

## **Consultation on the Concordat for the Advancement of Knowledge Exchange in Higher Education in England**

A Universities UK/Guild HE consultation with the HE sector  
Informed by the Universities UK Research England Joint Working Group

Submission from the Royal Academy of Engineering

July 2019

## Introduction

1. The Royal Academy of Engineering is pleased to respond to the Universities UK/GuildHE consultation on the Concordat for the Advancement of Knowledge Exchange in Higher Education in England. The Academy believes that knowledge exchange is of fundamental importance to ensuring that the UK captures value, both economic and social, from its investment in research, much of which is publicly funded. Assessing knowledge exchange should account for a balance of knowledge creation, knowledge dissemination and knowledge application.
2. Rewarding, recognising and incentivising activities which facilitate the delivery of benefits from research are central to the Academy's programmes, both UK-based and internationally, and are core to the expertise of our Fellows. The Academy's research programmes focus on funding high-quality engineering research with industrial impact and enabling partnerships with industry, while the Academy's Enterprise Hub makes awards to exemplars of excellence and innovation in engineering who will be the founders and leaders of tomorrow's high-tech companies. Consequently, the Academy also has policy interest and expertise in improving the climate for engineering entrepreneurs and growth of technology companies in the UK, as well as accelerating the commercialisation of university research. In particular, the Academy has a long-standing interest in ensuring the perspectives of academic entrepreneurs are represented in national discussion on research commercialisation, especially in relation to spin-out creation and technology transfer.<sup>1</sup>
3. Over recent years, there has been an increasing focus on how UK knowledge exchange can be improved, the Academy has welcomed this raising of the important topic on the national agenda. As the Academy believes knowledge exchange is of fundamental importance it is therefore strongly supportive of the developing Knowledge Exchange Framework (KEF) and has responded to the KEF metrics consultation in 2018 and the KEF Consultation 2019.<sup>2</sup> The Academy sees the KEF, and now the knowledge exchange concordat (KEC) as contributing to a long-term approach to developing and improving the effectiveness of UK knowledge exchange activities.
4. The Academy believes the KEC will be able to go some way to remedying two of the proposed KEF's most significant failings: the inability to capture the full breath of knowledge activities and failure to recognise that HEIs' strategic approaches to knowledge exchange are pertinent to institutional characteristics and influence the volume and range of their knowledge exchange activities. While the Academy still endorses for HEIs to be given the opportunity or the option to submit supplementary narratives for any or all of the perspectives in the KEF, to allow institutional strategies to be taken into account, the KEC's explicit acknowledgment that 'one-size does not fit all' for knowledge exchange is helpful.

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<sup>1</sup> [Royal Academy of Engineering submission to the House of Commons Science and Technology Select Committee inquiry on Managing Intellectual Property and Technology Transfer](#), 2016.

<sup>2</sup> [Royal Academy of Engineering submission to the KEF Metrics consultation](#), 2018 and the [Royal Academy of Engineering submission to the Knowledge Exchange Framework Consultation](#), 2019.

## **The Aims of the KEC**

5. The Academy strongly agrees with the aims of the KEC:
  - To give universities and their staff and students clarity of mission and support their development
  - To give partners an accurate representation of the approach that individual universities are taking to knowledge exchange
  - To provide clear indicators of their approaches to performance improvement
  - Encourage collaboration between universities
  - To give governing bodies and government broad confidence in the activity that is taking place in universities.
6. An aim focused on encouraging collaboration between universities is welcome to increase the recognition and reward of such activities. There is a widespread use of collaborative knowledge exchange approaches between universities in the UK, in particular to benefit their local communities, and supported by mechanisms such as the Connecting Capability Fund.
7. The Academy welcomes the aim of the KEC 'to give partners an accurate representation of the approach that individual universities are taking to knowledge exchange' and believes that the KEC is more likely to fulfil this ambition than the KEF. However, to do so, the language used by universities when reporting on their knowledge exchange activities, including in their short action plans, should be easily understandable by businesses and other external users of research.
8. However, the Academy believes that an aim to increase the effectiveness of knowledge exchange should be added. Although 'continuous improvement' is one of the KEC's principles and a commitment for university signatories, developing and improving the effectiveness of UK knowledge exchange activities should be the overarching rationale for the KEF and the KEC and therefore should be included in the aims.

## **The Principles**

9. As part of the Academy's contribution to improving knowledge exchange, in 2017, the Academy published *Transforming UK translation*, in partnership with the Academy of Medical Sciences, the Royal Society and the Wellcome Trust.<sup>3</sup> The document sets out commitments that the organisations collectively make to improve the UK's ability to commercialise and translate ideas and discoveries from its world-leading research base. Almost all of the commitments are reflected to some extent in the principles and key enablers set out in the KEC.
10. The Academy strongly agrees that the eight guiding principles provide an appropriate framework for the development of effective knowledge exchange in universities. They cover many of the areas the Academy has previously identified as important for knowledge exchange. Taken together the principles demonstrate a comprehensive view of all the different elements and responsibilities involved in knowledge exchange in universities.

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<sup>3</sup> [Transforming UK translation, Academy of Medical Sciences, Royal Academy of Engineering, the Royal Society and the Wellcome Trust](#), 2017.

## The Enablers

11. As noted in paragraph two, improving knowledge exchange is an area of policy interest for the Academy, with a particular focus on business-university collaboration, industry-academia mobility, entrepreneurship education and the formation of spin-out companies. The Academy is pleased to see many of the areas for improvement it has previously identified featuring in the principles and enablers. Some examples of these are set out below.

### *Mission*

12. The Academy agrees that having clarity of mission from university leadership to staff and students is essential for efficient and effective knowledge exchange. The experience of the Academy suggests that universities are most likely to succeed with knowledge exchange when the objectives of all parties involved are aligned.
13. As noted earlier, the KEF as currently proposed, does not allow for HEIs' strategic approaches to knowledge exchange to be captured, yet the diversity of approaches to knowledge exchange is a strength of UK higher education. The key enabler that proposes *'a clear statement of which modes or knowledge exchange are prioritised and supported in the context of an underpinning institutional strategy.....'*, directly addresses this concern of the Academy.
14. Sustainable funding for knowledge exchange that matches HEIs' knowledge exchange ambitions is a long-standing challenge for the sector. While the Academy will continue to champion funding specifically for knowledge exchange, like the much valued Higher Education Innovation Fund in England, universities should consider whether their model of knowledge exchange resource level aligns with the role they want knowledge exchange to fulfil. The key enabler of *'an evidenced approach to sustainable institutional investment to meet agreed institutional knowledge exchange objectives.....'* is therefore welcomed by the Academy.

### *Policies*

15. Clear and accessible policies relating to HEIs' KE practices has been an area the Academy has long-identified for significant improvement. Clear and accessible policies are crucial for levelling the information asymmetry that can often occur between academic entrepreneurs and universities. Therefore, the Academy very much supports this principle and is pleased to that policies covering shareholdings and revenue-sharing, among others, are identified in the key enablers. The Academy will continue to champion the need for clear and accessible policies, going somewhat further than the KEC in calling for them to ideally be publicly available.

### *Engagement*

16. The key enablers to support the principle of engagement are well-recognised by the Academy as best practice approaches. In particular, if implemented, these enablers will help with the establishment and operation of successful business-university collaborations of all types and address several of the points made in the Dowling Review of Business-University Research Collaborations.<sup>4</sup> The key enabler that proposes *'formal arrangements for timely and efficient execution of agreements and mechanisms to monitor this to inform improved service delivery'* will capture the

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<sup>4</sup> [The Dowling Review of Business-University Research Collaborations](#), 2015.

'user' perspective which the Academy advocates for as a key way to improve knowledge exchange.<sup>5</sup>

#### *Working effectively*

17. The '*working effectively*' principle and key enablers are interdependent with the '*policies*' principle and key enablers. Consideration should be given to reordering the principles and potentially combining some of the key enablers, to make them easier to understand and implement.

#### *Capacity building*

18. Professional knowledge exchange staff play a critical role in research commercialisation, having to undertake a number of specific and expert tasks including, but not limited to, IP valuation, IP protection, licence negotiation and market assessment. Consequently, the experience and skill level of staff has a direct bearing on the quality of knowledge exchange. There are long-standing concerns that the variable quality of knowledge exchange staff can be a barrier to knowledge exchange. University salary structures, as well as knowledge exchange budget restraints, are likely to be contributing factors. Therefore, the Academy welcomes '*capacity building*' as one of the guiding principles and the set of key enablers relating to professional staff supporting knowledge exchange. The UK benefits from the work undertaken by PraxisAuril, the national professional association for public sector knowledge exchange and commercialisation practitioners.
19. Ensuring that academic staff and students are exposed to knowledge exchange activities and know where to go for good quality relevant support is crucial, therefore the Academy is pleased to see this captured in the key enablers also.

#### *Recognition and rewards*

20. There has been frustration among engineers that activities which support and enable the delivery of impact are not currently sufficiently captured, recognised or rewarded, therefore the Academy is pleased to see recognition and reward prioritised as one of the guiding principles. As noted in the Dowling Review<sup>6</sup>, the perception that activities relating to commercial endeavours are damaging to an academic career path persist and detract from the attractiveness of such activities for academics. Universities need to ensure that recruitment and promotion criteria for relevant disciplines reward rather than penalise academics who have achieved excellence in translational and collaborative activities, and that these messages are communicated effectively. Furthermore, if universities value and want to encourage research commercialisation activities they need to provide their staff with sufficient time to engage in them. That Academy welcomes the inclusion of key enablers to address promotion criteria, rewards processes and time allocations among other measures.

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<sup>5</sup> [Royal Academy of Engineering submission to the House of Commons Science and Technology Select Committee inquiry on Managing Intellectual Property and Technology Transfer](#), 2016, [Royal Academy of Engineering submission to the KEF Metrics consultation](#), 2018 and the [Royal Academy of Engineering submission to the Knowledge Exchange Framework Consultation](#), 2019.

<sup>6</sup> [The Dowling Review of Business-University Research Collaborations](#), 2015.

### *Continuous improvement*

21. As outlined earlier the Academy welcomes the KEC as part of a long-term approach to developing and improving the effectiveness of UK knowledge exchange activities. It is important the UK continues to be aspirational in its knowledge exchange practice and believed the KEC should support that aspiration. Therefore, continuous improvement is important. Including in the aims of KEC an aspiration to increase the effectiveness of the UK knowledge exchange will reinforce the importance of this guiding principle and key enablers.
22. The perspective of businesses and other external users of research is an important element to be considered when evaluating and improving knowledge exchange activities. Therefore, the Academy is pleased to see the inclusion of beneficiary and partner feedback in the key enablers. The Academy is not convinced that the KEF as currently proposed will fulfil its aim to 'provide business and other users with more information on universities', however, implementation of these key enablers, combined with promotion of the findings in language that is understandable by business and other partners might.

### *Evaluating success*

23. Continuous improvement is dependent on evaluating success. Therefore, consideration should be given to reordering the principles and potentially combining some of the key enablers, to make them easier to understand and implement. As for '*continuous improvement*', evaluating success is important to improving the effectiveness of UK knowledge exchange activities. Including an aspiration to increase the effectiveness of the UK knowledge exchange in the aims of KEC will reinforce the importance of this guiding principle and key enablers.

### **Commitments of university signatories**

24. The Academy supports asking universities to become signatories to the KEC and that in doing so they make a number of commitments. There is a balance to be struck between not placing undue burden on universities and ensuring that the KEC does engender continuous improvements to HEIs' knowledge exchange practices. Given the importance the Academy places on knowledge exchange, the KEC alongside the KEF, presents a welcome opportunity to encourage, recognise and incentivise knowledge exchange, as one of the central activities of universities. Therefore, the commitments for university signatories seem proportionate, especially as much of what the commitments require should be undertaken within universities. However, proportionality is dependent on universities' interpretation of the commitments, so where possible, alignment with other reporting measures should be sought. Furthermore, as has been noted, 'one-size does not fit all' for knowledge exchange between institutions and this is also very likely to be true within institutions, given the range of different subject areas and forms of knowledge exchange. Therefore, when universities are looking at how to deliver the KEC's commitments, they should be done to with a view as to how it empowers all areas within universities to undertake their knowledge exchange activities more efficiently without adding undue complexity because of the breadth of subject areas and knowledge exchange activities within the institution as a whole.