Knowledge Exchange Framework

Decisions for the third iteration

Report detailing the decisions taken by Research England for the implementation of the third iteration of the Knowledge Exchange Framework.

6 June 2023

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Knowledge Exchange Framework

To	Heads of Research England-funded higher education providers
Of interest to those responsible for	Knowledge Exchange, including directors of knowledge exchange and PVC Research and Enterprise/Innovation
Reference	RE-P-2023-02
Publication date	06 June 2023
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Contents

Introduction

1. This document sets out the decisions that we have made for the third iteration of the KEF, known as KEF3. This includes detail on the eligibility and timescales for KEF3, the updated KE clusters and narrative statements, and the continued methodology and use of perspectives and metrics to present results.

2. There have been no substantive changes to the methodology used from KEF2 to KEF3, for information about the methodological changes made between KEF1 and KEF2 please refer to the KEF2 decisions document published in May 2022. A full timeline of the development of the KEF is at Annex A.

3. In May 2023 we published the decisions of RE's Review of Knowledge Exchange Funding. In this publication we also clarified the purpose of the KEF in the short/medium term, to continue to meet the following purposes:

    a) To provide Higher Education Providers (HEPs) with a useful source of information and data on their knowledge exchange (KE) activities, for the purposes of understanding, benchmarking and improving their own performance.

    b) Underpinned by the objective of providing more easily accessible and comparable information on performance for the purposes of transparency and public accountability.

4. We confirmed that the current design and development work will continue through further iterations and be focussed on the purpose to support HEP performance until at least KEF5 in 2025. The continued use of the current design and methodology will allow the KEF to be used by HEPs to compare their performance with each iteration.

5. In the long-term we will bring forward proposals on the development of the KEF for use in funding when we have the appropriate data and metrics available to make more fundamental changes to our funding approach (proposals not to be brought forward before 2025/26, with any subsequent implementation likely to take several further years). Specific ambitions for areas of long-term metric development for the KEF were set out in the KEF review report published in February 2022.
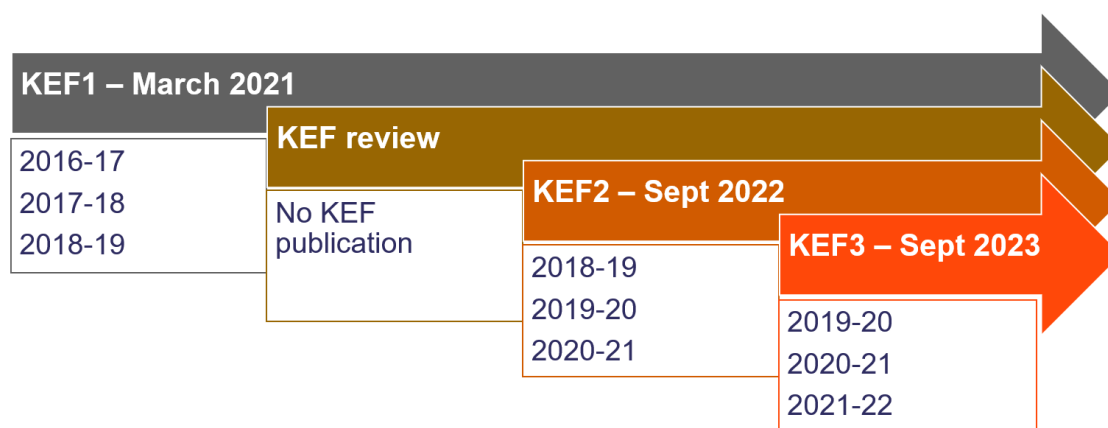
Eligibility and timescales

6. The third iteration of the KEF (KEF3) will be published in September 2023. Eligibility of HEPs for KEF3 will remain linked to eligibility for Higher Education Innovation

Funding (HEIF). Research England are currently undertaking work to clarify the eligibility criteria for HEIF ahead of implementation no earlier than 2024-25.

7. All HEPs that were eligible to receive HEIF funding in 2022-23 will be eligible to participate in KEF3. A list of such providers may be found at Annex B.

8. As was the case with the first iteration of the KEF, providers who were eligible to receive a Research England HEIF allocation, but who did not receive any funding, will be included in the sector wide cluster average calculations in the KEF but their individual metric dashboards will only be provided if they have chosen to submit narrative statements for KEF3.

9. Providers who were in receipt of a HEIF allocation in 2022-23 will have their full metric dashboard published, regardless of whether narrative statements have been provided.

10. Figure 1 shows the data years that are included in each iteration of the KEF up to and including KEF3.

Figure 1 - KEF data years for KEF1, KEF2, and KEF3.

KEF1 – March 2021	KEF review	KEF2 – Sept 2022	KEF3 – Sept 2023
2016-17 2017-18 2018-19	No KEF publication	2018-19 2019-20 2020-21	2019-20 2020-21 2021-22

Clustering

11. In advance of the publication of KEF3, the KE clustering of all English HEPs eligible to receive an RE HEIF allocation has been updated based on the most recently available data, including from REF2021. The same methodology and data sources have been used as in the first 2018 exercise, and the exercise conducted again by Tomas Coates Ulrichsen. Providers continue to be placed in one of the seven KE clusters identified to enable meaningful and fair comparison. These seven comprise the five general clusters, plus the 'STEM specialists' and 'Arts specialists' clusters. The abbreviated descriptions for each cluster are provided at Annex C.

12. Updated KE cluster placements are at Annex B. Providers have been informed of their updated KE cluster placements in advance of this publication, and the methodology underpinning the process is detailed in a [technical report](#). The methodology used is unchanged from approach used in the first clustering exercise, but assigns eligible HEPs based on the latest available data.

13. Our continued view is that the cluster variables represent a 'capability base' which can be thought of as quasi-fixed in the medium-term, but can change over the longer-term through investments in research, teaching and related physical capital. We will therefore continue to periodically re-cluster all English HEPs as appropriate, such as when new data becomes available (particularly REF data).

14. In exceptional circumstances we may reallocate providers on an ad-hoc basis outside of the formal re-clustering process. Such exceptional circumstances may include (but are not limited to) mergers, demergers or other significant events which we believe will have a material effect on the provider's capability base. Any provider that wishes us to consider this should make a written request to KEF@re.ukri.org.

Narrative statements

15. As discussed in the [KEF review report](#), the inclusion of narrative statements provides a valued opportunity to capture KE activities not currently represented in robust and available metrics currently available, and provides a unique source of evidence of such activities.

16. The stated purposes of the narrative statements remain to:

    a. Act as a 'marker' to support limited metrics that do not fully describe the activity in the perspectives of 'Public and Community Engagement' and 'Local Growth and Regeneration'.

    b. Be useful statements, contributing focused descriptions of contextual factors that shape the activity with clearly evidenced examples of outputs and outcomes.

    c. Allow a degree of comparison between providers by presenting narratives in a structured form.

    d. Offer the potential to identify future metrics that may be incorporated into future iterations of the KEF.

17. Narrative statements for the 'Public and Community Engagement' and 'Local growth and regeneration' perspectives, and the 'Institutional Context' narrative have been updated for KEF3. Previous narrative statements submitted for KEF1 will remain available on the KEF website but not presented on the main provider dashboards. We anticipate that narrative statements will be updated every three years, but this may be amended to timelines converging with accountability requirements for our KE funding. Further calls for updated narrative statements will be no earlier than KEF6.

Public and community engagement self-assessment process

18. We have commissioned the National Co-ordinating Centre for Public Engagement (NCCPE) to undertake a detailed review of the KEF3 public and community engagement self-assessment process to verify that it continues to be a robust proxy metric. This work will continue to inform the future development of the KEF.

Perspectives and metrics

19. The seven perspectives used in the first two iterations of the KEF will continue to be used in KEF3, in order to represent broad range of KE activities.

20. In Table 1 below, we have summarised the metrics that continue to be used for KEF3. A detailed description of the source data, including source table references from the Higher Education Business & Community Interaction (HE-BCI) survey, for each metric are available as a separate excel download alongside this report.

21. All metrics integrated into the KEF will be subject to ongoing review as we work to develop future iterations in line with the medium and long term goals set out in the 2022 KEF review report. However, in order to include multiple years of data, we do not anticipate substantive change to the KEF metrics until at least KEF5 (2025).

Table 1: Summary of the perspectives and metrics that will be used KEF3.

KEF3 Perspective title	Metrics to be used in KEF3, to be published in September 2023
Research partnerships	HE-BCI Contribution to collaborative research (cash) as proportion of public funding
	Co-authorship with non-academic partners as a proportion of total outputs (data provided by Elsevier)
Working with business	Innovate UK income (KTP and grant) as proportion of research income
	HE-BCI Contract research income with non-SME business normalised for institution size by HEP income
	HE-BCI Contract research income with SME business normalised for institution size by HEP income

KEF3 Perspective title	Metrics to be used in KEF3, to be published in September 2023
	HE-BCI Consultancy and facilities & equipment income with non-SME business normalised for institution size by HEP income
	HE-BCI Consultancy and facilities & equipment income with SME business normalised for institution size by HEP income
Working with the public and third sector	HE-BCI Contract research income with the public and third sector normalised for institution size by HEP income
	HE-BCI Consultancy and facilities & equipment income with the public and third sector normalised for institution size by HEP income
Continuing professional development (CPD) and graduate start ups	HE-BCI CPD/CE income normalised for institution size by HEP income
	HE-BCI Graduate start-ups rate by student FTE
Local growth and regeneration	HE-BCI Regeneration and development income from all sources normalised for institution size by HEP income
	Updated narrative statements included for KEF3
IP and commercialisation	HE-BCI Estimated current turnover of all active firms per spin-out surviving at least 3 years
	HE-BCI Average external investment per spin-out surviving at least 3 years
	HE-BCI Licensing and other IP income as proportion of research income
Public and community engagement	Updated self-assessment score for KEF3
	Updated narrative statements for KEF3

Presentation of results

22. The objective of the KEF is to provide more easily accessible and comparable information on performance in knowledge exchange to HEPs. Data will continue to be presented to avoid misinterpretation of results (e.g. as a sector-level ranking or league table) through an online visualisation platform displaying perspectives and underlying metrics.

23. The perspective results will continue to be presented as a quintile – i.e. as falling into one of five values, each representing 20% of English HEPs (where possible, see paragraphs 30-31). For example, the top 20% of providers would be assigned a quintile of 5 – very high engagement, the bottom 20% of providers would be assigned a quintile of 1 – very low engagement. The data underpinning the perspectives for each HEP will be presented in a polar area chart with a scale in quintiles and relative to the average quintile placement of the cluster group.

24. Where updated narratives were provided for KEF3 for the perspectives of 'Public and Community Engagement' and 'Local Growth and Regeneration', these will be presented alongside the quintile position, noting that metrics should be read in conjunction with the supporting narrative and not considered in isolation.

Methodology

25. This section provides detail on how the above metric values will be calculated in KEF3. The methodology will be the same as that updated for KEF2, to allow direct comparison between KEF2 and KEF3 performance to support HEPs in understanding their own improvement in KE.

26. Firstly, data from the three most recent years will be used to calculate the mean average for each metric using one of the two methods given in the example below, where 'a' is the numerator and 'b' is the denominator of the metric, for each of the three years of data.

27. For example, for the metric "HE-BCI Contract research income with non-SME business normalised for institution size by HEI Income", the three years of 'Contract research income' (the numerators) are represented by a_1, a_2 and a_3, whilst the total 'Incomes' for each of the three years (the denominators as described in Table 1) are represented by b_1, b_2 and b_3 below:

a_1	b_1	a_2	b_2	a_3	b_3
Year 1 Numerator	Year 1 Denominator	Year 2 Numerator	Year 2 Denominator	Year 3 Numerator	Year 3 Denominator

Average Method 1:

$$\frac{(a_1 + a_2 + a_3)}{(b_1 + b_2 + b_3)}$$

Average Method 2:

$$\frac{\left(\frac{a_1}{b_1}\right) + \left(\frac{a_2}{b_2}\right) + \left(\frac{a_3}{b_3}\right)}{3}$$

28. The averaging method selected for each metric will depend on which is most appropriate for the underlying data set, and the same averaging method will be used for every provider for a given metric. For example:

   a. Method 1 will be used where the dataset has zero values in the denominator of one or more of the three years being averaged for any HEP across the sector (which would otherwise result in a 'divide by zero' error when using method 2). An example of this is shown in table 3, below.
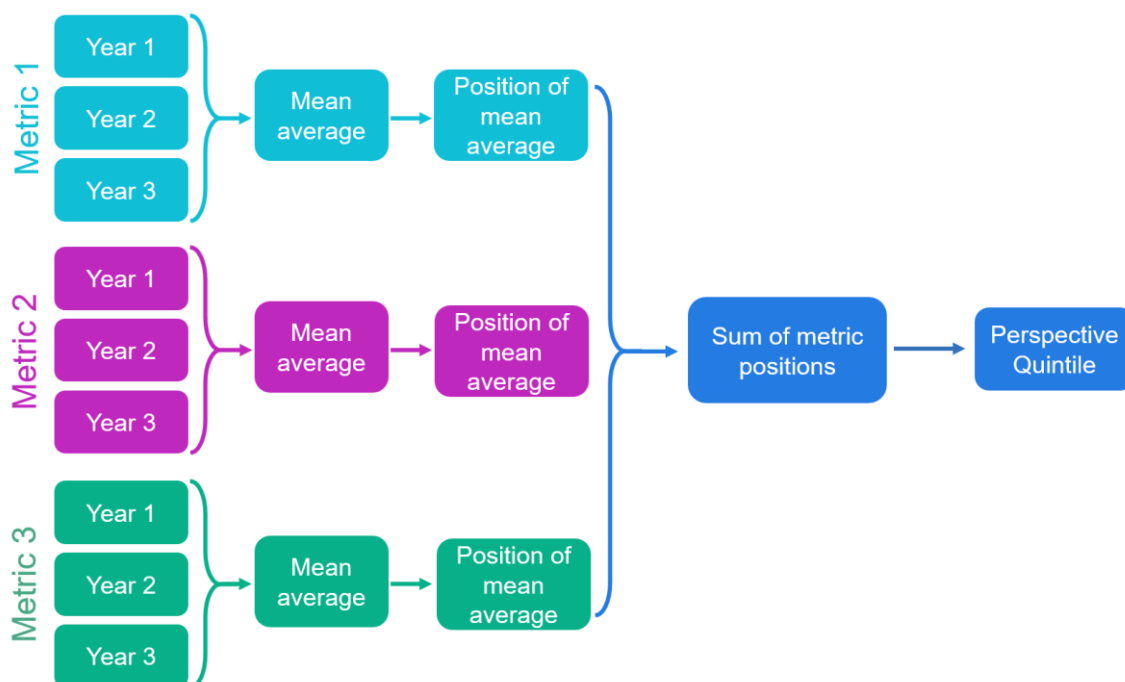
b. For all other metrics, method 2 will be used. For each metric, the averaging method used will be clearly indicated.

Table 3: Comparison of the results of applying averaging method 1 and 2 to an example dataset

	a_1	b_1	a_2	b_2	a_3	b_3		
	Year 1 Numerator	Year 1 Denominator	Year 2 Numerator	Year 2 Denominator	Year 3 Numerator	Year 3 Denominator	Method 1	Method 2
HEI 1	0	3	0	5	0	5	0.00	0.00
HEI 2	2	3	2	5	2	5	0.46	0.49
HEI 3	0	0	2	5	2	5	0.40	#DIV/0!

29. Once the three-year average for each metric has been calculated, all providers in the sector are then ordered by their three-year averages to give a metric position (1st -139th). All providers reporting a zero value will be given an equal lowest position (139th). For each provider the total perspective value is calculated by summing the positions of each contributing metric. Providers are then ordered across the sector by their total perspective values to a give a perspective position (1st-139th). The sector is divided into quintiles based on their perspective positions. An example of this process for a perspective with three metrics is shown in Figure 2.
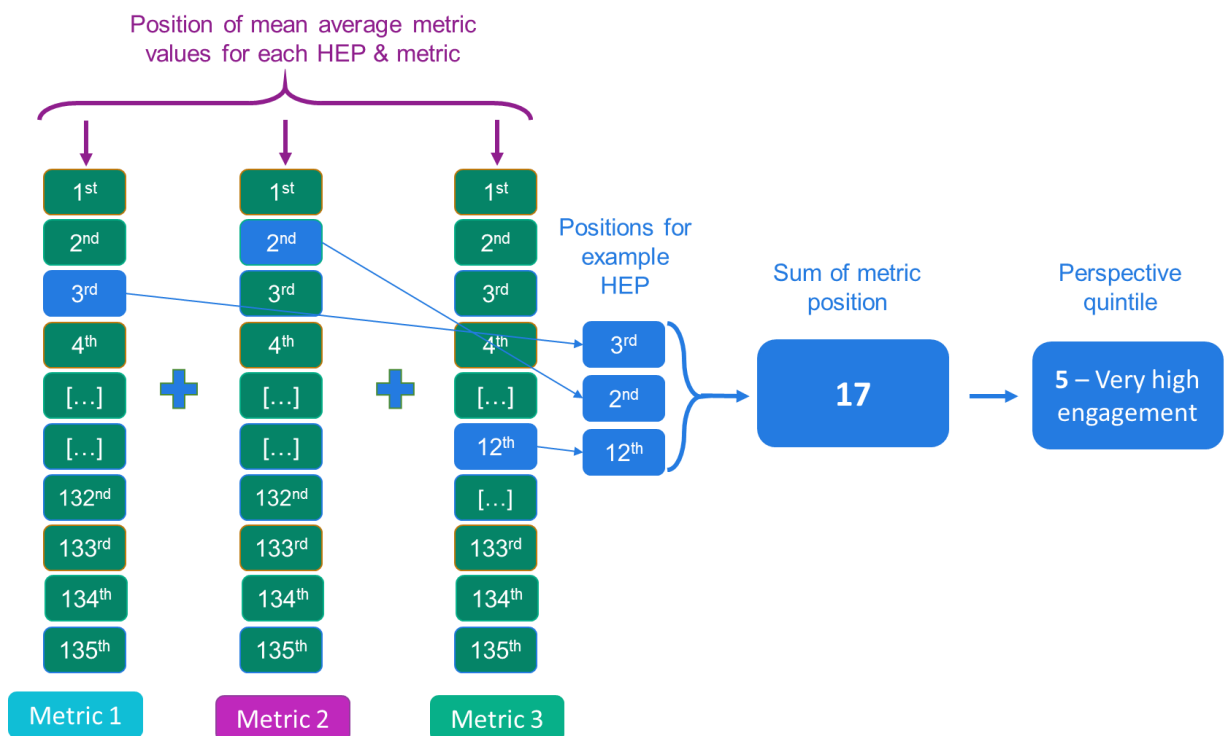
Figure 2: Example process for calculating a perspective quintile for an individual HEP

30. Ties in HEP positions are unlikely, however, where ties occur at either a metric level or perspective level, the HEPs will be assigned the position they would have had if they did not share that position with any other providers is assigned. Where this is the case the positions of other untied providers will not be altered, for example if three providers share a position of 5, the next provider will have a position of 8.
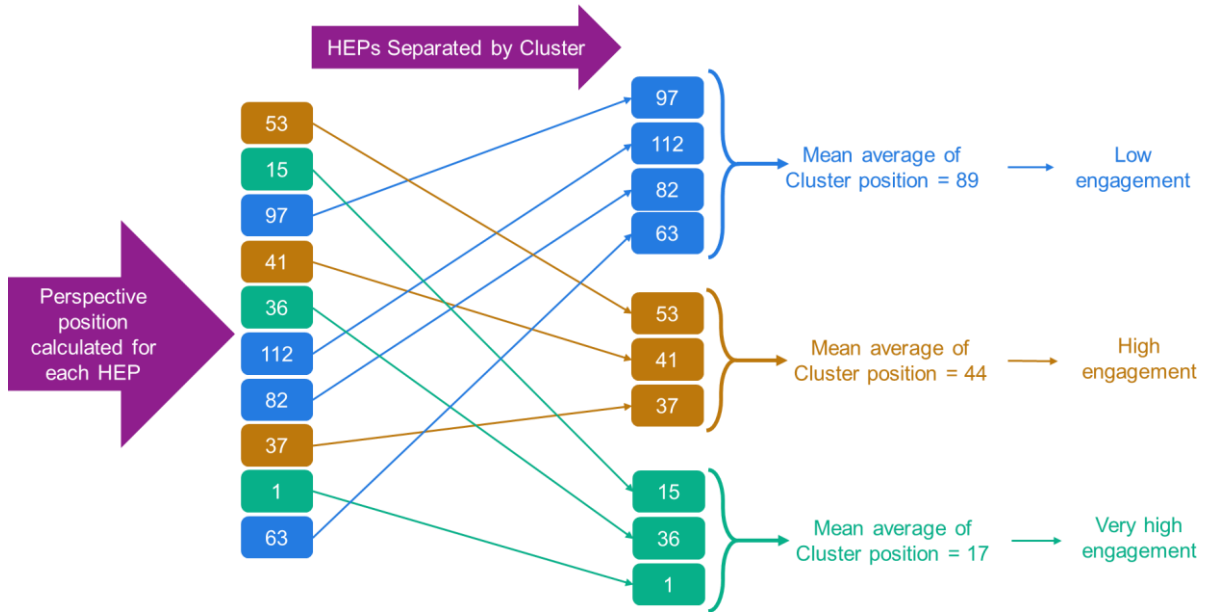
31. In Figure 3 below, we have provided a further illustration, with example numerical values of how an individual provider's metric positions are translated into a single perspective quintile outcome. In this instance the sum metric position (perspective position) of 17 falls in the top 20% of providers and so it achieves the highest quintile outcome. Where ties occur in perspective positions, it is possible that this could result in some quintiles containing more than 20% of providers to accommodate all providers who share that position, and the number of providers in the adjacent quintiles will be adjusted accordingly.

Figure 3: Example of calculating a perspective quintile from individual metric outcomes

32. Cluster average engagement levels are calculated by taking the mean average of the perspective positions of providers belonging to that cluster, and reporting the engagement level of the quintile of the cluster average position as shown in Figure 4, below.

Figure 4: Calculation of cluster averages

Annex A – KEF development timeline

The development timeline below sets out the major points of development and publications since the inception of the KEF.

Date	Development activity
September 2023	KEF3 to be published.
June 2023	KEF3 decisions document published and updated KE cluster analysis report published.
March 2023	Updated narrative statements were submitted by providers for KEF3 to Research England.
November 2022	Updated narrative guidance and templates for KEF3 were published.
September 2022	KEF2 was launched.
May 2022	KEF2 decisions report published.
February 2022	Review of the first iteration of the KEF published.
March 2021	Publication of the first iteration of the KEF.
October 2020	Updated narrative statements were submitted by providers for KEF1 to Research England.
April 2020	A circular letter outlining the revised timescales for the KEF to allow for the disruption caused by Covid-19 pandemic was published.
March - April 2020	Two webinars to assist higher education providers who are participating in the KEF with their preparations were hosted.
March 2020	Final details of the KE cluster descriptions and cluster placements was published. Templates for the submission of KEF narrative statements were published.
January 2020	KEF decisions report was published, setting out how we will implement the first iteration of the KEF and detailed information about the data sources that will be used and the methodology for presenting the data.
August 2019	A report detailing the outcomes of the KEF consultation and pilot workshops was published.
March - May 2019	Five KEF pilot workshops with 21 volunteer HEPs from across the sector were held.
January 2019	A consultation on proposals for the KEF was published. This included an invitation to participate in a series of pilot KEF workshops.
November 2018	A technical report of a cluster analysis of English Higher Education providers to inform the development of the KEF was commissioned.
April 2018	Research England assumed responsibility for the development of what was to become known as the

Date	Development activity
	Knowledge Exchange Framework (KEF) as part of its wider KE policy and funding remit.
November 2017	Minister of State for Universities, Science, Research and Innovation commissioned the Higher Education Funding Council for England (HEFCE) to provide more information about higher education provider' achievements in serving the economy and society for the benefit of the public, business and communities.

Annex B – Providers eligible for participation in KEF3 with cluster placement

Providers without shading in the table below were in receipt of HEIF in 2022-23 and therefore their metric dashboards will be published in KEF3 regardless of whether narrative statements were submitted.

Providers shaded in orange were eligible for HEIF funding in 2022-23 but did not receive an allocation as they did not meet the allocation threshold for funding. These providers have been given the option for their metric dashboards to be published in KEF3 via the submission of narrative statements.[1]

The below list of eligible providers is also available to download as an excel spreadsheet alongside this report from the Research England publication page.

UKPRN	Provider	KEF3 KE cluster	KEF1&2 KE cluster (if different)
10000163	AECC University College	STEM	
10000291	Anglia Ruskin University	E	
10000385	Arts University Bournemouth	ARTS	
10000571	Bath Spa University	J	*M*
10000712	University College Birmingham	M	
10000824	Bournemouth University	E	
10000886	University of Brighton	E	
10000936	University College of Osteopathy	STEM	
10000961	Brunel University London	X	
10000975	Buckinghamshire New University	M	
10001143	Canterbury Christ Church University	J	
10001264	Central School of Ballet	ARTS	
10001282	University of Northumbria at Newcastle	E	
10001444	National Centre for Circus Arts	ARTS	
10001478	City, University of London	E	
10001726	Coventry University	E	
10001883	De Montfort University	E	
10002718	Goldsmiths' College	E	

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[1] Note that the University of London (institutes and activities within its organisation, as opposed to the HEPs that are affiliated with it) is eligible for KE funding. Research England has agreed directly with the provider that its inclusion in the KEF would not be appropriate due to the unique characteristics and structure of this provider.

UKPRN	Provider	KEF3 KE cluster	KEF1&2 KE cluster (if different)
10003270	Imperial College of Science, Technology and Medicine	V	
10003324	Institute of Cancer Research	STEM	
10003614	University of Winchester	M	
10003645	King's College London	V	
10003678	Kingston University	E	
10003758	LAMDA	ARTS	
10003854	Leeds Arts University	ARTS	
10003861	Leeds Beckett University	E	J
10003863	Leeds Trinity University	M	
10003945	Liverpool Institute for Performing Arts	ARTS	
10003956	Liverpool Hope University	M	
10003957	Liverpool John Moores University	E	
10003958	Liverpool School of Tropical Medicine	STEM	
10004028	London Contemporary Dance School	ARTS	
10004048	London Metropolitan University	M	J
10004063	London School of Economics and Political Science	X	
10004078	London South Bank University	E	J
10004113	Loughborough University	X	
10004180	Manchester Metropolitan University	E	
10004351	Middlesex University	E	
10004511	National Film and Television School	ARTS	
10004775	Norwich University of the Arts	ARTS	
10004797	Nottingham Trent University	E	
10004930	Oxford Brookes University	E	
10005127	Arts University Plymouth	ARTS	
10005378	Rambert School of Ballet and Contemporary Dance	ARTS	
10005389	Ravensbourne University London	ARTS	
10005523	Rose Bruford College of Theatre and Performance	ARTS	
10005545	The Royal Agricultural University	STEM	
10005553	Royal Holloway and Bedford New College	X	
10005790	Sheffield Hallam University	E	
10006022	Solent University	M	
10006299	Staffordshire University	J	
10006427	University for the Creative Arts	ARTS	
10006566	University of West London	M	
10006840	University of Birmingham	V	
10006841	University of Bolton	M	J
10006842	University of Liverpool	V	
10007137	University of Chichester	M	
10007138	University of Northampton	J	
10007139	University of Worcester	J	

UKPRN	Provider	KEF3 KE cluster	KEF1&2 KE cluster (if different)
10007140	Birmingham City University	E	*J*
10007141	University of Central Lancashire	E	
10007143	University of Durham	X	
10007144	University of East London	J	
10007145	University of Gloucestershire	J	
10007146	University of Greenwich	E	
10007147	University of Hertfordshire	E	
10007148	University of Huddersfield	E	
10007149	University of Hull	X	
10007150	University of Kent	X	
10007151	University of Lincoln	E	
10007152	University of Bedfordshire	J	*E*
10007154	University of Nottingham	V	
10007155	University of Portsmouth	E	
10007156	University of Salford	E	
10007157	University of Sheffield	V	
10007158	University of Southampton	V	
10007159	University of Sunderland	J	
10007160	University of Surrey	X	
10007161	Teesside University	E	*J*
10007162	University of the Arts, London	ARTS	
10007163	University of Warwick	V	
10007164	University of the West of England, Bristol	E	
10007165	University of Westminster	E	
10007166	University of Wolverhampton	E	*J*
10007167	University of York	X	
10007657	Writtle University College	STEM	
10007713	York St John University	M	
10007759	Aston University	E	
10007760	Birkbeck College	X	
10007761	Courtauld Institute of Art	ARTS	
10007767	University of Keele	X	
10007768	University of Lancaster	X	
10007769	London Business School	V	
10007771	London School of Hygiene and Tropical Medicine	STEM	
10007773	The Open University	E	
10007774	University of Oxford	V	
10007775	Queen Mary University of London	V	
10007776	Roehampton University	J	
10007777	Royal College of Art	ARTS	
10007778	Royal College of Music	ARTS	
10007779	Royal Veterinary College	STEM	

UKPRN	Provider	KEF3 KE cluster	KEF1&2 KE cluster (if different)
10007780	School of Oriental and African Studies	J	*X*
10007782	St. George's Hospital Medical School	STEM	
10007784	University College London	V	
10007785	University of Bradford	E	
10007786	University of Bristol	V	
10007788	University of Cambridge	V	
10007789	University of East Anglia	X	
10007791	University of Essex	X	
10007792	University of Exeter	V	*X*
10007795	The University of Leeds	V	
10007796	University of Leicester	X	
10007798	University of Manchester	V	
10007799	University of Newcastle upon Tyne	V	
10007801	University of Plymouth	E	
10007802	University of Reading	X	
10007806	University of Sussex	X	
10007811	Bishop Grosseteste University	M	
10007816	Royal Central School of Speech and Drama	ARTS	
10007822	Cranfield University	STEM	
10007823	Edge Hill University	J	*M*
10007825	Guildhall School of Music & Drama	ARTS	
10007832	Newman University	M	
10007835	The Royal Academy of Music	ARTS	
10007837	Royal Northern College of Music	ARTS	
10007842	University of Cumbria	M	
10007843	St Mary's University, Twickenham	M	
10007848	University of Chester	J	
10007850	University of Bath	X	
10007851	University of Derby	J	
10008017	Trinity Laban Conservatoire of dance and music	ARTS	
10008640	Falmouth University	M	
10008816	Northern School of Contemporary Dance	ARTS	
10009292	Royal Academy of Dramatic Art	ARTS	
10014001	University of Suffolk	M	
10034449	Leeds Conservatoire	ARTS	
10037449	Plymouth Marjon University	M	
10040812	Harper Adams University	STEM	
10080811	Hartpury University	STEM	

Annex C – KE cluster descriptions

The KE cluster descriptions for those used in KEF3 are broadly consistent with those used in KEF1 and KEF2 and are as follows:

Cluster ARTS

Specialist institutions covering arts, music and drama (as defined by a very high concentration of academic staff in these disciplines). A range of sizes of institutions, although many are relatively small and specialist.

Cluster M

Smaller universities, often with a teaching focus. Academic activity across disciplines, particularly in other health domains and non-STEM. More research activity funded by government bodies/hospitals; 27% from industry.

Cluster J

Mid-sized universities with more of a teaching focus (although research is still in evidence). Academic activity across STEM and non-STEM disciplines including other health, computer sciences, architecture/planning, social sciences and business, humanities, arts and design. Research activity funded largely by government bodies/hospitals; 9% from industry.

Cluster E

Large universities with broad discipline portfolio across both STEM and non-STEM generating excellent research across all disciplines. Significant amount of research funded by government bodies/hospitals; 9.5% from industry. Large proportion of part-time undergraduate students. Small postgraduate population dominated by taught postgraduates

Cluster STEM

Specialist institutions covering science, technology, engineering and mathematics (as defined by a very high concentration of academic staff in these disciplines). Often high amounts of excellent research, particularly in bioscience and veterinary and engineering.

Cluster X

Large, high research intensive and broad-discipline universities undertaking a significant amount of excellent research. Much of research funded by UKRI and other government bodies; 8% from industry. Discipline portfolio balances across STEM and non-STEM although less clinical medicine activity. Large proportion of taught postgraduates in student population.

Cluster V

Very large, very high research intensive and broad-discipline universities undertaking significant amounts of excellent research. Research funded by range of sources including UKRI, other government bodies and charities; 11% from industry. Significant activity in clinical medicine and STEM. Student body includes significant numbers of taught and research postgraduates.

Annex D – KEF3 metrics and data sources

The metric source information is available to download as an excel spreadsheet alongside this report. This provides the full input and output reference information for all metrics to be used in KEF3.

The metrics and data sources used in KEF3 are the same as those used in KEF2. A spreadsheet providing a direct comparison between the metrics used in KEF1 and KEF2 was published alongside the KEF2 decisions document and can be found here.