

## Quick Reference

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

### Manufacturing Fellowships 6

**Call type: Invitation for proposals**

**Closing date: 16:00 on 04 May 2017**

**Funding Available:** Up to £4M is available for this call.

**How to apply:** Statement of Intent to apply followed by a full proposal.

**Assessment Process:** Proposals will undergo expert peer review. Those with sufficiently supportive comments will be assessed by an interview panel.

#### Key Dates:

Activity	Date
Registration of Statement of Intent to apply	31 March 2017
Closing Date for Full Proposals	04 May 2017
Expert peer review	May-September 2017
Sift Panel (depending on demand)	September 2017
Outcome of peer review process and invitation to interview	September 2017
Interview Panel(s)	October 2017
Announcement of Successful Candidates	December 2017

Additional information: Those who do not register with a Statement of Intent will have their applications rejected.

To be eligible for this call, applicants must be:

- People currently working in industry who are looking to move into and develop a career in academia (it is expected that their current role will involve research and innovation).
- Academics who have recently moved from industry (within approximately the last 18 months).

#### Contacts:

- Ms Rhia Visavadia, Portfolio Manager – Manufacturing the Future  
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- Mr Gerard Davies, Portfolio Manager – Manufacturing the Future  
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## **EPSRC Manufacturing Fellowships (Call 6)**

**Call type:** Invitation for proposals

**Closing date:** 16:00 on 04 May 2017

**Related themes:** Manufacturing the future

### **Summary**

EPSRC aims to support up to four new Manufacturing Fellows through this call for proposals. This is in addition to the cohort of 18 Fellows supported through this scheme since 2012.

Manufacturing Fellowships are aimed at people who have the potential to be future research leaders in their field of manufacturing research. They support either:

- People currently working in industry who are looking to move into and develop a career in academia (it is expected that their current role will involve research and innovation).
- Academics who have recently moved from industry (within approximately the last 18 months).

EPSRC offers up to five years of support for suitable candidates. They must be able to articulate a compelling research vision and demonstrate how their research will benefit from their industrial experience.

By the end of the award we expect Fellows to have driven forward:

- New research agendas with the potential for transformative impact on manufacturing industries.
- A change in the culture within academia by transferring best practice from industry to academia.

### **Background**

The aim of EPSRC's Manufacturing the Future (MtF) theme is to create and capture the benefits of research for UK manufacturing industries, thereby supporting UK productivity and prosperity. We do this by:

- Investing in new growth areas, drawing on opportunities from emergent research across the engineering and physical sciences
- Accelerating the impact of our investments by connecting the research and innovation landscape, promoting collaboration between academia and innovative manufacturing businesses

- Fostering a research community with the appropriate skills and leadership in manufacturing research.

In order to deliver on the latter goal, EPSRC's Manufacturing the Future theme has operated a Manufacturing Fellowships scheme since 2012. This scheme is designed to encourage researchers in industry to make a successful transition to an academic research environment and in so doing, become a recognised leader in their field. This activity addresses a key gap in the UK's manufacturing research community, as illustrated in some key findings:

- An internal EPSRC review of the first three cohorts of Manufacturing Fellows and their Heads of Department confirmed that the scheme provided a valuable mechanism for suitable candidates to facilitate the transition from industry to academia.
- EPSRC's Theme Day report on Manufacturing Research (<http://www.epsrc.ac.uk/newsevents/pubs/epsrc-theme-day-in-manufacturing-research-report/>) found that there are very few Fellowships in Manufacturing research.
- The Review of International Approaches to Manufacturing Research ([http://www.ifm.eng.cam.ac.uk/free/2011int\\_man\\_research.pdf](http://www.ifm.eng.cam.ac.uk/free/2011int_man_research.pdf)) – a report by the University of Cambridge's Institute for Manufacturing on manufacturing research in a number of leading countries – discusses of lack of flow between academia and industry in the UK, especially compared with Germany and the US. Whilst there are examples of transfer at the Professorial level, the lack of exchange of people is acute at other levels.

For more information about EPSRC's portfolio and strategies, see our website: <https://www.epsrc.ac.uk/research/ourportfolio/>.

## Research Scope

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 the knowledge from our science and engineering base to solve issues of scaling-up processes and products required for manufacturing impacts.

We would like to encourage 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.

## **Lessons from the previous calls**

EPSRC has run five Manufacturing Fellowships calls in the last five years. Across these calls a total of 67 applications were received, 39 applicants were interviewed and 18 applications were successful. Whilst the overall standards of the applicants have generally been high, we can offer a range of generic advice to applicants to our sixth call based on this experience:

- Research quality is the primary assessment criterion for this call, and transformational research is an expectation. In order to demonstrate this, it is important to show an understanding of the state of the art in academic research in the field, as well as how the proposed research will go beyond this.
- We anticipate that successful applicants will go on to a long-term academic career and develop and lead a research group in their field. The application should discuss longer term plans, goals and ambitions for the individual within the academic research environment.
- Applicants will need to demonstrate how their research will benefit from their industrial experience. They should discuss how they might use their experience in a new environment and what sort of change they might anticipate being able to achieve. In the case of applicants who have already moved to an academic institution, the emphasis should be on what they have been able to achieve in this regard and how the Fellowship would help them further.
- Where relevant, it is important to discuss IP issues related to the research, particularly as the applicants to this call have a background in industry.
- It is important to take care when assessing the budget requirements for the proposed research; it is possible to ask for too little resource to

undertake the proposed work as well as too much. Be as accurate as possible in your budget estimates.

- Applicants can request between 50% and 100% of their time to work on the Fellowship. Please consider carefully what other tasks you may wish to undertake within the university (in particular teaching, administrative tasks and applying for further research grants) before you commit 100% of your time to the Fellowship. However, you should also be sure that you request sufficient time in the fellowship to be able to undertake the proposed research programme.

## **Funding available**

- Up to £4M is available for this call.
- Funding is expected to be for up to five years.
- The Fellow is expected to request a package of resources appropriate for the aims of the Fellowship, which could involve staff-time, travel & subsistence, access to equipment etc.

## **Equipment**

Where possible, researchers are asked to make use of existing facilities and equipment, including those hosted at other universities. If equipment is needed as part of the research proposal, applicants must follow EPSRC's rules for requesting equipment over £10,000 in value. Individual items of equipment between £10,000 and £400,000 can be included on proposals if the equipment is essential to the proposed research and if no appropriate alternative provision can be accessed. Research organisations will be expected to make a contribution to the cost of the order of 50% of the full cost of the equipment. Additional justification of the requirement for individual items of equipment between £10,000 and £400,000, and details of the proposed contribution to the cost of the equipment, must be provided in the justification of resources. For any items or combined assets with a value above the OJEU (Official Journal of the European Communities) limit a two-page Equipment Business Case must also be included in the proposal documentation.

Guidance on how to prepare an Equipment Business Case can be found on the following webpage:

<https://www.epsrc.ac.uk/research/facilities/equipment/process/researchgrants/>

Any items of equipment with a value more than the current OJEU threshold that are funded on research grants will need to be reported on annually as part of the University's Equipment Account Annual Reports. This will be communicated via an additional grant condition on the research grant.

For more information on equipment funding, please see:

<http://www.epsrc.ac.uk/research/facilities/equipment/>

The current OJEU threshold can be found at:

<http://www.epsrc.ac.uk/research/facilities/equipment/process/>

For more information on equipment funding, please see:

<https://www.epsrc.ac.uk/research/facilities/equipment/>

## Eligibility

### **There are no nationality restrictions for this call.**

To be eligible to apply, please note that:

- This call is only open to:
  - People currently working in industry who are looking to move into and develop a career in academia (it is expected that their current role will involve research and innovation).
  - Academics who have recently moved from industry (within approximately 18 months).
- You must not currently hold a similar Fellowship award from another funder (this includes ERC Starting, Consolidator or Advanced Grants). If you are submitting fellowship applications to other funding bodies in parallel to this application, you should be aware that if you accept an EPSRC Fellowship you will be expected to turn down offers of other similar awards.
- Unsuccessful applicants to previous calls under this scheme may be eligible to apply to this call, provided they still fulfil the basic requirements of the call described above. However, candidates should discuss their situation with EPSRC in advance of submitting an application; prior agreement with EPSRC on the suitability of previous candidates for the current call would be a precondition of their application. In line with EPSRC policy a direct resubmission of a previous application would not be acceptable under any circumstances. Any applications from previous candidates must address the issues given as feedback to the original submission. For further advice and guidance please contact EPSRC.
- You may only apply for one EPSRC Fellowship (of any kind) in any 12 month period.

## Fellowship location

- Fellowships can be held at any UK university or similar Higher Education Institution (HEI) that is eligible for Research Council funding, please see the RCUK page on Eligible Organisations. Research Councils have introduced a change of eligibility status for Independent Research Organisations (IROs). Any organisation currently approved as an IRO for one Research Council is now eligible for funding across all Research Councils.
- You will need a Host Organisation Statement from your host organisation and therefore you should contact the Head of Department at your host organisation and their Research Administration (depending on the organisation this may be departmental or central) who will advise you about costing your proposal and internal procedures relating to submitting a research proposal through Joint electronic Submission (Je-S). Your fellowship must be costed and submitted by the host organisation. If you are applying from overseas, you must have agreement from an eligible UK Host Organisation to host the fellowship.

- For further guidance please refer to the EPSRC Funding Guide pages at <http://www.epsrc.ac.uk/funding/howtoapply/fundingguide/>
- It is expected that the host department will have an internationally-recognised standing in Engineering and / or Manufacturing research.
- EPSRC's intention is for the Fellow to establish an active and successful research group rather than lead or set up a Centre for the host institution.

## Equality and diversity

The long term strength of the UK research base depends on harnessing all the available talent. As a funder of research, we remain committed to attracting the best potential researchers from a diverse population into research careers.

Awards will be made based on merit; however, we are keen to obtain greater diversity in our manufacturing portfolio. Applications from women and other under-represented groups are therefore especially welcome. EPSRC Fellowships can be used to support part-time or other flexible working patterns. If you have any questions about what a Fellowship would allow please speak to the EPSRC contact for this call.

## How to apply

Anyone intending to apply to this call must email with a Statement of Intent to apply to [manufacturing@epsrc.ac.uk](mailto:manufacturing@epsrc.ac.uk) by 31 March 2017.

Applicants will need to have access to the RCUK Joint Electronic Submissions System (Je-S: <https://je-s.rcuk.ac.uk/>) in order to be able to complete their application. Please set up an account if you have not already done so. For advice on setting up an account, contact the Research Office of your prospective university or the RCUK Je-S helpdesk ([JeSHelp@rcuk.ac.uk](mailto:JeSHelp@rcuk.ac.uk)) in the first instance. All information related to the application should be submitted to EPSRC via Je-S.

You should prepare and submit your proposal using the Research Councils' Joint electronic Submission (Je-S) System.

When adding a new proposal, you should select:

- Council 'EPSRC'
- Document type 'Fellowship Proposal'
- Scheme 'EPSRC Fellowship'
- On the Project Details page you should select the 'Manufacturing Fellowships 6' call.

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 call closing date.

Once submitted you will not be permitted to amend your application or provide additional information unless specifically requested by EPSRC.

EPSRC must receive your application by **16:00 on 04 May 2017**.

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 (<http://www.epsrc.ac.uk/funding/guidance/>) which should be consulted when preparing all proposals.

If the attachments are uploaded as Word documents, please be aware that once the application has been submitted to the Council/Funder, all the attachments will be converted and held as an Adobe Acrobat file (PDF). Also please note, that whilst we support a wide range, we do not support all MS Word font types. Therefore if an unsupported font type is used a different font type may be substituted which may result in changes to the layout of the document. For this reason we recommend that the documents are converted to PDF files before uploading.

### **Submitting an application**

The following attachments are mandatory:

- Case for Support (Maximum **nine** sides of A4, **two** for the track record and **seven** for the Case for Support)
- Justification of resources (maximum **two** sides of A4)
- Pathways to Impact (maximum **two** sides of A4)
- Diagrammatic Workplan (**one** side of A4)
- Host Organisation Statement (maximum **two** sides A4)
- Applicant's CV (maximum **two** sides A4)
- List of publications (no page limit).

Where applicable:

- Proposal cover letter (to alert EPSRC staff to any issues, these will not be seen by peer reviewers or panel members)
- Project Partner Letter of Support from any project partners (no page limit, signed, headed and dated within six months)
- Equipment quotations and business case where appropriate (see paragraph on equipment for further information).

Once submitted you will not be permitted to amend your application or provide additional information unless specifically requested by EPSRC.

EPSRC must receive your application by **16:00 on 04 May 2017**.

Guidance on the advice on the completion of the research proposal forms is given on the EPSRC website, which should be consulted when preparing all proposals (<http://www.epsrc.ac.uk/funding/howtoapply/preparing/>).

### **Guidance on writing an application**

Font size 11 is the minimum acceptable, minimum margin must be size 2cm on all sides. 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.

1. Case for support, including a track record of the applicant (2 pages) and the detailed description of the proposed work programme and vision for the fellowship (7 pages).
2. CV - Please include the following:
  - Your current contact details.
  - Your employment history, listed in reverse order. Please start with your current employment and make sure that the title of your current post is clear.
  - Your academic history, listed in reverse order. The dates of any degrees obtained.
  - Track record of research funding, where applicable: please include start/end dates, funding body, value of award, type of grant (e.g. First grant, fellowship etc), your role on the grant (PI, Co-I, Researcher etc). Please ensure that any fellowship awards are clearly highlighted.
  - Any current administrative activities: examples may include editorial responsibilities, committee membership etc.
  - Other: examples may include invited talks, awards, prizes, memberships of professional bodies etc.

Please do not include details of possible reviewers on your CV.

3. Host organisation statement completed by the Head of Department of your host department. (maximum 2 sides A4)
  - The Head of Department (through consultation with colleagues as appropriate) at the host organisation must complete a statement in support of the application. The statement should be on Departmental or University headed paper, should be dated, and should clearly state the position held by the author (e.g. Head of Department of Electrical Engineering etc). It must address the issues outlined below:
  - How does the applicant's expertise and interests fit into current and future Research Strategies of the Host Organisation?
  - Why is an EPSRC Manufacturing Fellowship the most appropriate support mechanism for the candidate?
  - What support will be provided to help the development of the research career of the candidate?
  - Details of an appropriate support mechanism to aid the transition from industry to academia. It is recommended that candidates should have a named senior academic mentor who has international standing and a track record of securing EPSRC funding.

- How the applicant will benefit the department; how their experiences, management practices, contacts and knowledge complement and enhance the research strategy of the University
- How, subject to performance, the institution intends to support the candidate in the medium term (5-10 years – i.e. beyond the duration of the Fellowship)
- The host organisation may wish to provide funding for travel, equipment, a DTP studentship, and laboratory and research facilities. The statement may include further training and staff development opportunities.
- The host organisation statement will form part of the assessment of Fellowship proposals. When the statement is complete it will need to be given to the applicant to attach to their proposal.

#### 4. Project Partner Letters of Support from industrial collaborators

- Statements of support should only be included from project partners (i.e. an organisation that is making an active contribution to the project as opposed to expressing an interest in it). Letters should be signed, headed and dated within six months of the application.

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.

In addition, where non-standard fonts are present, and even though the converted PDF document may look unaffected in the Je-S System, when it is imported into the Research Councils Grants System some information may be removed. We therefore recommend that where a document contains any non-standard fonts (scientific notation, diagrams etc), the document is converted to PDF prior to attaching it to the proposal.

For advice on writing proposals see:

<https://www.epsrc.ac.uk/funding/howtoapply/preparing/>

## Assessment

### Assessment process

Full proposals received by the closing date will be assessed via a two-stage review process:

- **Stage 1 – Expert peer review:** Proposals will be sent out to expert peer reviewers. If the reviews received are sufficiently supportive the candidate will be invited to interview; if not, the proposal will be rejected at this point and you will be sent copies of the reviewer reports as feedback. In the event of the call being heavily oversubscribed, we reserve the right to hold a sift panel prior to inviting shortlisted candidates for interview. If you are invited for interview, you will have the opportunity to see and respond to the reviewers' comments.

- **Stage 2 – Interview:** For those candidates invited forward to interview the process will involve a formal presentation and questions and answers based on the application, reviewers’ comments and the applicant’s response, as well as any issues raised in the presentation. The interview panel will be made up of senior academics and industrialists. Further details of the interview process will be sent to the candidates nearer to the time of the interviews. We anticipate interviews will take place in October 2017.

EPSRC reserve the right to apply additional selection criteria in the event of the call being so substantially oversubscribed as to be unmanageable as initially planned.

### **Assessment criteria**

The Candidate is expected to demonstrate the following competencies, capabilities & experiences:

#### **Research Quality:**

- You should articulate a strong vision for the research proposed.
- You must demonstrate how the research would have a transformative impact on the manufacturing industries through the translation of world-class science and engineering. The scientific merit, originality, technical feasibility, and industrial relevance of the proposed programme of research should be clear.
- You should articulate how the proposed research is relevant to the UK manufacturing research base and how it will have a transformative effect.

#### **The Applicant:**

- You should demonstrate how your vision for the Fellowship will enable you to achieve your research and career aspirations. Clarity of vision and ability to communicate it, and the ability to demonstrate real intellectual leadership are important.
- You should articulate your potential ability to set and drive new research agendas; your ability to work in and bring together multidisciplinary teams to collaboratively solve real-world research problems; your ability to influence, inspire and motivate others beyond their immediate sphere of influence.
- You must demonstrate excellent communication and interpersonal skills.
- You should show evidence of your ability to build a network of contacts who are willing to provide support and a capacity to look for research connections outside your research area.
- You should have evidence that you can lead original and independent research and innovation.
- Candidates must demonstrate an understanding of the university milieu.

**Industrial Experience:**

- You should have recent experience of industrial manufacturing innovation; either setting technical / strategic research aims or experience of collaborative research.
- You should articulate a vision for how will you apply you industry experience, contacts and knowledge to:
  - drive globally competitive academic research
  - enhance culture and practices in academia

**Importance:**

Evidence of how the proposed research:

- Contributes to, or helps maintain the health of other research disciplines,
- Contributes to addressing key UK societal challenges,
- Contributes to current or future UK economic success and/or enables future development of key emerging industry(s).
- Meets national strategic needs by establishing or maintaining a unique world leading research activity (including areas of niche capability).
- Fits with and complements other UK research already funded in the area or related areas, including the relationship to the EPSRC portfolio and our Research Area strategies and EPSRC's Delivery Plan.

**The Research Environment:**

- You must be able to demonstrate a strong vision for how you and your team will deliver the research proposed in the application, including developing cross-institutional collaboration where appropriate.
- Your host organisation must demonstrate an appropriate level of support and commitment to your career (as evidenced through the Host Organisation Statement) both for the duration of the Fellowship and beyond (subject to performance); this should include details of appropriate institutional infrastructure, and international standing of the host department.
- Your Host Organisation Statement must give details of an appropriate support mechanism to aid the transition from industry to academia, and it is recommended that candidates should have a named senior academic mentor who has international standing and a track record of securing funding.
- You should articulate how your industrial experience will benefit the department; how management practices, contacts and knowledge complement and enhance the research strategy of the University.

**Impact:**

- Who may benefit from the research, how they may benefit and what will be done to ensure they have the opportunity to benefit.

- What pathways to impact activities will be undertaken.
- Evidence of how the candidate will use their experience and networks to ensure the above two points.

#### **Resources and Management:**

- You must be able to justify the planning and project management of the proposed research programme, including the management of any staff requested.
- You must be able to demonstrate that the resources requested in this application are justified and appropriate for delivering the proposed research.
- You should identify the main risks and put contingencies in place.

### **Feedback**

Feedback will be provided to those applicants both successful and unsuccessful at the interview stage.

### **Key dates**

<b>Activity</b>	<b>Date</b>
Registration of Statement of Intent to apply	31 March 2017
Closing Date for Full Proposals	04 May 2017
Expert peer review	May-September 2017
Sift Panel (depending on demand)	September 2017
Outcome of peer review process and invitation to interview	September 2017
Interview Panel(s)	October 2017
Announcement of Successful Candidates	December 2017

### **Contacts**

We recommend that potential applicants discuss their ideas with EPSRC well before the closing date. Due to the large number of queries expected, please ensure that your question has not been addressed within this document before contacting EPSRC. If you have any questions about the call, please contact:

- Ms Rhia Visavadia, Portfolio Manager – Manufacturing the Future  
01793 444097, [rhia.visavadia@epsrc.ac.uk](mailto:rhia.visavadia@epsrc.ac.uk)
- Mr Gerard Davies, Portfolio Manager – Manufacturing the Future  
01793 444233, [gerard.davies@epsrc.ac.uk](mailto:gerard.davies@epsrc.ac.uk)

Any queries regarding the submission of proposals through Je-S should be directed to:

- The Je-S helpdesk  
01793 444164, [JeSHelp@rcuk.ac.uk](mailto:JeSHelp@rcuk.ac.uk)

## Change log

Name	Date	Version	Change
Rhia Visavadia	07/11/16	1	Updated Document

## Appendices

### Je-S attachments Check List

Attachment Type	Maximum Page length	Mandatory/ Optional	Extra Guidance
Case for Support	9 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	2 pages	M	
Workplan	1 page	M	
Justification for Resources	2 pages	M	
Host Organisation Statement	2 pages	M	From the Head of Department at the host organisation in support of the application. The statement should be on Departmental or University headed paper, should be dated, and should clearly state the position held by the author
CVs	2 pages each	As Required	
Project Partner Letters of Support	No page limits	As Required	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.
Equipment Quotes	No page limits	As required	
Equipment Business Case	2 pages each	As required	Required for any items or combined assets with a value above the OJEU limit.
Technical assessment	No page limit	As required	
Proposal Cover Letter	No page limit	As required	The cover letter can be used to highlight any important information to EPSRC. 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.