

# **Call for Expressions of Interest for an Innovation and Knowledge Centre (IKC) in Biofilms**

**Call type: Expression of Interest**

**Closing date: 8<sup>th</sup> February 2017**

As part of the second phase of the UK Biofilms Programme the Biotechnology and Biological Sciences Research Council (BBSRC), and Innovate UK, would like to invite expressions of interest to establish a Biofilms Innovation Knowledge Centre (IKC). The IKC will also be supported by an in-kind contribution of up to £1m over five years from the Science and technology Facilities Council (STFC). It is expected that the IKC will advance biofilm research and innovation over a five year period, using a £12.5m funding award, across four strategic biofilm themes: Prevention, Detection, Managing and Engineering.

The IKC will be expected to show how it is building upon and leveraging, to a significant extent, existing investments in research and innovation from the Research Councils, Innovate UK and beyond. A significant commitment from the host institution(s) towards supporting and facilitating the infrastructure and activities of the IKC is also a key requirement. The closing date for Expressions of Interest is the 8<sup>th</sup> February 2017 at 4.00pm.

## **1. Background**

Biofilms are as versatile and challenging as they are ubiquitous and can be broadly defined as any group of microorganisms adhering to each other within a matrix on or at a surface.

Biofilms create major challenges and opportunities for businesses operating across a myriad of industries but understanding and manipulating them is difficult. Over the past decade, investments in fundamental bioscience research now enable us to dramatically change the way in which we examine and work with biofilms. As a result, new diverse market opportunities are being unlocked. These advances in research can now be built upon, harnessed and applied to the multidisciplinary opportunities and challenges of biofilms. This duality presents the UK research base and industry with an exciting and timely chance for scientific, economic, societal and commercial reward.

As one of the key features of biofilms includes their versatility and broad applicability, there are clear opportunities for biofilms to support a number of industry sectors such as: health; personal care and consumer products; manufacturing; process and marine industries; water and wastewater treatment; nuclear; oil and gas exploration and refining; chemical; and agri-food sectors.

To support academics and industrialists in capitalising on the strategic biofilms opportunity for the UK the BBSRC and Innovate UK launched Phase 1 of the UK Biofilms Programme in January 2015. The strategy<sup>1</sup> for Phase 1 was underpinned by a strategic workshop, held in December 2014, involving all UK industry sectors and a range of academic disciplines. This work resulted in BBSRC and Innovate UK providing £1.4m of funding for 21 industry-led collaborative R&D projects<sup>2</sup>. In turn, this led to over £500,000 of private sector investment in the UK Biofilms Programme and fostered over 40 new academic and industrial partnerships across 6 different industry sectors and many research disciplines. These partnerships underpin projects focused not only on the myriad challenges biofilms present, but also on harnessing the unique biology of biofilms as an opportunity for scientific, economic, societal and commercial reward. More broadly, Phase 1 connected ca.185 businesses across all UK industry sectors with academic research groups covering a very wide range of research areas.

The second phase of the UK Biofilms Programme will build upon prior and current fundamental and applied biofilm research and innovation. Crucially, existing capability and knowledge needs not only to be built upon, but also connected in a strategic, multidisciplinary way in order to create and sustain economic, scientific and societal value for the UK. Based upon evidence and insight gained from diverse consortia of industrialists and academics, the BBSRC and Innovate UK would like to establish a biofilms Innovation Knowledge Centre for the UK. For more information on the STFC in-kind contribution, and how it could form part of a bid and underpinning support for an IKC please download the STFC document from: [www.bbsrc.ac.uk/biofilms](http://www.bbsrc.ac.uk/biofilms). The IKC will bring those at the cutting edge of research together with innovators in business, helping them work together to advance biofilm research and catalyse its commercial exploitation across new products and processes delivering against challenges and opportunities across an array of industry sectors.

---

<sup>1</sup> See Biofilms Strategic Opportunity paper: [www.bbsrc.ac.uk/biofilms](http://www.bbsrc.ac.uk/biofilms)

<sup>2</sup> See “*The Management and use of biofilms*” review at [www.bbsrc.ac.uk/biofilms](http://www.bbsrc.ac.uk/biofilms) for further information.

## **2. Innovation and Knowledge Centres**

Innovation Knowledge Centres are seen as a mid to long-term investment for the Funders. The vision for IKCs as an overall programme of investment is to help advance research whilst nucleating new industries in the UK with a value of at least £1bn. In addition, the IKC programme aims to add value to emerging and existing UK industries, and sectors, through harnessing science and technologies across myriad sectors and industries.

IKCs are academically-led and are a key component of the UK's innovation landscape. IKCs create early stage critical mass by concurrently advancing research and accelerate the commercialisation of world class science and emerging technologies into new products, processes or services across an array of sectors and industries. An IKC possesses expert knowledge and understanding of core science and technologies across the breadth of its strategic area(s). This is used to help foster collaboration and provide competitive advantage to the businesses with which the IKC interacts. The IKC will be based in university settings and be led by an expert team with a truly entrepreneurial spirit. Access to scientific, technology, application and market expertise and associated laboratory and scale up facilities should be provided to both academia and industry.

The unique capabilities of an IKC fit within the innovation landscape to create fertile, knowledge-rich environments in which business can collaborate with academics and other businesses to advance research and create the next generation of science and technology as it emerges from the research base. This early-stage collaboration enhances understanding of both the technology and the likely markets and drivers that will determine its economic potential. An IKC will collaborate with businesses in a number of ways such as: providing networking and community-development opportunities; and support for collaborative research from proof of concept through to demonstrator level. An IKC will possess or have direct access to:

- Core capabilities in the domain(s) of the chosen science and technologies; a shared environment to enhance collaboration, and leading to the creation of critical mass.
- Flexible capabilities in companion and enabling technologies that might be needed to remove barriers to innovation and make systems work.
- Market analysis and market development capability, to evaluate the commercial opportunities across a range of potential end-uses.
- Facility and equipment fit for purpose to enable operational activities and produce technology demonstrators; with access for third parties.

- Ability to dynamically respond to business need.
- Professional management of knowledge and intellectual assets, including both internally and externally owned intellectual property.

As well as delivering demonstrable commercial advantage and improvement to the companies that interact with it, or emerge from it, the IKC will use its excellent research to advance the fundamental science and create new technology and innovative approaches for future exploitation by industry. It is expected that the impact of the IKC is felt across its chosen domain(s), on a national level and across industry sectors. The IKC will build upon its world class research capability to deliver innovation of international renown.

### **3. How an IKC Operates**

#### ***Overarching Purpose***

An IKC should have a clear statement of its overarching purpose, pertinent to its science and technology domain(s); and in line with the specific vision and purpose set by the Funders. This is essential, since many of the practical aspects of operating and evaluating the success of an IKC depends upon the extent of progress towards achieving the overall vision and strategy for the UK.

Given its role to support multidisciplinary, collaborative research across industry sectors and in accelerating world-class technology to market, it is a prerequisite for the academic leads of the IKC to have an established reputation in the relevant scientific fields. One indication of this is that the academic leads already receive a substantial income for internationally competitive research. The academic leads also need to be able to articulate clearly the potential applications of the research and technology they intend to focus on, and the current and potential future business landscape in the applicable domains. The leads will need to secure upfront commitment, in cash and/or in-kind from a cohort of businesses who wish to support and underpin the IKC, such as through helping to set the IKC vision and strategy.

The initial funding period for an IKC is five years. From the outset the IKC must plan, and resource, substantial industry engagement and collaborative work. If it is not yet possible to identify some *potential* applications and routes to market, it is probably too early to consider the creation of an IKC. One possible route to market might be through spin-out companies from the university. This is a valid route to commercialisation, but on its own constitutes the creation of a single company, or small number of companies. Whilst we encourage this activity from the academic world, an IKC should not concentrate unduly on the creation of spin-outs. The

substantive part of an IKC's efforts should be targeted at supporting businesses, newly formed or well established, based outside of its own structures.

### **Leadership**

Effective leadership by the executive team is critical to an IKC's success. The team must clearly articulate its vision and strategy for the IKC, and engage staff in realising this vision. An IKC exists in a particular domain to advance scientific research and accelerate the commercialisation of world-class UK expertise in science and technology in areas with high growth potential. The IKC leadership team should capitalise on the research and development assets of UK academic institutions to promote the uptake of novel science and technology by existing companies and/or the establishment, and commercial success of, new ones. They should promote excellence across their activities and become exemplars for the successful commercialisation of UK-based ideas and invention.

### **Governance**

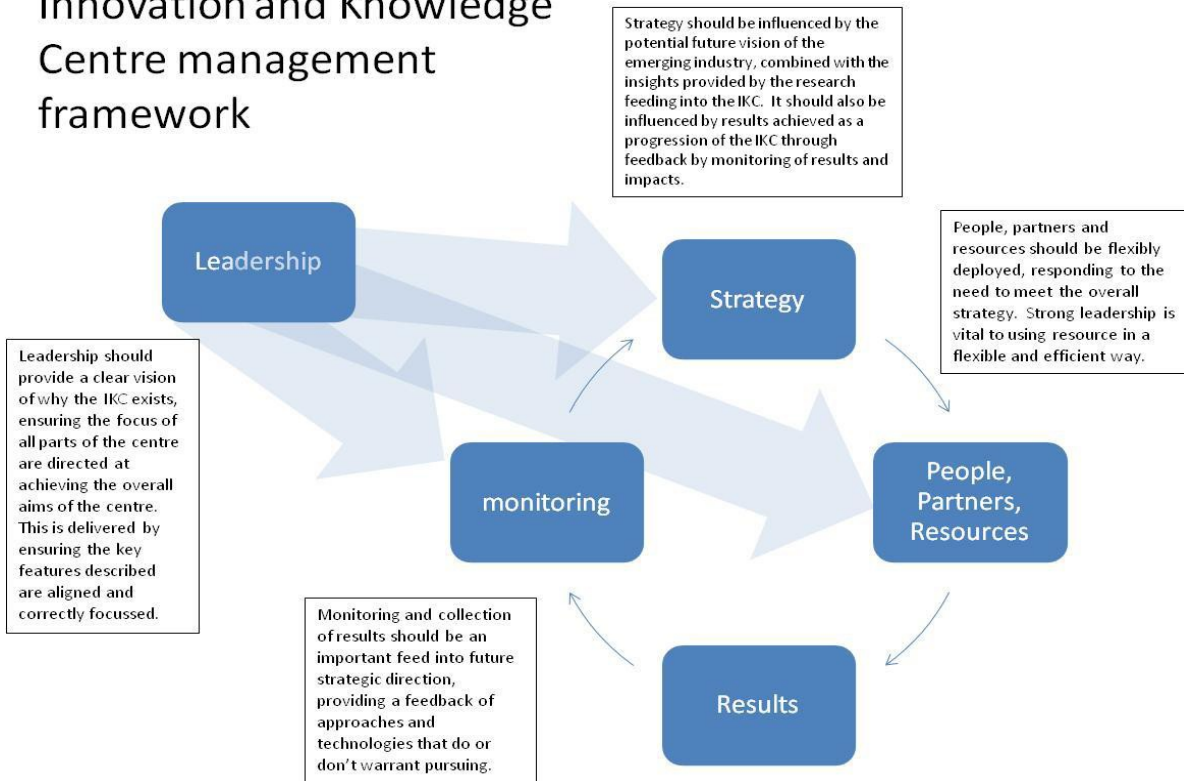
The leadership team has overall responsibility for the good health of the centre and its ability to meet its strategic objectives and there are clear requirements for the governance structure of an IKC. It is a condition of IKC funding that the executive board of the IKC appoints an independent chairman and non-executive board to ensure good governance of its activities. The non-executive board should include senior industry figures, those with extensive innovation experience and academics from other academic institutions. It should provide guidance on the direction of the IKC and challenge to the IKC team. The governance process must ensure that, for example, commercial benefits accrue to businesses collaborating with the IKC, but that these do not distort the principle of openness of the IKC, and its willingness to engage with all stakeholders in the sector.

To complement the formal processes, the management of the IKC should maintain regular contact with the funders of the programme, particularly in respect of their management and monitoring processes, and to help the IKC maximise the opportunity and connections across other science and technology areas. This requires the ongoing commitment and resource allocation from the funders to provide a person as 'connector' or point of contact for IKC activities and provide context/clarity on the operational relationship between the IKC and other centres, to maximise the opportunity from wider collaboration and sharing best practice, rather than just as a funding delivery role.

## Strategy

One of the important themes in an IKC is to create early stage critical mass in areas of research and technology which can be exploited and further developed by businesses from different sectors. Although the UK excels in research, and in many areas leads, most research is carried out on a global scale. The challenge for the UK is to generate wealth from the excellent new science achieved by the UK research base. Collaborating with and providing scientific access to industry at an early stage will help speed up the journey to full scale industrial adoption of emerging science and technologies thus offering economic and societal reward. Enabling companies to access science early on will ensure they are in a position to evaluate the science in the context of their market aspirations and gain the confidence to invest further. The diagram below indicates how elements of an IKC iterate and reflect.

## Innovation and Knowledge Centre management framework



## ***Intellectual Assets***

The Funders expect IKCs to create a multitude of intellectual assets (technology expertise, know-how, show-how, intellectual property and intellectual property rights) and that they will do so with an understanding of the value these assets can bring to the businesses with which they interact. Each IKC will agree with the funders, as part of the conditions of its grant funding, an intellectual property (IP) policy setting out its approach to managing IP and the processes it will adopt. The ultimate impacts of the IKC will be commercial gain for the UK industry base as well as creating new, business-inspired, academic research and development leading to economic and societal reward.

There is recognition that intellectual assets are both tangible and intangible in nature and both should be addressed strategically by the IKC. Principles of operation in this area are already present in the Knowledge Exchange and Commercialisation Principles developed by the Research Councils and Innovate UK<sup>3</sup>. The activities, approaches and the management of intellectual assets by universities and IKCs should reflect these. In summary:

- 1) The intellectual property rights (IPR) arrangements between the IKC and its customers and partners should facilitate the achievement of the IKC's overarching purpose. That is, advancing research and accelerating the commercialisation of an emerging technology; using the output from UK research to help businesses to grow.
- 2) IKCs are expected to manage IP in a professional and transparent manner. The approach adopted should encourage collaborative working and help the exploitation of IP. Proper arrangements should be put in place to record and protect existing (background) IPR, including commercially-sensitive information, from IKCs and collaborating partners. New (foreground) IPR should also be recorded and protected as appropriate, with regular reviews on the merit of maintaining that protection. However, licensing and direct exploitation of IP by the IKC itself is expected to provide only a relatively small part of an IKC's income.
- 3) IKCs should manage the development, protection and exploitation of new technology for the benefit of UK industry and encourage a knowledge of existing third party IPRs:
  - a) Having arrangements flexible enough to be tailored to the different circumstances of partners and business users, large and small;
  - b) Not creating perverse incentives for partners or businesses;
  - c) Avoid infringing any of the State Aid rules and ensure that the IKC can maintain 'no aid' status;

---

<sup>3</sup> For further information see the [BBSRC Grants Guide](#) and other resources such as the Lambert Toolkit.

d) Not creating burdensome costs for small companies and other customers.

4) The arrangements will need to differentiate between projects carried out under each tranche of funding:

a) For work done exclusively under core funding, we would expect the IKC to own and to take necessary steps to protect any IP created. The objective should be to strengthen the IKC's overall technical capability and enable it to deliver its overall goals more effectively and license out relevant rights to its business users.

b) For collaborative work funded jointly by business and the public sector, we would expect the IKC to follow the existing regime for publicly funded collaborative research – ie, for all partners to agree appropriate arrangements to share the rights to exploit IP created, for example as suggested by the Lambert agreements.

c) For R&D contracted with business(es) we would expect exploitation rights to new IP to be determined by contract and in general for these to lie with the businesses contracting with the IKC. The centre must also protect any IP that customers bring into the centre as part of a project. IP arrangements with the customer must not inhibit future use of the centre's background IP (eg, for other customers).

The understanding of the industrial sectors that are specific to the IKC and the understanding of a route to market for UK companies will dictate and drive the approach to IP assets and their exploitation. A number of models and practices already exist and partners should be flexible in their approaches to ensure benefits to businesses, the economy and society.

### ***Duration of an IKC***

An IKC is granted funding for an initial period of five years. During this time the operation of the IKC will be subject to normal performance evaluation for which there is an established set of KPIs (Annex 1). Where a science and technology domain reveals exceptional promise, the funders may be prepared to support an IKC in that technology domain for a further period, renewed in tranches. The decision to continue to fund an IKC in a particular domain for this extended period will be made on the past and present performance of the IKC, and on an assessment of the needs and growth prospects of the core area(s) the IKC is focused on (e.g. emerging industries, existing sectors, new science and technologies). The decision to award this extension to *the existing IKC* will be based upon the success of the IKC's own operation and performance in the established metrics.



Before end of the initial five-year funding period, an assessment will be made of the prospects for the research and industrial areas concerned and the innovation needs. It will be important to understand what the obstacles to continued development and uptake of the science and technology are, and the appropriate mechanisms to overcome them deployed. It will be important to understand the role a centre would play, relative to a more distributed programme of investments, and if a centre continues to be needed, whether an IKC is the right type of centre. At this point it could be possible to make any adjustments needed to the scope of the IKC's work. At some point, it might be appropriate to set up a larger and closer to market centre, and the future of any individual IKC would also have to be assessed in that context.

If a decision is made to extend research council and Innovate UK funding to an IKC the host institution(s) may also be required to continue its commitment. An ongoing dialogue between funders, the IKC and the university should be maintained to enable the IKC to continue its support to business uninterrupted.

Within the initial funding term of five years the revenue from intellectual assets (including IP) to the IKC should be fairly limited, and insufficient to cover the long-term costs of running the centre. Therefore, realistic projections should be incorporated into the IKC's plans. Investment in an IKC over an extended period will be in response to a market need and balanced against opportunity costs; in a world of finite resources, making longer term investment in one technology area has to be judged against the opportunities forfeited in another.

Should the decision be made not to extend the funding of a particular IKC, the host institution will be free, should it chose, to continue to support a centre in the same area, but this will not be able to continue to use the IKC name. The funders are keen to see the term IKC as a mark of excellence and to exert their control over the use of the term. The presence of an IKC in a science and technology domain should signify that a technology is new and exciting, with real potential for adoption and economic impact, and it should flag that the centre hosting the IKC has world-class expertise in that technology, and its commercialisation.

### ***People***

The expertise and commitment of the team of people within an IKC are critical to its ability to deliver commercial value from the world-class science of the university within which it is based, and elsewhere. Hence it will be essential, if it is to deliver its strategic objectives, for the IKC to have robust policies and processes to recruit, retain, develop and manage the performance of its people. These people will drive the exploration and adoption of new technology and business models, working closely with teams from the companies working with the IKC.

The team will need to have a clear understanding of the overarching purpose of the IKC, and its own contribution to achieving it. From the outset there needs to be a

broad balance of skills within the IKC – in science, technology, market analysis, commercial acumen, stakeholder management etc. As work evolves it is expected that the need for new capabilities will emerge. The IKC needs to have the ability to identify capability gaps and fill them, possibly by bringing in expertise from other departments in the host university, or by recruiting externally the best in their fields.

It is expected that the IKC management team will create a dynamic culture that attracts new staff to work in the centre, and businesses and other academics to work with it. The IKC team should be sensitive to the different vocabularies sometime adopted in different sectors, and have the ability to engage in a fruitful way in a range of different settings.

### ***Excellence in Collaboration***

In order to achieve its objectives the IKC will necessarily have a wide range of collaborations, with industry, academia and with other bodies that are important in the space (e.g. standards, metrology, regulation, Government departments, non-governmental organisations, research institutes, etc.). In keeping with the centre's own level of expertise, these interactions should draw on the very best capabilities available and help maintain the international competitiveness of UK business.

The IKC will have streamlined processes for this in place, and aspire to be the partner of choice for researchers and innovators across its strategic areas. Particular attention should be paid by the IKC to leveraging relevant research, skills and innovation investments both current and future. In this context, a pre-requisite for receiving IKC funding is the need for all IKC partners to collectively evidence how the IKC will be building significantly upon existing Research Council and Innovate UK investments across research, innovation and skills; as well as any wider investments, infrastructure and facilities.

At the point at which an IKC is established, it will have already identified a cohort of potential partners in the various academic research areas and industry sectors relevant to its strategy and vision. A number of these collaborators will have already committed to supporting the IKC in cash and/or in-kind and potentially on specific projects. The IKC is expected, in addition to supporting these early undertakings, to pursue an energetic outreach activity and to continue to develop a breadth of interactions and collaborations that deliver tangible benefit to the businesses involved. In particular it should be reducing time to market, helping to implement new/improved processes, and/or extending product ranges. To help in this the IKC will provide access to its assets, both physical (facilities and scientific equipment) and intellectual (techniques, know-how and expertise). These could be proprietary systems, or commoditised 'off the shelf' ones.

So long as it advances research and innovation under the overall strategy of the IKC, and in the science and technology areas for the UK, access for both business and

the academe are encouraged. The IKC should provide underpinning support for core science development across all necessary areas. The IKC will be aware of the wider science and innovation ecosystems, and possess knowledge of road mapping activities and a vision for the development of multidisciplinary research. It may be an existing national centre of excellence and will positively interact with and contribute to the missions of other institutions or centres (e.g. Catalysts, Catapults and Doctoral Training Centres).

The IKC is established to be a *national* centre of expertise in multidisciplinary scientific research, technology development and commercialisation in its particular domain. In this respect the businesses, and other collaborators, with which it engages should be drawn from the best nationally, not just those organisations operating near it. The IKC must have capacity to engage with SMEs as well as large companies, and the service it offers should be truly world class.

As a unifying point for collaboration the IKC should help partners and collaborators to engage with and benefit from a range of other innovation activities, research investments and programmes, for example: Collaborative Research and Development; Knowledge Transfer Partnerships; Research and Technology Clubs; Industrial CASE awards; Industry Fellowships; and other funding opportunities.

### **International**

The IKC will be a driving force within the innovation ecosystem and demonstrate active collaboration with other relevant research groups of international reputation. Each IKC should develop an international strategy, building on analysis of internationally competitive science and industry strengths. It should outline, in the context of supporting innovation and the advancement of multidisciplinary research, a strategy and plan for its international engagement. It will be expected to engage in collaborations of an international standard and awareness of international markets and dynamics, and the position of UK businesses and how to help them.

### ***Market awareness and activity***

The IKC will undertake the iterative business of matching novel science and technology capability to potential end-use markets in order to establish where the science or technology is most likely to gain early traction. It should have internal capability to do this, and work with business and partners to make the evaluation as robust as possible. It should use the information gained to inform the work it does; for instance, the new knowledge it generates, the collaborations it establishes and the IP it chooses to protect.

### ***Advancing science and skills***

The IKC and its partners will continue working at the cutting edge of science with original work carried out by a strong team of researchers of varying levels of experience (from professorial to doctoral students). They will stay abreast of developments worldwide, and use this knowledge to inform their own work. The strength of the team will enable them to continue attracting grant funding from sources including research council and funding council grants, under normal peer review processes. The IKC and its partners will be expected to support and facilitate academic and industrially-focused training to ensure critical skills needs are met both now and for the future.

### ***Access to expertise and equipment***

The IKC will have an open door policy to business and other academic collaborators. It will make available to UK business the benefit of its knowledge and experience, and will enter into collaborations with them to help advance the commercial development of the technology. It will, under suitable arrangements, make its physical equipment and assets available for business use.

### ***Profile***

The IKC should seek opportunities to engage with stakeholders across the various science, technologies and markets relevant to its area of expertise. Whilst not promoting itself excessively, it should ensure that its profile is sufficiently visible that the right people are aware of its existence, and find it easy to engage with.

### ***Evaluation and Monitoring***

The funders will conduct regular monitoring of the progress being made by an IKC at different time points (see Annex 1), as well as formal reviews at 9, 24 and 42 months. It will establish, through use of independent reviewers and the active participation in the supervisory and governance boards, whether the IKC is on a trajectory that will meet its ultimate objective and deliver benefit to UK business. A number of quantitative and qualitative measures will be used to assess progress. These will be used to provide evidence which will directly inform decision making on whether to award subsequent IKC core tranche awards. Funding (including core funding) will be withdrawn from IKCs that demonstrate insufficient progress in the metrics, or where the governance arrangements are felt to be insufficiently robust.

An independent panel will conduct formal stage gate reviews and make recommendations to the Funders. In addition to regular reviews with the connectors from the funding organisations, there will be formal monitoring events, involving the independent panel and scheduled for months 9, 24 and 42. Monitoring is intended as an ongoing process to enable the IKC to demonstrate delivery and its 'fitness for purpose'. The formal stage gate review process may raise specific items that the independent assessors may wish to see addressed outside of the normal schedule.

### **Key Performance Indicators**

The IKC should be able to demonstrate its awareness of the key markets and players within its science and technology domains and its successful interaction with them. It should be able to show that these engagements have a strategic purpose, and are representative of the entire landscape in the UK; and that it is acting as a national centre. It should be able to place this in an international context. It should be able to show, over time, the benefit to business of these interactions. Such benefits include: the number of projects completed; additional investments companies are making in this technology domain; the licences taken; the number of new products, processes or services companies have introduced and to which the IKC contributed; the growth of the companies in the IKC's orbit and the growth of the market overall. The IKCs are required, as a minimum, to report against a defined set of Key Performance Indicators (KPIs) as defined as Annex 1.

## **4. The Assessment Process**

Expressions of Interest and full proposals will be assessed by an independent panel of experts. Applicants are invited to submit an expression of interest (EOI) to establish a Biofilms IKC. The EOI should provide an outline of the potential IKCs vision, strategy and plans across the areas described in Sections 1, 2 and 3 of this document, directly connecting to:

- **Vision**
- **Institution(s) & Leadership**
- **Industrial Partners and Support**
  - Cash and/or in-kind industry support is a condition of award.
- **Leveraging existing investments, resources and facilities**
  - Must be across the full spectrum from research to commercialization.
- **Strategy for advancing biofilm research and skills training (60% - 70% of the IKC portfolio)**
  - Must cover and link strategic focus across the themes of: Prevention, Detection, Managing and Engineering biofilms.
  - Must reference evidence of existing experience and details of track records.
  - Skills in respect to both research and industrially-relevant skills.
- **Strategy for supporting and facilitating the commercialization of biofilm**

**science and technology (30% - 40% of the IKC portfolio)**

- Including market analysis and development methodologies to evaluate commercial potential across industry sectors.
  - Must also include an ability to manage knowledge and intellectual assets professionally, both for internally and externally owned intellectual property.
- **Outreach, Communication & Access Strategy**

**Key Dates and Award Schedule**

<b>Activity</b>	<b>Date</b>
Call Open	11 <sup>th</sup> November 2016
Deadline for Eols	8 <sup>th</sup> February 2017
Full Proposals Invited	Beginning of April 2017
Closing Date for Full Proposals	End of April 2017
Decisions Announced	July / August 2017

Note: dates are for guidance only and may be subject to change.

- **Tranche 1 Award (Month 1 – Month 24):** £4.25m (BBSRC); £1.25m (Innovate UK). Total Tranche 1: **£5.5m.**
- **Tranche 2 Award (Month 24 – Month 60):** £5.75m (BBSRC); £1.25m Innovate UK. Total Tranche 2: **£7m.**
  - Please note that the Tranche 2 award is dependent upon the IKC successfully passing a 24 month review.

**Contact Information**

For further information, at any stage of the application process, please contact: [biofilms@bbsrc.ac.uk](mailto:biofilms@bbsrc.ac.uk)

**By post:** Business and Innovation Unit, Biotechnology and Biological Sciences Research Council (BBSRC), Polaris House North Star Avenue, Swindon, SN2 1UH, UK.

## 5. How to Apply

The Biofilms IKC call for proposals will follow a two stage process. The first stage is a call for expressions of interest; this will be followed by inviting selected applicants to submit a full stage proposal.

A single bid can be made by up to four academic partners (across up to four institutions); however, one lead partner and institution must be nominated. To be eligible for the award a bid must have committed and agreed industry support either in cash and/or in-kind from more than one industry partner for the duration of the programme. Moreover, a bid must also have institutional support from the host institution(s) which contribute significantly to the overall IKC programme, for the five year duration. It is also a prerequisite that the IKC bid evidences how and why it is building upon and leveraging, to a significant extent, existing investments in UK research and innovation.

At the EOI stage it is expected that a clear collaboration agreement will have been drafted inclusive of all potential partners. This will need to be agreed by all potential IKC partners prior to submission of a full proposal. In addition, at the EOI stage an indicative cost breakdown must be included, uploaded as a separate document with the submission.

An institution may *lead* only one expression of interest, and all expressions of interest must have a letter of support from the Pro-Vice-Chancellor, or equivalent, of all the academic institutions (up to four) leading the bid. This letter of support must outline the agreement and details of institutional support.

Further information on BBSRC requirements can be found at [BBSRC Research Grants Guide](#) and the RCUK grants [terms and conditions](#). In addition, this document sets out specific requirements

**Expressions of Interest (EOI) will consist of:**

**A six page Case for Support which must cover the following seven areas:**

1. Vision
2. Management and Governance
3. Research Strategy
4. Innovation & Commercialisation Strategy
5. Operational Plan, facilities / infrastructure & leveraging value from UK investments
6. Partners
7. Success and Sustainability

- **A CV for each academic lead (use template);**
- **Documents to be uploaded under 'Other Attachments':**
  - Executive Summary;
  - Letters of Support (and/or intent) from project partners (academic and industrial);
  - Academic and industry beneficiaries;
  - Justification of resources (e.g. facilities, staff, in-kind)
  - Five year work plan overview (Gantt chart);
  - Outline Pathways to Impact plan;
  - Any relevant agreements (or drafts) for collaboration, IP, etc;

BBSRC recommend that you use typefaces Arial, Helvetica or Verdana and a strict minimum font size of 11 must be used for the entire Case for Support, Justification of Resources and CVs (excluding text on diagrams and the use of mathematical symbols). A minimum of single line spacing and standard character spacing must be used. Margins must not be less than 2cm. Applicants should note that under no circumstances should their application exceed the page limits described. Any outline submissions which exceed the stipulated page limits will be withdrawn.

**The Eols should be submitted before 4pm on 8<sup>th</sup> February 2017. Full proposals will be invited by beginning of April 2017, with a submission date of end of April 2017.**

Successful applicants will be invited to write a full proposal, further guidance will be made available to those applicants invited to submit a full proposal; however, applicants should note that:

- Pathways to impact will be required at the full proposal stage and these should be formulated to meet the needs of the biofilms industry sector(s).
- In addition, at the full proposal stage a letter from the applicant's Technology Transfer Office (TTO), or equivalent, will be a mandatory requirement. The letter must confirm the University or Research Institution accepts the conditions of this call.



### ***Eligibility***

Standard RCUK eligibility rules for BBSRC apply to this call. For further information on eligible Independent Research Organisations visit <http://www.rcuk.ac.uk/funding/eligibilityforrcs/>.

### ***Ethics***

The Research Organisation is responsible for ensuring that ethical issues relating to the project are identified and brought to the attention of the relevant approval or regulatory body. Approval to undertake the research must be granted before any work requiring approval begins. Ethical issues should be interpreted broadly and may encompass, among other things, relevant codes of practice, the involvement of human participants, tissue or data in research, the use of animals, research that may result in damage to the environment and the use of sensitive economic, social or personal data. For full guidance please refer to the [BBSRC Grants Guide](#).

### ***Submitting an Application***

Submit your proposal through the Research Councils' Joint Electronic Submission (Je-S) system by 4pm on 8<sup>th</sup> February 2017. Late applications will not be accepted.

Guidance on completing the outline submission can be found on the Je-S help. Applicants should select the following from the Je-S menus:

1. **Log in** the Joint Electronic System ([Je-s](#))
2. Select 'New document' from the functions menu
3. Select **Council:** 'BBSRC'
4. Select **Document Type:** 'Outline Proposal'
5. Select **Scheme:** 'Standard Outline'
6. Select **Call/Type/Mode:** '2017 Biofilms IKC EOI'
7. Click 'Create Document'

## Annex 1: Innovation Knowledge Centre Key Performance Indicators

Annual Reporting Frequency (months)			
Once / as necessary	<b>Inputs</b>	IKC funding	
Once / as necessary		Outputs from prior research	
6		Public Research funding	
6		Public Innovation / regional funding	
12		Public Post Graduate training funding	
Once / as necessary		<i>University contribution(s)</i>	
6		Partner Cash contributions	
6		Partner In-kind contributions	
12	<b>Activity</b>	RO partners	
12		Investigators	
12		Multidisciplinarity	
12		User partners	
12		Oversight body engagement	
6		Business collaborators	
6		- Of which SMEs	
3		Business engagement	
6		Trade articles	
12		Staff - research	
12		Staff - non research	
12		Doctoral students	
12		Masters students	
12		Short Courses	
6		Stakeholder involvement	
6		Co-production consultation activities	
6		<b>Outputs</b>	Publications
6			International publications
6	Citations		
6	Joint publications		
6	IP activity		
6	Knowledge exchange events		
6	Business assists		
6	Spin-outs and JVs		
6	Proof of Concept projects		
6	Demonstrators		
6	Secondments		
12	Doctoral completions		
12	Masters completions		
12	Training completed		
12	Public engagement events		
12	Projects adapted or developed		

12	<b>Outcomes</b>	Research quality	
12		Capability / facilities	
12		Investment in relevant companies	
12		More relevant projects for users	
12		Policy and standards influence	
6		Products, tools, processes, and services to market and delivering value	
6		Inward investment deals	
12		Skills supply for the sector	
12		More relevant projects for public	
12		Divers recruitment	
12		Changed perceptions	
12		Jobs created	
12		<b>Impacts</b>	Value of sector
12			Jobs in sector
12	Export value		
12	Clusters		
12	Environmental benefits		
12	Social benefits		