (TBC)
- 16:00 on 29 October 2019 (TBC)

The batching dates are being published to help the manufacturing community plan and submit standard proposals. They are not deadlines but used by the Manufacturing the Future Theme to assess the level of demand in each quarter.

It is strongly recommended that proposals are submitted before the batching dates to ensure there is enough time for the peer-review process to be completed. Proposals submitted after this date, or those that do not have sufficient reviews in time for the panel, will be assessed by the most appropriate capability theme panel at a later date (i.e. Engineering, ICT, Physical Sciences or Mathematics).

Background

EPSRC's Delivery Plan (<https://epsrc.ukri.org/newsevents/pubs/epsrc-delivery-plan-2016-17-2019-20/>) highlights our commitment to maintaining a programme of long-term, excellent research where the emphasis is on 'bottom-up' investigator-led ideas, including community-generated challenges. We aim for this to comprise around 60% of our total research portfolio, with strategic programmes making up the remaining 40%.

EPSRC has developed the standard research mode to ensure that there is a flexible way to apply for proposals which are community generated. Standard proposals are crucial in maintaining a healthy flow of new ideas and forming a vibrant research community. As such, there is considerable value in achieving a portfolio of research including both strategically-focussed programmes and standard mode projects. However, the volume of standard mode proposals addressing fundamental manufacturing research questions has not matched the demand elsewhere in the Theme and across EPSRC as a whole.

This activity is intended to highlight the theme's long term aim to increase the number of investigator-led ideas we support by funding standard mode proposals. More information on called standard grants can be found here: <https://epsrc.ukri.org/funding/applicationprocess/routes/standardresearch/>

EPSRC defines Manufacturing research as the design and development of new and existing manufacturing processes, systems and networks. This call is aimed at people working in these areas or in underpinning research areas.

The vision for the Manufacturing the Future theme is for the research we sponsor to help solve some of the most serious challenges facing the UK today and in the future. Manufacturing makes a major contribution to the UK economy but further investment is required, particularly in high-value and specialist manufacturing, underpinned by the research base. The goal of the theme is to take research

from our science and engineering base that addresses the research issues of scaling-up processes and products required for manufacturing impacts.

Research Visions

The Manufacturing the Future challenge theme draws on capabilities from across the whole engineering and physical sciences research portfolio. We are seeking a balanced portfolio of long-term, speculative research, as well as research where the benefits and manufacturing outcomes are clearly evident.

We would like to encourage investigator-led research proposals from the breadth of the engineering and physical sciences research community that are focused on addressing key challenges in UK manufacturing. These could lead to the following research visions identified by the Manufacturing the Future theme:

21st Century Products – Century defining products might be ‘smart’, multi-functional or might enable or enhance our well-being. Unimaginable today, these products may be enabled by new technologies or have advanced materials incorporated into components. Research efforts will generate a suite of flexible tools, enabling the manufacturing process to be integrated in the discovery, design and development of these new products, allowing for rapid prototyping with scale-up capability embedded.

Digital Manufacturing - Digital manufacturing optimises the design process, allows for simulation and visualisation of processes and enables fast and responsive control and connectivity of manufacturing systems and supply chains. Intelligent factories and industries will be categorised by automation, personalisation of products and services (including development of the digital technologies and user-interfaces that enable this); transformation of the cyber-physical production system driven, for example, by data from IoT and increased interconnectivity; and cyber security risks to manufacturing.

Sustainable Industries - Manufacturing industries will be able to meet the needs of present sectors/customers without compromising the ability of future generations to meet their own manufacturing needs. This depicts a future where resource usage, resilience and security are transformed and where business models, manufacturing processes and product value/ownership are redefined.

New Industrial Systems – Industrial systems may evolve from being predominantly centralised towards a portfolio that becomes more effective at creating and capturing value at a variety of scales. This vision could be interpreted at different levels. At a tangible level; introduction of alternative machine tools, cellular manufacturing, self-healing tools, systems that self-build. Different models of operation may be alternative supply chains and business models. Finally, mass customisation in consumer products and personalisation of healthcare.

Funding available

Standard Grants are very flexible; applicants may apply for projects ranging from small value, short term grants (e.g. feasibility studies) to longer-term, larger awards (e.g. a multi-institution project), including first grants, networks or workshop funding.

(<https://epsrc.ukri.org/funding/applicationprocess/routes/standardresearch/>)

We can accept awards of up to £2 million through this call.

If you have an idea for a project of higher value, please speak to one of the EPSRC contacts who will be happy to provide advice on possible funding mechanisms.

The applicant can request funding for anything that is eligible as detailed in the EPSRC funding guide (<https://epsrc.ukri.org/funding/applicationprocess/fundingguide/>).

High-risk/high-return research proposals relating to new concepts or techniques are particularly encouraged.

The proposal must clearly articulate how the research contributes towards the manufacturing visions set out above, including the novelty and innovation of the approach.

We encourage research collaborations with business and the public sector, particularly where they can help research advances and the take-up of results. However a project partner of this nature is not an obligation for this call.

If you want to work with another university, we are happy to receive proposals from two or more organisations that, when taken together, form a coherent project.

New Investigator Awards are also invited for consideration. See the website for more details on the New Investigator Award scheme (<https://epsrc.ukri.org/funding/applicationprocess/routes/newac/nia/>).

Equality, Diversity and Inclusion

The long term strength of the UK research base depends on harnessing all the available talent and the Research Councils have together developed the ambitious UK Research and Innovation Equality, Diversity and Inclusion Action Plan <https://www.ukri.org/files/legacy/skills/action-plan-edi-2016/>

In line with the UK Research and Innovation Diversity Principles, EPSRC expects that equality and diversity is embedded at all levels and in all aspects of research practice. We are committed to supporting the research community in the diverse ways a research career can be built with our investments. This includes career breaks, support for people with caring responsibilities, flexible working and alternative working patterns. With this in mind, we welcomes applications from academics who job share, have a part-time contract, need flexible working arrangements or those currently committed to other longer, large existing grants. Please see our Equality and Diversity webpages <https://www.epsrc.ukri.org/funding/equalitydiversity/> for further information.

Equipment

For information on support for equipment on research grants please see the EPSRC website (<https://epsrc.ukri.org/research/facilities/equipment/process/researchgrants/>).

Eligibility

Please ensure sufficient time to create Je-S accounts for Investigators who do not currently have one.

For information on the eligibility of organisations and individuals to receive EPSRC funding, see the EPSRC Funding Guide:

<https://www.epsrc.ukri.org/funding/howtoapply/fundingguide/>

A list of eligible organisations to apply to EPSRC is provided at:

<https://www.ukri.org/funding/how-to-apply/eligibility/>

How to apply

Submitting an application

You should prepare and submit your proposal using the Research Councils' Joint electronic Submission (Je-S) System (<https://je-s.rcuk.ac.uk/>).

When adding a new proposal, you should select:

- Council 'EPSRC'
- Document type 'Standard Proposal'
- Scheme 'Standard' or 'New Investigator Award'
- Discipline 'Manufacturing'

Note that clicking 'submit document' on your proposal form in Je-S initially submits the proposal to your host organisation's administration, not to EPSRC. Please allow sufficient time for your organisation's submission process between submitting your proposal to them and the batching date.

Guidance on the types of support that may be sought and advice on the completion of the research proposal forms are given on the EPSRC website (<https://www.epsrc.ukri.org/funding/howtoapply/>) which should be consulted when preparing all proposals.

Guidance on writing an application

For advice on writing proposals see:

<http://epsrc.ukri.org/funding/howtoapply/preparing/>

All attachments must be completed in single-spaced typescript in Arial 11 or other sans serif typeface of equivalent size, with margins of at least 2cm. For accessibility purposes, a sans-serif font style such as Arial should be used as these are more easily readable to those with visual impairment. For the same reason, type should be justified only on the left hand side

If any attachments exceed the page limit stated, fail to adhere to the specified format or include any documentation that has not been specified your proposal will be returned or rejected.

Applicants should use the Ethical Information section on the Je-S form to demonstrate to peer reviewers that they have fully considered any ethical issues

concerning the material they intend to use, the nature and choice, current public perceptions and attitudes towards the subject matter or research area. EPSRC will not fund a project if it believes that there are ethical concerns that have been overlooked or not appropriately accounted for. All relevant parts of the Ethical Information section must be completed. If the research will involve human participation or the use of animals covered by the Animals (Scientific Procedures) Act 1986 it is recommended that applicants pay particular attention to the guidance highlighted below. EPSRC reserves the right to reject applications prior to peer review if the Ethical Information sections are not completed correctly.

Further guidance on completing the Je-S form can be found at <https://je-s.rcuk.ac.uk/Handbook/pages/GuidanceonCompletingaStandardG/EthicalInformation.htm>. Other relevant guidance includes: EPSRC's policy on animal use in research (<https://www.epsrc.ukri.org/about/standards/animalresearchpolicy/>) and the Responsible Innovation Framework (<https://www.epsrc.ukri.org/research/framework/>).

Please note that on submission to EPSRC **all** non-PDF documents uploaded onto Je-S are converted to PDF, the use of non-standard fonts may result in errors or font conversion, which could affect the overall length of the document.

For advice on writing proposals see:

<https://www.epsrc.ukri.org/funding/howtoapply/preparing/>

Submissions to this call will count towards the Repeatedly Unsuccessful Applicants Policy. Further information about the policy can be found at: <https://www.epsrc.ukri.org/funding/howtoapply/basics/resubpol/rua/>

Assessment

Assessment process

This is a highlight notice for standard research proposals and therefore all proposals submitted will be considered by the standard process as outlined on the EPSRC website (<https://epsrc.ukri.org/funding/assessmentprocess/>).

Proposals which are not within the remit of the manufacturing the future themed will be transferred to alternative prioritisation panels run by the most appropriate theme.

Proposals will be considered at a manufacturing-focussed Prioritisation Panel in accordance with EPSRC assessment procedure for standard research grants.

Should there be insufficient demand we reserve the right for proposals to be considered at the most appropriate capability theme panel meeting. Please note that this assessment procedure takes into account the EPSRC's balancing capability strategy for its research areas. More information on this strategy can be found at <http://epsrc.ukri.org/research/ourportfolio/researchareas/>

Assessment criteria

The assessment criteria for standard grants can be found at <https://epsrc.ukri.org/funding/assessmentprocess/review/formsandguidancenotes/standardgrants/>

Guidance for reviewers

Information about the EPSRC peer review process and guidance for reviewers can be found at: <https://www.epsrc.ukri.org/funding/assessmentprocess/review/>

Guidance for reviewing standard grants can be found here:

<https://www.epsrc.ukri.org/funding/assessmentprocess/review/formsandguidancenotes/standardgrants/>

Contacts

If you have any questions about the call or wish to discuss your proposal, please contact a member of the theme:

For Proposals related to New Industrial Systems, please contact:

- Ms Stephanie Williams
Portfolio Manager – Manufacturing the Future (01793 44 4243);
Stephanie.williams@epsrc.ukri.org

For Proposals related to Digital Manufacturing:

- Dr Agnieszka Dzielendziak
Portfolio Manager – Manufacturing the Future (01793 44 4364);
agnieszka.dzielendziak@epsrc.ukri.org

For Proposals related to Sustainable Industries, please contact:

- Dr Shyeni Paul
Portfolio Manager – Manufacturing the Future (01793 44 4431);
shyeni.paul@epsrc.ukri.org

For Proposals related to 21st Century Products, please contact:

- Mr Gerard Davies
Portfolio Manager – Manufacturing the Future (01793 44 4233);
gerard.davies@epsrc.ukri.org

Change log

Name	Date	Version	Change
Shyeni Paul	11.9.18	1	N/A

Name	Date	Version	Change

Appendices

Je-S attachments Check List

Standard:

Attachment Type	Maximum Page length	Mandatory/Optional	Extra Guidance
Case for Support	Eight pages	M	Comprising up to two A4 sides for a track record, and six A4 sides describing proposed research and its context.
Pathways to Impact	Two pages	M	
Workplan	One page	M	
Justification for Resources	Two pages	M	
CVs	Two pages each	As Required by EPSRC	For named and visiting researchers, and researcher co-investigators only.
Project Partner Letters of Support	No page limits	As Required by EPSRC	Must be included from all named project partners. Must be on headed paper, and be signed and dated within six months of the proposal submission date.
Letters of Support	No page limits	As Required by EPSRC	In exceptional circumstances a maximum of three letters can be submitted.
Equipment Quotes	No page limits	As required by EPSRC	

Equipment Business Case	Two pages each	As required by EPSRC	Required for any items or combined assets with a value above the OJEU limit.
Technical assessment	No page limit	As required by EPSRC	
Proposal Cover Letter	No page limit	Optional	The cover letter can be used to highlight any important information to EPSRC. This attachment type is not seen by reviewers or panel members.
Other attachment	No page limit	As required, at EPSRC request only	This can be used for a document that does not fit under any of the headings above. This attachment type is not seen by reviewers or panel members.

Please ensure you adhere to the above attachment requirements when submitting your proposal. Any missing, over length or unnecessary attachments may result in your proposal being rejected.