

Review of the first iteration of the Knowledge Exchange Framework

Report detailing the findings of the review of the first iteration of the Knowledge Exchange Framework, with recommendations for future development.

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Knowledge Exchange Framework Review

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
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1. Executive summary

1. The first iteration of the Knowledge Exchange Framework (KEF) was launched on 31 March 2021 to provide comparable, benchmarked and publicly available performance information about Higher Education Providers' (HEPs') knowledge exchange activities. Research England committed to undertaking a review of the KEF and this publication details the process and findings of Research England's review. In particular, it presents evidence of what is working well, and recommendations for improvements for future iterations of the exercise.
2. The review has clearly revealed that the KEF demonstrates the very significant contribution to the economy and society made by English HEPs, and further that the publication of these results has driven the creation of further tangible benefits.
3. Significantly, the sector engagement throughout the review has illustrated that the first iteration of the KEF is considered to be having a clear positive impact within providers, including through improving the status of knowledge exchange (KE) and improving the quality of internal KE data collection. Through the review we have received assurance from the sector that the framework also adds value more broadly to the KE landscape, specifically by taking a significant step forward in representing the diversity of both knowledge exchange activities and the providers conducting them.
4. We have strived to engage with the sector throughout the KEF's development and the KEF has continued to enjoy broad confidence from participants following publication of the first results. The cluster-based approach has both enabled fair comparison of providers, and evidenced that while members of cluster V (large, research intensive providers) demonstrated consistently high performance to contribute to economic growth, all clusters included high performing providers across all perspectives. Therefore, the KEF has been instrumental in demonstrating the value of higher education providers of all sizes and specialisms to the UK economy.
5. Regarding the selection of metrics, it is apparent that there is confidence that those currently used are appropriate to form the basis for a performance framework. Additionally, the use of a self-assessment process to provide a metric for public & community engagement has offered a useful and sufficiently robust tool to compare provider performance until a time when independent data-driven metrics can be delivered.
6. While the positive impact of the KEF is evident, the review has also demonstrated that there are improvements that could and should be made for future iterations of

the KEF. However, it is not possible with the data sources currently available for these to all be addressed in the short term, such as further improving the breadth of KE activity being captured by the metrics. We have therefore framed our plans for how improvements may be addressed across the short, medium, and longer term.

7. In the shorter term the review has suggested that there are potential minor changes to the individual metrics. This includes how the perspectives are named and the underpinning mathematical methodology, which could be evolved without the need for extensive further development and yet could significantly enhance the representation of the underlying data in final KEF results. The tools used to visualise and present KEF results have also been explored as part of the review and has provided promising initial work for further development to improve both the usability and accessibility to a range of audiences.
8. In the longer term, developments should look to further improve the representation of the breadth of KE activity, and this is predominantly dependent on the availability of new robust data and further exploration of how to best apply such data in the metrics.
9. Research England are planning to share a KEF options survey with the sector on potential changes that may be implemented in the second iteration of the KEF (KEF2), and for KEF2 to be published in summer 2022. Further details about the next steps for the KEF can be found in section 9 – Summary of findings and recommendations at the end of this report.

2. Background

10. In March 2021 the first iteration of the KEF was launched in response to the Government's Industrial Strategy White Paper which requested Research England to develop a Knowledge Exchange Framework, as detailed in the [November 2017 ministerial letter](#). The aims of the KEF were to allow providers to better understand and improve their own performance in knowledge exchange, as well as provide businesses and other users with more information to help them access the world-class knowledge and expertise within English providers of higher education.
11. The design of the first iteration was informed through extensive consultation with the sector. In January 2019 we published our [initial plans](#) and invited feedback through an online survey. We also invited a representative sample of providers to participate a pilot exercise which looked to further test and refine the proposals outlined in the consultation. The clustering of providers was conducted as described in the [initial cluster analysis](#) published in November 2018.
12. The first iteration was implemented in March 2021 in line with the [decisions report](#) and [data sources table](#) which were published in January 2020. The report outlined decisions for the final design, the selected metrics and the inclusion of narrative statements. We also published [further detailed information](#) relating to the clustering arrangements and the narrative statements in March 2020.
13. This document sets out the process and findings of the review of the first iteration of KEF. This includes how feedback and evidence has been gathered, the presentation of evidence for what is working well, and areas for future development.

3. The KEF review structure

14. This section outlines the structure of the review and the sources of evidence that we have drawn upon. Findings for each area of the review will be presented alongside a summary of relative timescales for potential changes to be addressed as follows:

- **Short term** - Able to be implemented in the very near future or with minimal further development in KEF2.
- **Medium term** - Not possible to implement for KEF2, but a tangible objective for further exploration that could be implemented with some additional development in the medium term future (such as improving the robustness of the HE-BCI contributions in-kind data).
- **Long term** - Suggestions for improvements that require significant further development and so could only be implemented in the longer-term future (such as the design and implementation of new metrics).

Table 1 – Review areas, the sources of evidence for each area, and the sections of this report where they are discussed

Review area	Source(s) of evidence	Sections
The process Eligibility, mechanics of submission, burden	<ul style="list-style-type: none"> • KEF survey 	4 – General findings
Current metrics and methods Choice and range of metrics, dealing with compressed or narrow ranges, outliers, normalisation strategy.	<ul style="list-style-type: none"> • KEF survey • Focus groups • Metrics expert group 	5 - Findings by perspective 6 - Metrics and Methodology
Narratives Including robustness of the Public and community engagement self-assessment.	<ul style="list-style-type: none"> • KEF survey • Focus groups • NCCPE review • Analysis of narratives 	5 - Findings by perspective
Presentation of results Dashboard design and functionality, overall website, different user journeys, balance of use of metrics & narrative.	<ul style="list-style-type: none"> • KEF survey • Focus groups • User testing conducted by external agency 	5 - Findings by perspective 7 - Data presentation and visualisation

Future metrics/areas of KE Policy engagement, 'voice of the user', KE with arts & cultural organisations, additional exploration of recording in-kind contributions.	<ul style="list-style-type: none"> • KEF survey • Focus groups • Policy engagement roundtable • NCACE • In-kind workshops 	8 - Areas for Future Development
Is it fulfilling its purpose?	<ul style="list-style-type: none"> • KEF survey • Focus groups • Evidence of use 	9 - Summary of findings and recommendations
Timing of future iterations	<ul style="list-style-type: none"> • KEF survey 	9 - Summary of findings and recommendations

KEF survey methodology

15. In June 2021 we invited KEF participating providers¹, or individuals within those providers to participate in a survey about their perceptions of the first iteration of the KEF. Whilst the survey was aimed at participating providers, responses from any interested parties were welcome. The survey consisted of numerical or multiple-choice responses with some opportunity to provide supporting comments. Where applicable we replicated questions from the [KEF Consultation](#) in order to understand whether confidence in the metrics had changed following publication of the results.
16. We received 139 responses to the online KEF survey which were predominantly from participating English HEPs. Responses from participating providers were asked to confirm whether their response was a formal response on behalf of the provider, or their personal view as an individual involved in the process. We undertook a comparison of aggregated cluster views between formal provider level responses and individual views and little difference was found at this level. As a result, we are presenting all the responses in this document as a combination of formal and individual views.

¹ By participating provider, we mean any provider who was eligible to participate in the first iteration of the KEF and was included in the KEF Cluster group placement. This includes providers that chose not to submit narrative statement.

Table 2 - Number and type of survey response for each category of survey respondent

Respondent organisation	Number of responses		
	Formal provider response	Formal faculty/dept response	Individual view
Participating English higher education provider			
• Arts cluster	7	0	5
• Cluster E	13	0	12
• Cluster J	9	0	10
• Cluster M	5	0	12
• Cluster V	12	0	14
• Cluster X	13	2	8
• STEM cluster	5	0	6
Non-participating organisation with interest in KEF	3	0	0
Representative body of participating providers	3	0	0
Total	70	2	67

KEF focus group methodology

17. To enable further discussion on the feedback received from the KEF survey, the following virtual focus groups were subsequently held to receive more detailed feedback, taking place throughout August and September 2021:
 - a. Local growth & regeneration
 - b. IP & commercialisation
 - c. Research partnerships
 - d. Skills enterprise & entrepreneurship
 - e. Public & community engagement (co-delivered with NCCPE)
 - f. Working with business and Working with the public sector (this extended joint session explored the shared metrics of both perspectives)

18. We received expressions of interest from 225 individuals to attend one or more focus groups. In order to facilitate small group discussions, attendance at each event was limited to approximately 21 individuals. Groups represented a broad range of providers, clusters and where relevant, other users. Although we were unable to accommodate all expressions of interest, invitations were managed to ensure that every provider who submitted an expression of interest was invited to attend at least one session, and that no single provider or cluster group was over-represented. Every session was well attended and we are grateful to participants for giving their time and expertise to inform our review.
19. Each focus group session was designed around the feedback gathered through the KEF survey to discuss the issues raised in more detail. The focus of each group session are outlined in further detail from section 5 of this report.

Other sources of feedback

20. We also received general feedback from various engagements with the sector since the publication of the KEF. This includes feedback received in meetings with the Research England institutional engagement managers, feedback from the KEF dashboard survey and feedback received separately from individuals. This wider feedback has been used to inform our review activities and to prompt further discussions, including at the focus groups.

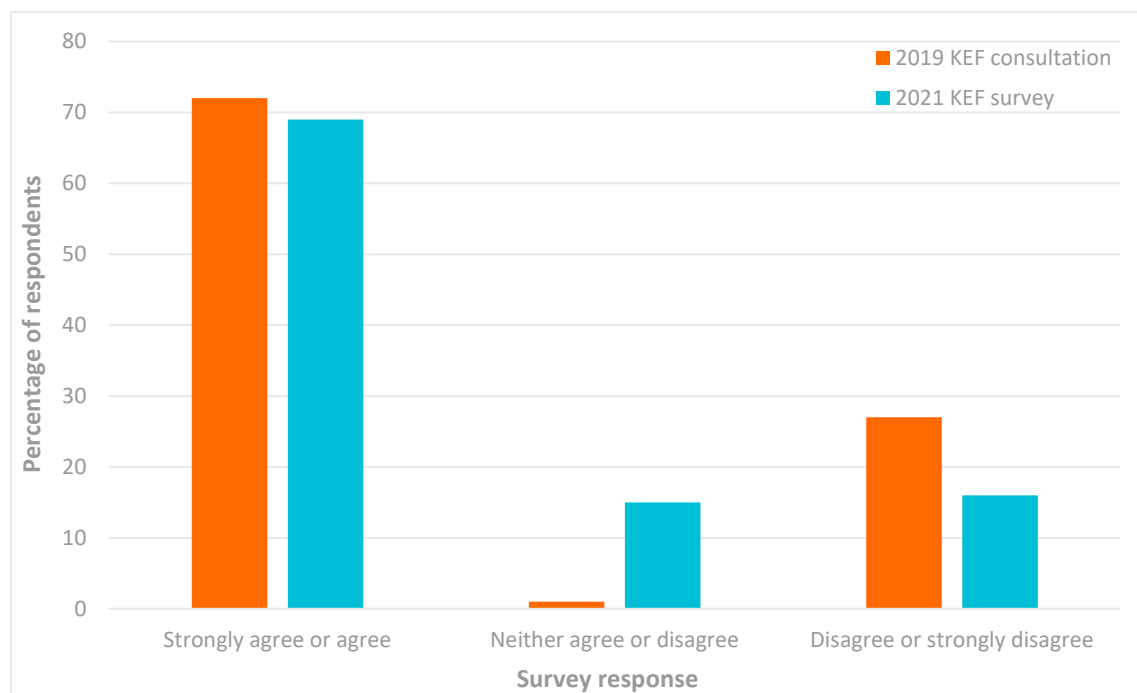
4. General findings

21. This section outlines general findings not related to specific perspectives, or the dashboard design including: our approach; KEF results generally; eligibility; the mechanics of making KEF submissions; and considerations of burden.

KEF survey feedback

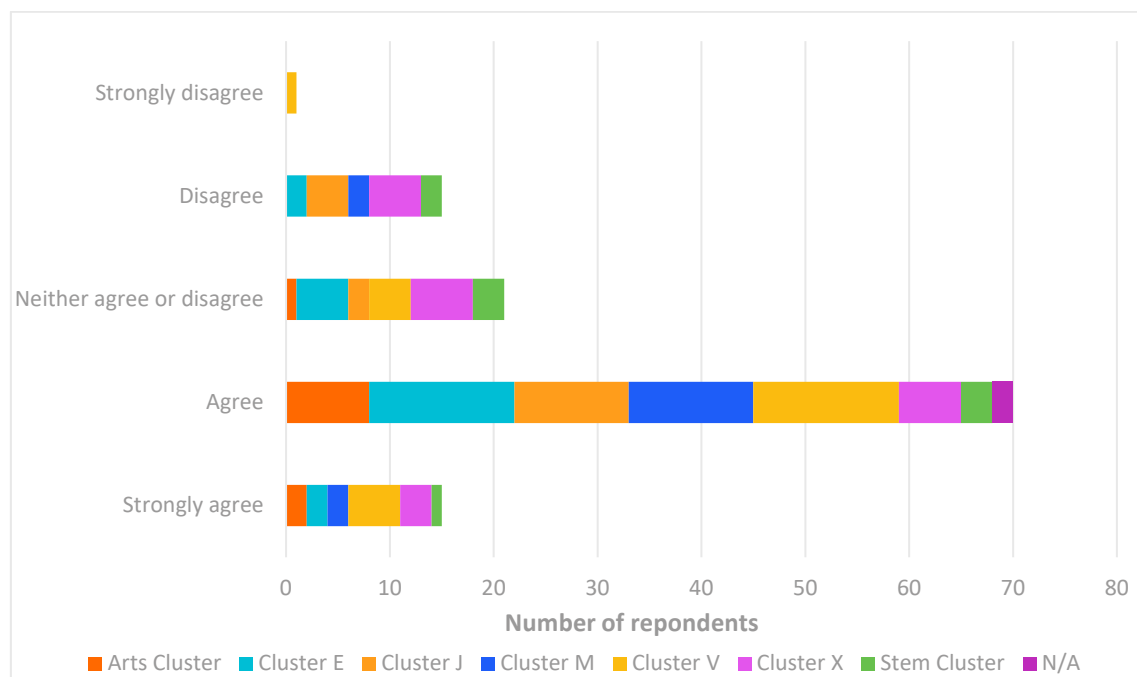
22. In both the 2019 KEF consultation and the 2021 KEF survey we asked about the suitability of the overall KEF approach as an annual, provider level, largely metrics-driven exercise. Figure 1 illustrates that there remains broad agreement for these principles with 72% and 69% of respondents in agreement with this statement in 2019 and 2021 respectively. In addition, since 2019 there has been a reduction from 27% to 16% of respondents expressing disagreement that the founding principles are appropriate.

Figure 1 - Comparison of support that the founding principles of the KEF are appropriate pre (2019) and post (2021) publication



23. General comments provided as part of the survey highlighted that while the overall approach is aligned with the aims of the KEF, a small number of respondents felt that the limitations of a metrics-based approach resulted in the full picture of knowledge exchange activity not being captured. There was significant support generally for the inclusion of narrative statements, however some respondents considered that the role of the narratives was unclear.
24. Some respondents commented on the annual nature of the exercise, expressing concern that this could lead to a short-term focus and suggested a biannual or three yearly exercise would be a more appropriate timeframe, particularly regarding the narrative statements.
25. The survey was also used to seek feedback on whether the KEF clusters are a useful mechanism to interpret the KEF results and 85 out of the 139 respondents agreed or strongly agreed with this statement, as displayed in figure 2 below.

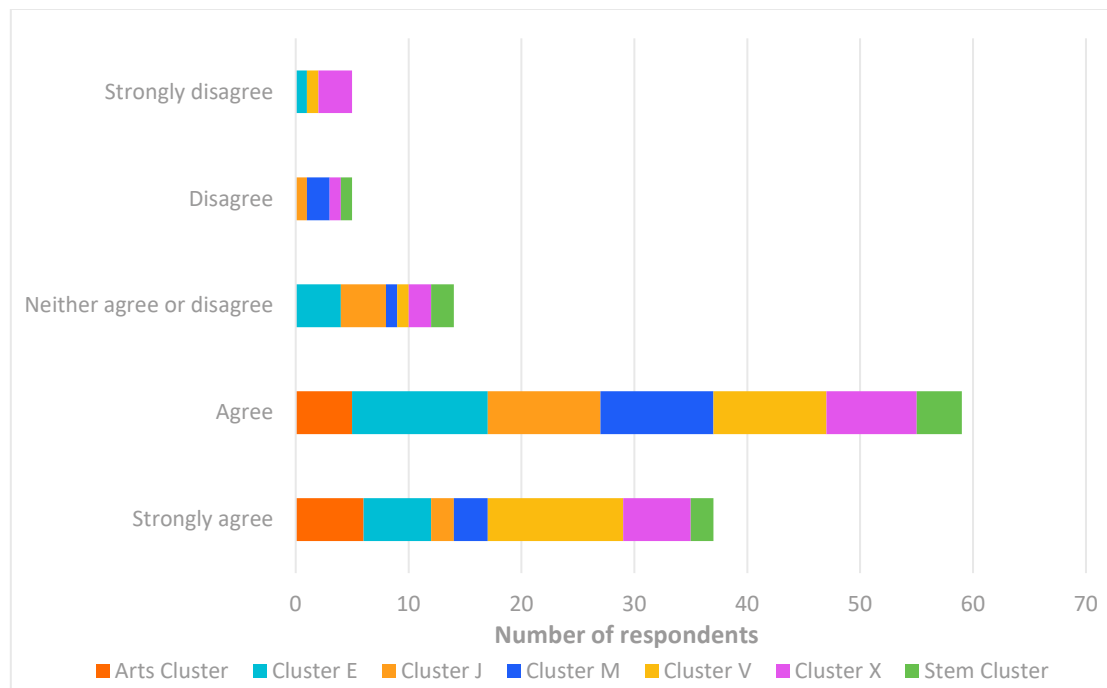
Figure 2 - Survey results examining whether KEF clusters are a useful mechanism to interpret the KEF results



26. While the majority of respondents clearly considered clusters to be a useful tool for comparison, of those that disagreed there were suggestions that a more flexible basis for comparison would be valuable, whereas others expressed concern that the cluster approach could encourage competition rather collaboration.

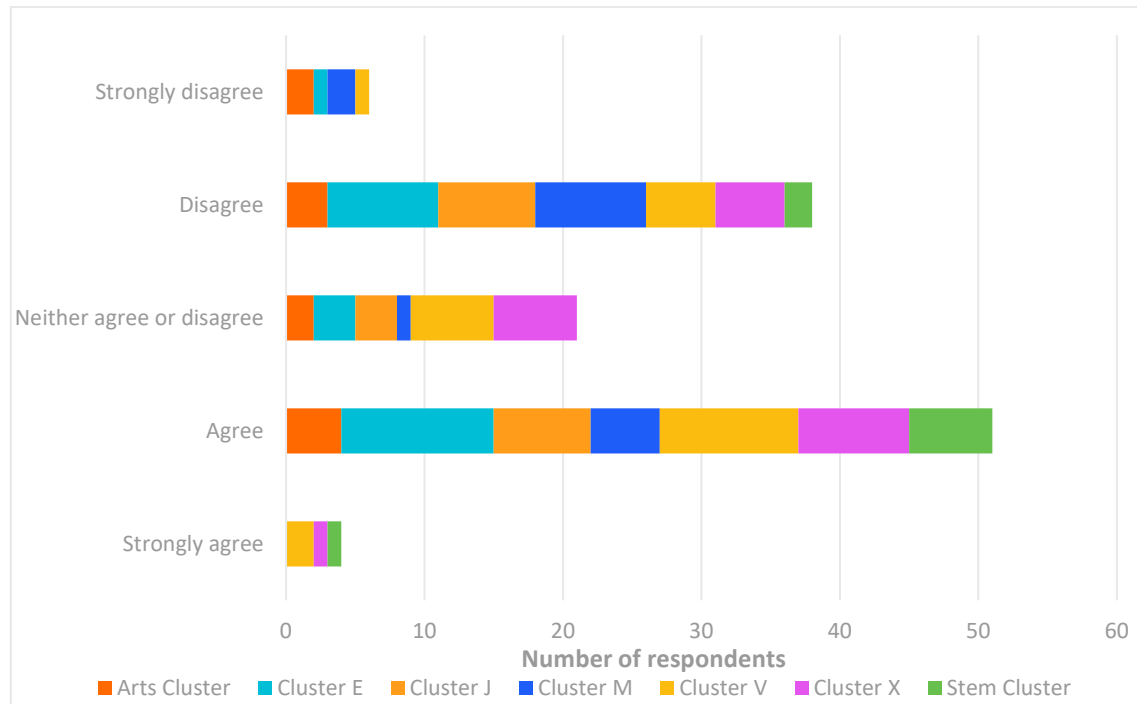
27. We also asked whether respondents considered that their provider had been placed in the appropriate cluster. As demonstrated in figure 3, 97 responses, representing a 70% majority, agreed or strongly agreed this to be the case. Of those disagreeing, a small proportion commented that it would be useful to have the opportunity to incorporate comparison on factors other than clusters, such as geography.

Figure 3 - Survey results examining whether providers believe they have been placed in the appropriate cluster



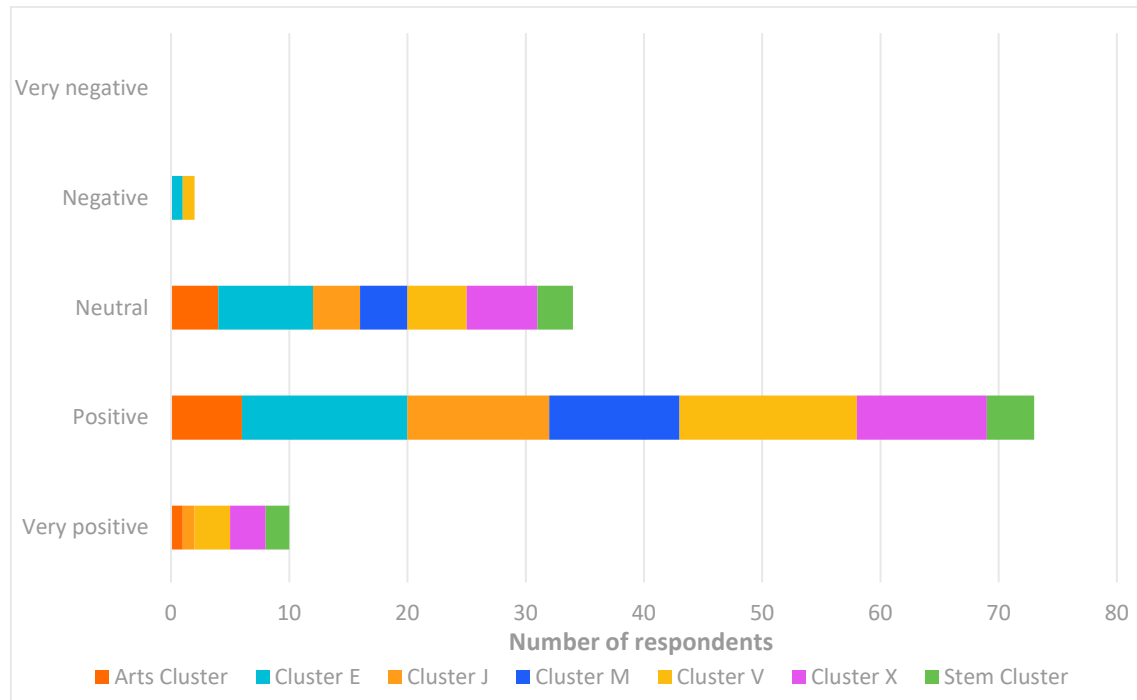
28. We went on to ask how fairly the KEF dashboards represented the performance of providers, and here the response is more mixed response. As demonstrated in figure 4 below 55 providers, some 40% of respondents, agreed or strongly agreed that the KEF represents their provider's performance fairly, with a similar proportion, 44 (32%) disagreeing or strongly disagreeing with this statement.

Figure 4 - Survey results examining whether providers believe their dashboard fairly represents their individual performance



29. This was also reflected in the accompanying comments, with most highlighting concern that the dashboards represent a relatively limited proportion of knowledge exchange activities. Further to this, some expressed concern that the names for some of the perspectives are misleading by implying a broader range of activity. While others considered that the narratives were not represented clearly in the dashboards.
30. Despite these concerns, we still see a clear picture overall. Figure 5 below demonstrates that respondents considered the impact of the KEF on their provider to be beneficial, with 83 (70%) of respondents deeming its impact to be positive or very positive. It is also worth noting that only two responses (2%) reported a negative impact on their institution.

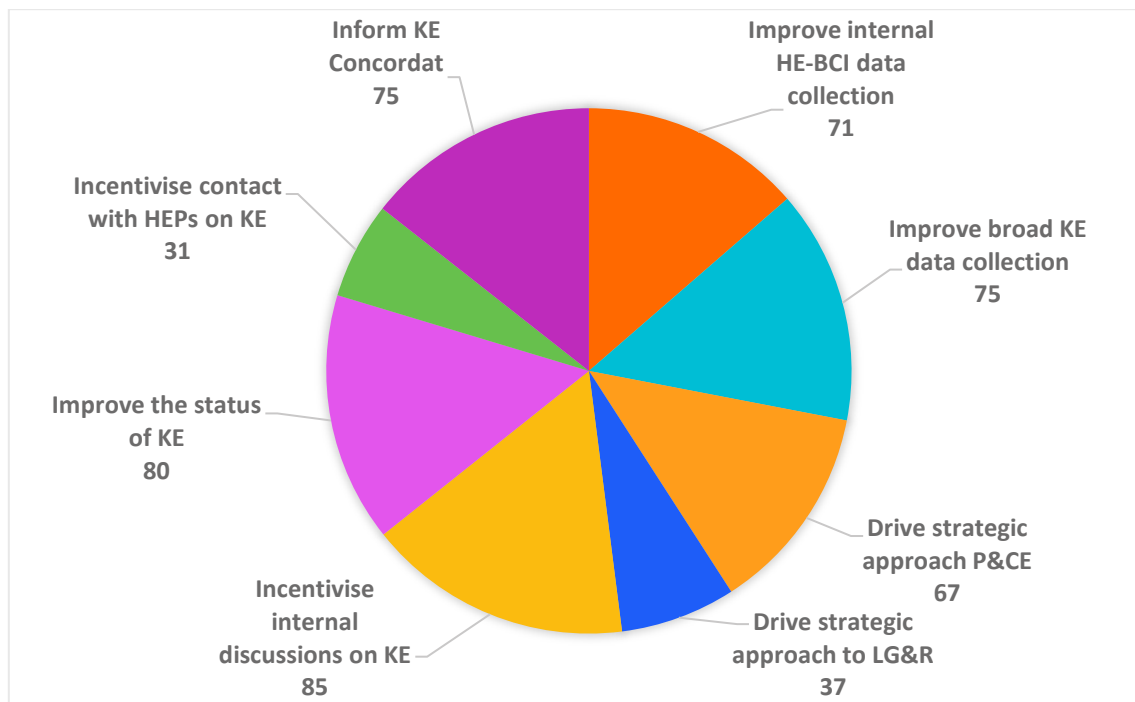
Figure 5 - Survey results examining the impact providers believe the KEF has had on their institution



31. To understand where any potential benefits lay, respondents were asked to select (from a set list²) the ways that the KEF had impacted their provider positively. Significantly, over half of those expressing an opinion indicated that they had recognised four or more different positive impacts from the KEF. The number of respondents selecting each type of positive impact is shown below in figure 6. The two most widely reported impacts, with over 80 reports, were in relation to 'incentivising internal discussions around knowledge exchange' and 'improving the status of knowledge exchange activity' more generally. These benefits were closely followed by 'improvements to the type of knowledge exchange data collected' and 'benefits to informing KE Concordat action planning'.

² Reviewing / improving processes for internal data collection for HE-BCI; Reviewing / improving the type of knowledge exchange data that is collected more broadly; Driving more strategic approach to public & community engagement activity; Driving more strategic approach to local growth and regeneration activity; Incentivising internal discussions around knowledge exchange; Improving the status of knowledge exchange activity; Incentivising contact with other higher education providers around knowledge exchange; Informing KE Concordat action planning.

Figure 6 - Positive impacts of the KEF reported in the survey



Burden

32. The KEF was designed as a metrics based exercise, predominately using existing data sources, in order to minimise the burden placed on providers. However, we recognise that through the preparation and approval processes of the narrative statements and data modelling, participating providers have expended substantive time and resources in their preparations for the KEF. We therefore used the survey to understand the scale of time and resources applied.
33. We examined the estimates of FTE days to infer both the total number of FTE days across participating providers and to understand if there were significant differences between the clusters. It should be noted that while the survey collated both responses from individuals and formal provider responses, to eliminate duplication in sector and cluster totals, we removed individual and non-provider responses from the further analysis. The indicative data shown below therefore only includes the formal responses submitted on behalf of a provider. Of these, 59 providers provided an estimate of the time spent modelling data, while 54 estimated the time spent drafting each narrative statement (excluding staff consultation and formal approval processes). Furthermore, as we asked for estimates to be provided using FTE day ranges, when calculating totals we have therefore displayed both the minimum and maximum figures possible by summing the lower and upper ends of each range.

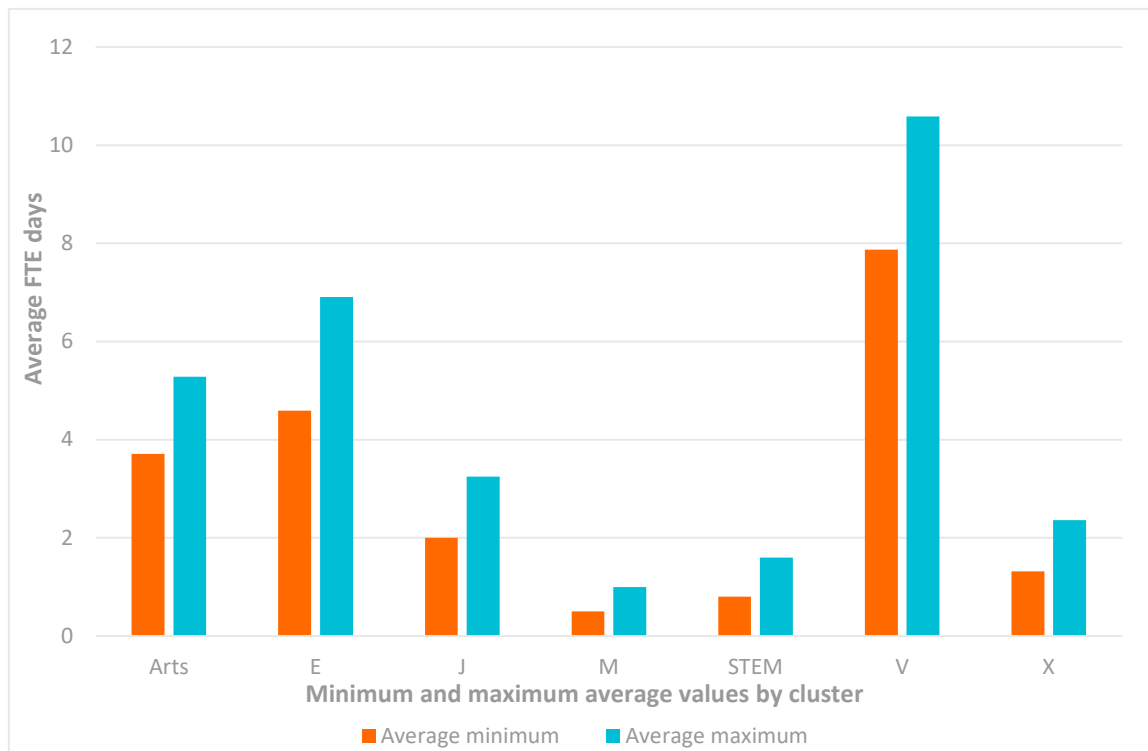
34. Taking into consideration that only just over half of participating providers gave a formal estimate to on the number of FTE days spent on KEF preparations through data modelling and narrative drafting, we can see that the time and resources applied across the sector are significant. Table 3 below displays the estimated total FTE across the three elements. It is evident that across all clusters, the public and community engagement narrative and the associated self-assessment attracted the most resources, with double the estimated time to that spent data modelling. However, the difference between the two narrative statements was much smaller, demonstrating that even without an associated 'score' the resources applied to drafting the Local growth and regeneration narrative statements were still significant.

Table 3 - Estimated total FTE days spent preparing for the KEF across the sector by cluster, formal responses only

Cluster	Data modelling		Local growth & regeneration narrative		Public & community engagement narrative	
	Estimated total FTE days		Estimated total FTE days		Estimated total FTE days	
	Min	Max	Min	Max	Min	Max
ARTS	26	37	39	55	44	60
E	51	76	89	126	103	140
J	16	26	63	84	78	102
M	3	5	15	21	15	21
STEM	4	8	33	45	39	51
V	95	127	86	113	111	133
X	15	26	85	112	99	129
Total	210	305	410	556	489	636

35. In order to discern if there were cluster differences to the application of resources, the average estimated number of FTE days by cluster was examined. As demonstrated by figure 7, cluster V providers reported an average of between eight and ten FTE days spent data modelling, nearly twice that of any other cluster. Cluster E and Arts cluster providers reported between four and six days, and Clusters J, X, M and STEM all reported less than three FTE days.

Figure 7 - Estimated average minimum and average maximum number of FTE days spent modelling KEF metrics (formal provider responses only)



36. However, the picture is more consistent when we look at time spent preparing the narrative statements, with all clusters showing an average of 5 or more days for each narrative. Cluster J reporting the highest estimates of between 9 and 12 FTE days for local growth and regeneration and 13 to 15 FTE days for public and community engagement.

Figure 8 - Estimated average minimum and average maximum number of FTE days spent drafting narrative statements (formal provider responses only)



37. It is clear from both the data and the accompanying comments that the preparation of the narrative statements represented the most significant time commitment in the KEF. However, while some providers commented that the cost to benefit ratio of this time was high, others considered that the time spent on the exercise had been worthwhile and had elicited significant related benefits. When considering burden, many providers also highlighted burden issues arising due to multiple reporting deadlines beyond KEF needing to be met within a narrow timeframe and that this issue had been compounded by pressures of the Covid-19 pandemic.

Eligibility

38. Eligibility has been considered against the backdrop of wider Research England activity. In the first iteration of the KEF eligibility for participation in HEIF was set as follows:

“Institutions eligible for Research England HEIF funding in the academic year 2019-20, but whom did not receive any funding, will be included in the sector wide cluster average calculations but we will not automatically publish their individual institutional metrics. These institutions are also encouraged to participate and if advance notification is given and narrative statements are submitted to Research

England they will be included in the presentation of results.”
*RE-P-2020-01, KEF Decisions Report, January 2020*³

39. The long-term purpose of the KEF, including its use in funding, will be considered as part of a wider review of knowledge exchange funding. In the meantime, eligibility for participation in future iterations of the KEF will continue as those providers included in the most recent annual HEIF allocation calculations.
40. We will detail a timetable for the review of knowledge exchange funding in Q2 2022, but do not expect it to result in a new method of allocation before academic year 2023-24.

Mechanics of narrative submission

41. In the first iteration of the KEF narratives were submitted directly to RE by email in response to a published guidance document and narrative templates. However, this was an inflexible and labour-intensive method with scope for a more streamlined approach.
42. It is our intention to improve this submission process and the mechanism used to update or amend narratives. We will explore how providers could manage their own submission which would simplify the current arrangement for both providers and RE.

³ <https://re.ukri.org/sector-guidance/publications/knowledge-exchange-framework-decisions-for-the-first-iteration/>

5. Findings by perspective

43. This section details the findings and feedback received for each perspective. This includes feedback received from the KEF survey, the relevant perspective focus group, and a summary of areas for future development.

IP & commercialisation

44. Feedback on the IP and commercialisation perspective was sought primarily through the sector survey and dedicated focus group. Many of the discussions with the KEF Metrics Expert Group also debated issues directly related to the metrics in this perspective (see section 6 – Metrics and methodology for details), in particular when addressing the narrow range of institutions that contribute data in this perspective and specifically for the spin-outs metrics.

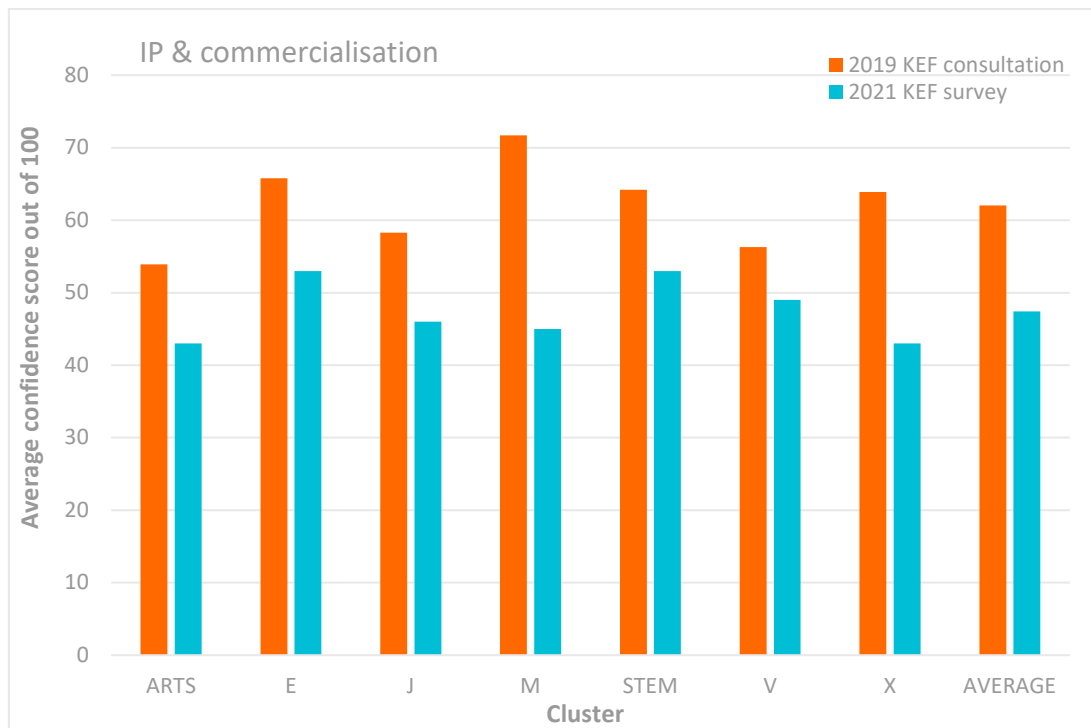
Table 4 - Data sources of the IP and commercialisation perspective

Metric	Numerator	Denominator
Estimated turnover of all active firms per active spinout	Estimated current turnover of all active firms	Number of active spin-outs which have survived at least three years
Average external investment per formal spinout	Estimated external investment received	Number of newly registered companies
Licensing and other IP income as proportion of research income	Total intellectual property income (total IP revenues)	Research grants and contracts income

Survey

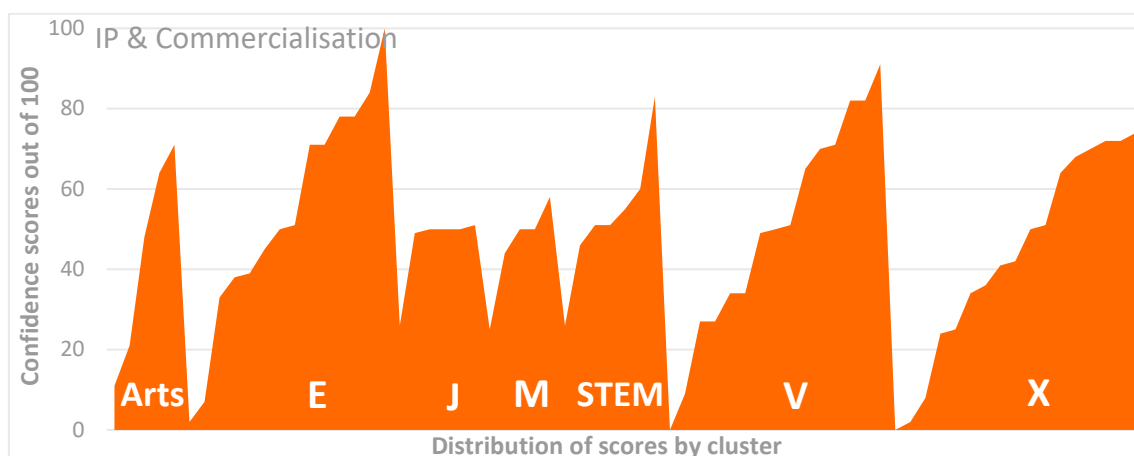
45. In the KEF survey, respondents were asked to provide a score out of 100 on how well their performance is represented in the IP and commercialisation perspective. Figure 9 below illustrates that the average score across all responses was 48 in the 2021 KEF survey. Cluster average responses ranged from 43 for the Arts cluster and cluster X, to 53 for the STEM cluster and cluster E. In addition, despite the decrease in confidence scores since 2019 prior to KEF publication, the overall average of 48 is notably greater than the average confidence in other perspectives in 2021.

Figure 9 - Average confidence score that KEF results reflect provider performance by cluster, before and after KEF publication



46. The range of responses within each cluster are shown below in figure 10 and demonstrate that, similar to other perspectives, there was significant variation across responses within each cluster as well as overall. It is worth noting that responses from clusters E, V, and X were the most variable (including scores of below 5) compared to cluster J, M, and STEM where the lowest scores were not below 25.

Figure 10 - Distribution of IP & commercialisation 2021 confidence scores by cluster



47. A number of key themes were also drawn from the specific comments made in the survey in relation to this perspective, and all highlight the narrow range of activities conducted by a relatively small number of providers that are currently being reflected in this perspective. These included:

- **Emphasis on spin-out metrics** – two of the three metrics in this perspective represent outputs from spin-outs, and in practice IP & commercialisation activities are broader than this.
- **Concentrated data** – a significant number of institutions do not have any measurable activity which can be captured by the metrics included in this perspective, particularly the spin-out metrics.
- **Socially-driven enterprises** – activities and enterprises that are driven by generating social impact or do not quickly generate high volumes of income are not well reflected.

Focus group feedback

48. The feedback received through the KEF survey was then used to frame the discussions in the sector focus groups. In addition to exploring broader observations, the following topics were also specifically examined:

Spin-out metrics	Social impact	Further metrics
•How could the current metrics recording spin-out activity be developed?	•How could commercialisation and IP exploited for social good be better represented in this perspective?	•Should further metrics be added? •Should entrepreneurship and graduate start-ups be represented within this perspective?

49. Specific points raised were the potential bias of metrics in this perspective towards institutions with a greater involvement in spin-out activity (given two of the three metrics measure this activity). Also, the underlying data used in these spin-out metrics and coverage of the perspective overall does not reflect activity driven by the generation of social impact.

50. Furthermore, a relatively small number of providers report non-zero values for these metrics. The KEF also does not reflect whether the zero values shown represent participating in activity but not doing it effectively, or an absence of activity. Therefore, the possibility of representing an absence of activity with 'N/A' rather than

'0' or allowing providers to opt out of given metrics was raised, however this has the potential to encourage unintended behaviours and 'gaming' of the KEF method.

51. The use of high turnover and large external investment to reflect higher performance were deemed to lend themselves to spin-outs which are driven by high economic impact rather than those that pursue different growth models or seek to result in societal impact. In addition, the use of an external investment metric risks allowing 'blockbuster' companies to dominate the metric, and effectively encouraging such activity may not be demonstrating the full breadth of the academic community and their ideas.
52. However, it was acknowledged that the range of robust data currently available, such as through the HE-BCI collection, is limited and the addition of further spin-out metrics or the evolution of the numerators in the current measures may not be currently possible.
53. It was also highlighted that when seeking a proxy for value creation from spin-outs, external investment continues to be more appropriate than the sale of shares, to ensure value is measured earlier in a spin-out's lifetime and when it is likely to be more closely engaged with the provider.
54. Using an alternative denominator the two spin-out metrics was also suggested to reflect a more accurate picture of a provider's spin-out portfolio. Suggestions based on the currently available robust data were:
 - Number of active firms
 - Number still active which have survived at least 3 years
 - HEP research income.
55. The HE-BCI survey currently collects software and non-software licence numbers and the inclusion of these fields in the KEF were raised as options for increasing the diversity of activity represented in this perspective. However, the collection of this data was considered as part of original KEF development and the data was deemed to not be sufficiently robust, especially for software licenses where a large number being granted may not in reality be representing significant impact.
56. The inclusion of social enterprises in some capacity was also raised as an avenue for capturing companies devised for the purpose of generating social impact. However, this was also considered as part of the original development of the KEF and deemed to be an inappropriate measure at present as the overlap between this category and other spin-out/start-up counts in HE-BCI is not clear. This will be

considered as part of further development of the KEF and be fed into the HE-BCI review.

57. The group discussed matters around capturing social enterprise activities, specifically the issue of harnessing different methods to best capture the different types of activity that exist. For instance, there are businesses that will return profit but are socially focussed, spin-outs that are not driven at all by external investment, or start-ups that are not based on provider IP but have a social purpose. The diversity of businesses that are driven at least in part by social motivations present a significant challenge in their measurement.
58. Alternative metrics were suggested, such as measures of employment of start-ups, spin-outs and other enterprises. Such metrics would demonstrate the broader impacts of these businesses beyond what is currently reflected.
59. When considering the addition of further metrics, the focus group was asked specifically about the inclusion of a start-up metric. Such a metric could present a means of reflecting companies that result in social impact and representing the activities of a broader range of institutions.
60. Many synergies exist between start-up enterprises and technology transfer and they can look very similar when considering the HE innovation landscape. However, 'start-ups' do not involve the exploitation of university IP and so the group expressed concern that they would not align with the current scope or title of the perspective. The group noted the perspective title could be renamed. In addition, IP-related activity and start-ups are often managed from different departments or offices of a provider, with start-ups requiring providers to perform a different role and staff with different expertise.
61. The inclusion of staff or graduate start-ups in this perspective would require further consideration of the audience of the KEF and the renaming of perspectives.
62. A possible solution suggested to the increase the range of KE activities included in the KEF was to introduce a short narrative to allow providers to describe IP and commercialisation activities not currently represented by quantitative metrics. However, this could significantly increase the burden on HEPs associated with the KEF.

63. Other themes raised and discussed, without suggested solutions, were:
- a. IP that is retained by an artist/practitioner/academic such as for creative outputs cannot be reported, and therefore it can be difficult for arts disciplines to compete with others.
 - b. It would be beneficial to include the input measures that generate IP, rather than just the outputs. This is because some ventures never scale significantly due to the nature of the service they provide, however they still generate significant impacts.
 - c. Current metrics favour a provider with smaller volume/range of activities each with a high commercial impact over a provider with a larger volume/range of activities each with a smaller commercial impact (e.g. 1 larger spin-out against 5 much smaller spin-outs), even if the overall proxied value of this impact is equal. However, this is taken into account to some extent by clustering.

Future developments

64. **Short term** – we will consider a change in the title of this perspective to more accurately represent the current metrics, and we will explore the evolution of the denominators for the spin-out metrics.
65. **Long term** – continued exploration of additional data sources and improving current data collection will allow the basket of metrics in this perspective to be more representative of sector activity and to be more balanced.

Working with business and Working with the public & third sectors

66. These two perspectives are both primarily based on the income received by providers from undertaking contract research, providing consultancy and facilities services, albeit to clients in very different sectors (set out in table 5 below). Given the similarity of the metrics, we held a single joint focus group and compared the survey results of the two perspectives.

Table 5 - Data sources of the Working with business and Working with the public & third sector perspectives

Perspective	Numerator	Denominator
Working with Business	Innovate UK income (KTP & grant)	Research income (grants and contracts)
	Contract research income with non-SME	HEI income ⁴
	Contract research income SME	HEI income
	Consultancy and facilities income with non-SME	HEI income
	Consultancy and facilities income with SME	HEI income
Working with the Public & Third Sector	Contract research income with the public and third sector	HEI income
	Consultancy and facilities income with the public and third sector	HEI income

Survey

67. In the KEF survey, we asked how well the 'Working with business' and 'Working with the public and third sector' perspectives represent performance, illustrated by figures 11 and 12 below. The survey responses demonstrated more confidence in the 'Working with business' perspective (with the exception of Cluster M), with an average score of 48, compared to the average score of 40 for 'Working with the public and third sector'.

⁴ 'HEI Income' is the combined total of: tuition fees and contracts, funding body grants and research grants and contracts taken from the HESA finance record)

68. Figures 11 and 12 also demonstrate that while confidence has fallen across both perspectives following the publication of the first KEF results, they remain two of the highest performing perspectives.

Figure 11 - Average confidence scores that KEF results reflect provider performance by cluster, before and after KEF publication

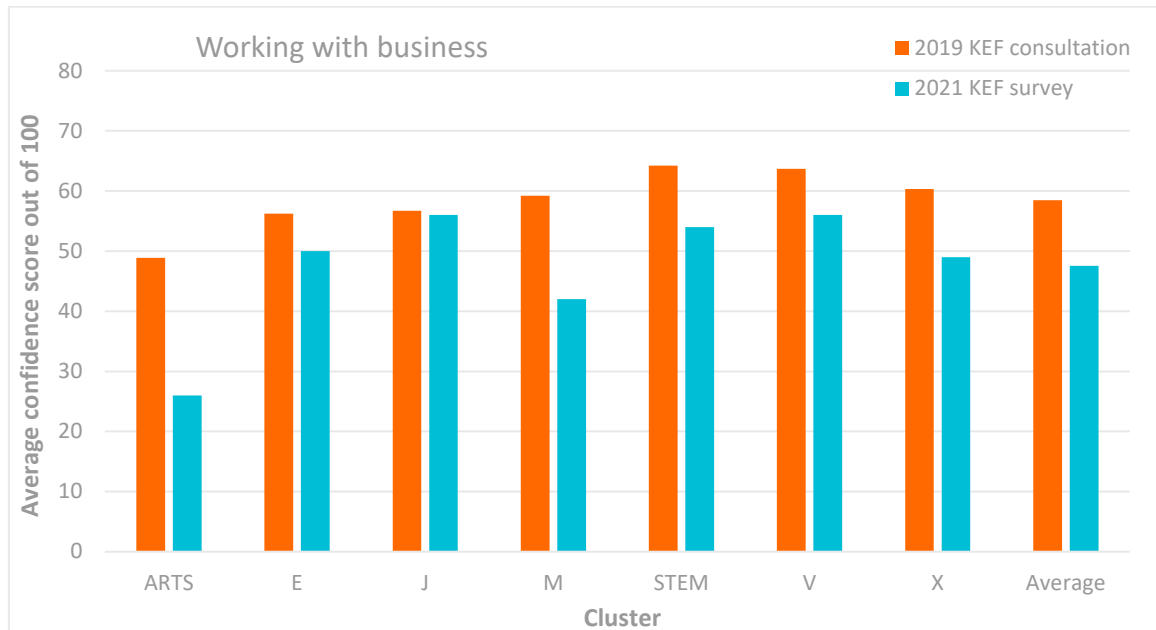
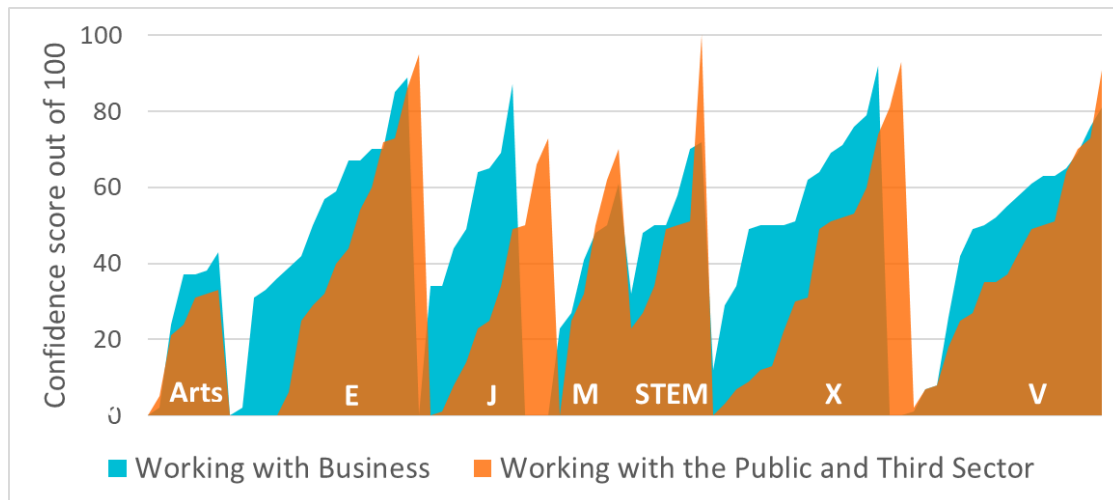


Figure 12 - Average confidence score that KEF results reflect provider performance by cluster, before and after KEF publication



69. However, as with other perspectives, figure 13 shows there is significant variation of views within each cluster. This is particularly evident across clusters X and V who both used a very broad scoring range for the 'Working with the public & third sector' perspective (shaded in orange).

Figure 13 - Distribution of Working with business and Working with the public and third sector 2021 confidence scores by cluster



70. The comments in the KEF survey provided further insight into why these two perspectives have maintained higher levels of confidence. Unlike feedback received for some other KEF perspectives, there was very little reference to concerns about the robustness of the metrics themselves. Instead, the issues raised related to the wide variety of KE activities undertaken with business or the public and third sector that are not currently captured by the chosen metrics.

Working with business

71. Respondents raised concerns that while the title 'Working with business' implied capture of all areas of working with business, there were three significant areas of activity that are not captured within the current metrics:
- Student activities, such as internships or collaborative PhDs, were considered a notable omission as they represent an important channel of collaborative work with local businesses.
 - As the perspective is primarily based on fee income metrics, it excludes the wide range of subsidised support services provided to businesses, and also any collaborative partnerships with businesses to achieve shared goals.

- c. A significant amount of working with businesses can be evidenced through in-kind contributions, in both directions, however these do not feature in the metrics.

72. The only comment relating to metric robustness in this perspective suggested that there may be some bias to types of providers who focus on Innovate UK funded KE activities. The Innovate UK income data is relatively concentrated with 70% of participating providers reporting any level of Innovate UK income and only 62% reporting income from knowledge transfer partnerships (KTPs).

Working with the public & third sector

73. Similarly, the lower confidence levels in this perspective appear to primarily relate to the title of the perspective implying a greater range of activity than is represented by the income metrics used. Respondents noted that the KEF does not recognise activity with local charity or publicly funded partners in the following areas:
- a. Activities that are not intended to generate income for the provider but are instead driven by other strategic priorities such as supporting local partners to tackle societal or local issues.
 - b. Services that are income generating, but where a large proportion of this is subsidised or pro-bono activity, and therefore their scale is misrepresented.
 - c. Activities undertaken to shape and inform local or national policy, which can often lead to significant impact but is not income generating.
74. Finally, comments also related to the placement of the Continuing Professional Development (CPD) metric which is currently included in the 'Skills, enterprise and entrepreneurship' perspective. A number of respondents considered that CPD represented the majority of their income from public and third sector clients and it would be better placed in this perspective.

Focus group discussion

75. Focus group attendees were split into smaller groups and asked to discuss the KEF survey comments in greater detail, as well as to consider the effectiveness of the perspectives more broadly.

Working with Business	Working with Public & Third Sector
<ul style="list-style-type: none"> • Student activity and SME support. • Working with business perspective overview 	<ul style="list-style-type: none"> • Societal support or subsidised (pro-bono) activity. • Working with the public & third sector perspective overview.

76. As with the survey responses, much of the group discussions focused on the range of KE activity not captured by the current KEF metrics, particularly where perspective labelling implied a broader range of activities captured through the exercise.

Working with business

77. The focus group explored a wide range of student engagements with business that provided benefit for both business and students such as live briefs and collaborative PhDs. However, it was acknowledged that there are significant barriers to capturing the activity in a form that could feed into the KEF, particularly around the diversity of activity and lack of associated income.
78. The group also echoed feedback from the KEF survey, noting institutional activity which collaborates with SMEs and is not currently captured by the KEF. However, it was noted that there are a number of significant internal barriers to data collection. For example, much activity is driven by personal contact and connections between individuals which is challenging to collect and requirements to do so could inhibit positive behaviour by placing an undue burden on activity. Additionally, disjointed internal data systems can make it difficult to capture consistent data across different departments or faculties.
79. Discussions of introducing additional metrics and the potential to collect SME engagement data as part of HE-BCI concluded that considerable development work would be necessary. For instance, projects such as those supported by the European Regional Development Fund (ERDF) already include counts of SME engagements. However, in order to be meaningful for a sector wide collection, development of a clear definition of what is meant by engagement would be required such as what activity counts as an engagement. For example, whether one long-

lasting relationship is more valuable than one or many shorter interactions, and how can they be compared.

80. In addition, it was raised that the current data collection exercise does not capture institutional investments in supporting SMEs, which are often non-monetised or heavily subsidised in nature, and have a significant impact on the resilience and success of SMEs. However, inclusion of such input measures alone was not considered to be an effective proxy for the overall value of the intervention to the SME. Further to this, providers often fulfil a 'middle partner' role, facilitating and enabling access to funding and income for SMEs, while not receiving income themselves. In the long term, capturing data from the end user could be a valuable addition.
81. The group explored synergies with the 'Local growth and regeneration' perspective and debated whether externally collected economic data on gross value added (GVA) generation of provider activities in the relevant region could be of value to both perspectives. While it could potentially provide a further numerical source of data with minimal burden for individual providers, it was acknowledged that it may be challenging to develop a consistent methodology that would be relevant across all providers. It was therefore suggested that external collection of additional data may be required.
82. The group shared the view that the use of the KEF perspectives in themselves placed a false delineation around activities which is not present in working practice. Specifically, much of the business support activity conducted by providers is captured in the KEF in the 'Research partnerships' perspective and CPD metrics rather than the 'Working with business' perspective.
83. As a result, it was felt that the perspective title of 'Working with business' implied a breadth of metrics in this perspective that is not present, and it would be more representative if the titles gave a clearer perception of the limitations of the data.

Working with the public & third sector

84. The discussions focusing specifically on 'Working with the public and third sector' echoed the survey findings that many activities in support of the public and third sector are not captured by the current metrics. However, it was recognised that there are considerable barriers to capturing non-monetised activity in numerical data format. While there are pockets of data collected by providers, such as contributions in-kind or civic impact reports, this is not consistently gathered between, or even within, providers. (Refer to section 8 - Areas for Future Development to read about

work Research England is undertaking to improve the collection of contributions in-kind.)

85. Given the limitations in the collection of data for non-monetised activity, there was discussion of whether a narrative element could add value to both this and other perspectives. Contributors considered that a narrative statement, or template of 'soft' data points, would be more representative of their work. However, the associated burden (as discussed in section 4 - General findings) was acknowledged and there would need to be a clear rationale for the purpose of a narrative, including how stakeholders would benefit and use the information provided.
86. In the longer term, it was considered that periodic broad-based impact assessments that would recognise the local economic impact of the KE activities of a provider, including qualitative case studies, could be an area for further exploration. Again, ensuring consistency across the sector and value against burden would need careful consideration and rationale.

Future developments

87. **Short term** – We will consider a number of amendments to the titles and decile methodology of the perspectives and seek sector opinion through the KEF options survey, including:
 - a. Renaming the 'Working with business' perspective to better reflect the income metrics it contains, for example 'Business services' or 'Research and development for business'.
 - b. Renaming the 'Working with public & third sector' perspective to better reflect the metrics it contains, such as 'Research & development services for the public & third sector'
88. **Medium term** - we will focus on the development of sector-wide guidance for the recording of in-kind contributions to collaborative research and contribute to the wider HE-BCI review, to provide more robust data which could then be included in the KEF in the future. Section 8 - Areas for Future Development describes this work in more detail.
89. **Long term** – we will explore ways to balance the existing income-based metrics with additional measures that capture a broader range of interactions. The primary route for this will be to support HESA on the forthcoming HE-BCI review.

Research partnerships

90. The sector survey and focus groups were the primary source of feedback for this perspective. However, we also sought additional advice and analysis from Elsevier who provided the data for the co-authorship metric for the first iteration of the KEF. This enabled us to explore the practicalities of potential changes to this metric.

Table 6 - The metrics used for the Research partnerships perspective, and their numerators and denominators

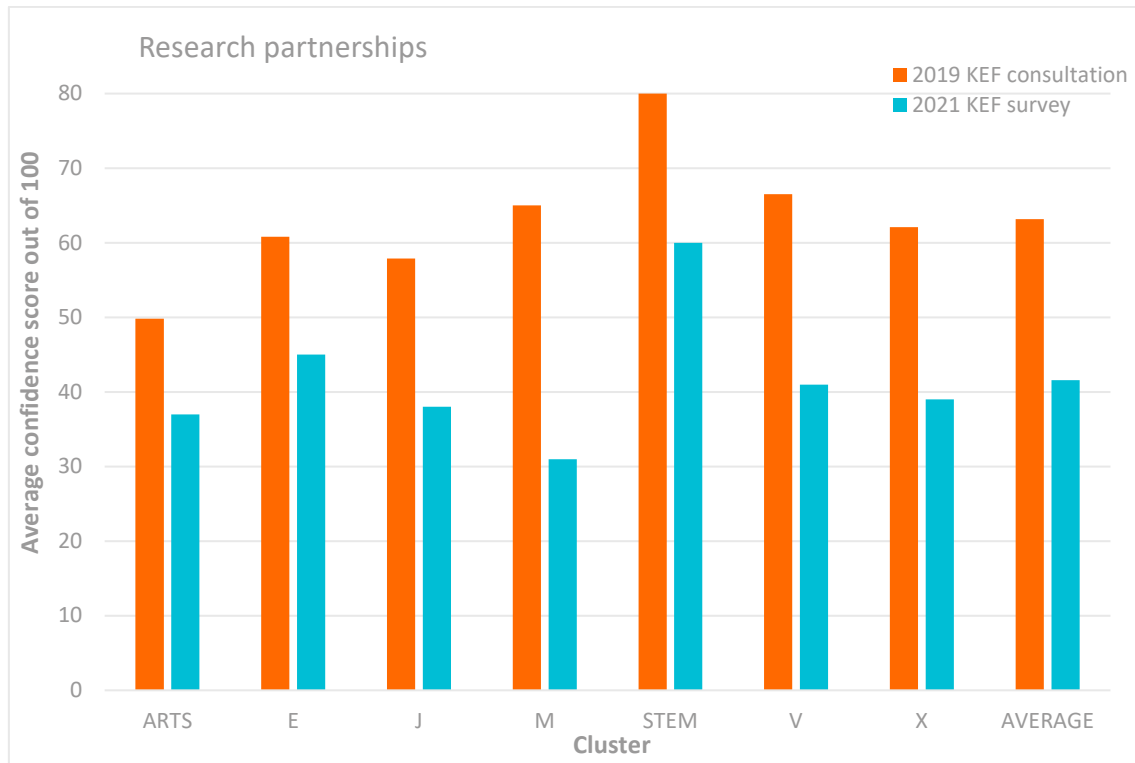
Metric	Numerator	Denominator
Contribution to collaborative research (Cash) as proportion of public funding	Collaborative contribution (cash) to publicly funded research	Public funding for collaborative research
Co-authorship with non-academic partners as a proportion of total outputs ⁵	Number of outputs co-authored by a non-academic partner	Total number of outputs

Survey

91. Respondents to the KEF survey were asked how well the Research partnerships perspective represents their performance, and the results are shown figure 14, presented alongside scores collected in the 2019 KEF consultation. The average score out of 100 for this perspective was 40 and similar to that of other perspectives, although had decreased significantly from the average confidence score of 63 in 2019. The average cluster score for this perspective was notably higher for respondents from the STEM cluster with an average of 60, and the cluster with the lowest average score in 2021 was cluster M with 31.

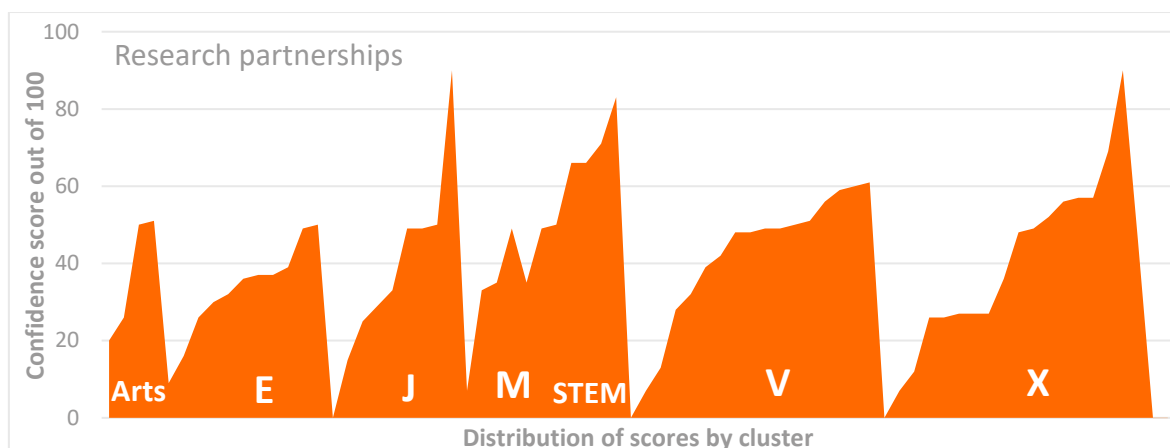
⁵ Provided for the first iteration of the KEF by Elsevier.

Figure 14 - Average confidence score out of 100 that KEF results reflect provider performance per cluster, before and after KEF publication



92. Similar to other perspectives, scores ranged significantly within clusters as shown in figure 15 below and particularly within clusters J, M, and X. Notably, scores were relatively consistent for the Arts and STEM clusters, perhaps reflecting broader feedback on discipline representation in this perspective as discussed later in this section of the report.

Figure 15 - Distribution of confidence scores out of 100 across all respondents for the Research partnerships perspective by cluster



93. A number of key themes were drawn from the specific comments made in the survey in relation to this perspective, but they generally highlighted the narrow range of activity that is captured by the perspective. These included:
- a. 'Research partnerships' as a title for this perspective suggests coverage of a significantly broader range of KE activity than the contributing metrics provide in practice.
 - b. A metric capturing co-authorship activity favours partnerships in STEM disciplines or institutions with medical schools and will only capture partnerships with published outcomes, and the tendency of external partners to co-author varies by sector and size of partner.
 - c. The collaborative research metric only captures collaborative activity where financial transactions have occurred, which is not the case in all partnerships such as those with the public sector, charities, or arts and cultural organisations.

Focus group

94. The feedback received through the KEF survey was then used to frame the discussions in the sector focus group, and attendees were split to examine one of the following topics in addition to exploring broader observations:

Collaborative research	Non-academic co-authorship	Perspective overview
<ul style="list-style-type: none"> • Possible metric development e.g. Contributions in-kind 	<ul style="list-style-type: none"> • Possible development to widen the representation 	<ul style="list-style-type: none"> • Possible additional metrics to widen representation

95. Similar to the other perspective focus groups, the use of a brief narrative was suggested to capture collaborations and types of partnerships not reflected in the current metrics and where viable additional metrics could not be identified to improve the coverage of this perspective.

Collaborative research as a proportion of public funding

96. One break-out group specifically discussed current issues with the collaborative research metric and activity that it currently may not capture. A primary issue was that there is a great diversity of collaborative relationships for which cash is not an appropriate proxy for impact or value as it is not always involved. In particular, this

creates a discipline bias as collaborations in the arts and humanities are more like to involve partner contributions that are not cash based, are harder to quantify, and consequently are not represented sufficiently in this metric.

97. In addition, it was raised that collaborative research not involving public funds is excluded. This form of research includes the following collaborations:
 - with non-governmental organisations (NGOs) or community groups who provide contributions
 - involving students conducting research
 - with large companies who support work in lieu of public funding and are not contract research (and so should not sit in HE-BCI as 'contract research').
98. As a result, the group suggested that the HE-BCI collection could be amended to enable the reporting of collaborative research with private funding but where it can be demonstrated that there is genuine shared work and outcomes for both the provider and external partner.
99. In addition, collaborative research driven by creating social impact rather than economic is less likely to involve cash contributions and consequently the full value of these collaborations may not be currently captured. The group also suggested that recognising projects linked to the UN Sustainable Development Goals should be incorporated into in-kind contributions.
100. There are also potential conflicts of this metric with the Innovate UK (IUK) metric in the Working with business perspective. The IUK metric drives increased IUK income, but this would result in increased public funding with no cash contribution which decreases performance in the Research partnerships perspective.
101. However, the group emphasised that the research and KE being conducted should drive KEF metrics rather than the reverse, and so re-definition of 'collaborative research' could be considered and alongside what the motivations are for businesses engaging with HEPs.
102. This group also discussed the extent to which the re-inclusion of in-kind contributions would solve some of these issues by increasing the diversity of collaborations with external partners represented. In-kind contributions are currently collected in the HE-BCI survey, and it was suggested that this could help particularly by balancing the contribution of arts and humanities collaborations. However, it was emphasised that in-kind contributions should only be included if a more robust methodology for the recording of this data was introduced as how these contributions are currently quantified across the sector varies significantly. Refer to section 8 - Areas for Future Development for information about current work

supported by Research England to address issues in the collection of contribution in-kind data.

103. Once the differences in in-kind contributions between different types of institutions are known through a new data collection methodology, it was suggested that a multiplier could also be applied to this to account for discipline differences. However, implementing such a methodology in a robust way would be challenging.
104. It was suggested that a framework to ensure there would be consistent data collection across the sector would be required to increase its robustness, and that this could even be discipline or cluster specific to account for the diversity of activity that occurs. The group were supportive of guidance developed by Research England to be implemented and then iterated in the future.

Co-authorship with non-academic partners

105. This focus group discussion built on previous concerns that there is a discipline bias within the co-authorship metric. Only partnerships which result in written outputs are being captured and potentially those with larger businesses who have greater capacity but also incentive to produce written publications. It was suggested that these types of partnerships are more common within STEM disciplines or with institutions that have medical schools. Though it was also acknowledged that this bias may be accounted for by the KEF clusters to some extent.
106. This metric was intended to provide a proxy for strong partnerships which result in measurable impact, however the focus group raised that arts and practice-based research outputs in particular are not captured currently. In addition, partnerships with SMEs, and often this accounts for the majority of activity of smaller providers, do not tend to result in published written outputs as this is not part of their culture, performance objectives, or incentives for conducting work with HEPs. It was suggested that redefinition of the metric could include co-creation activities.
107. However, it was considered unlikely that a co-authorship metric would be able to fully represent complete the breadth of activity deemed as 'research partnerships'. Therefore, this is an issue that could be addressed by the introduction of further metrics or the evolution of the definition and title of the perspective.
108. While this metric currently reflects activity without using income as a proxy for impact, it was raised by the focus group that the metric will still be representing partnerships that are likely to require financial transactions.

109. The group also raised the potential for the encouragement of unintended behaviours in this metric, such as the naming of non-academic partners even where not most appropriate and therefore not driving meaningful collaboration.
110. The group was asked to comment on the evolution of this metric, and the following additional output types were suggested:
 - Outputs with law and policy papers
 - Trade journals
 - Documentaries and films
 - Joint conference presentations (though the reporting of this would be very challenging)
 - Citations and acknowledgements of outputs to recognise outputs generating impact.

Additional metrics to increase the breadth of the perspective

111. The final group discussed types of research partnerships which are not currently being captured in this metric, as well as many of the topics that were raised by the other groups in this session. In addition to the potential discipline bias already discussed, this included partnerships involving people exchange and staff or student placements. Although it was recognised that measuring mobility would be difficult, it reflects an important aspect to partnership building for many providers particularly as part of practice-based research. Specifically, it was raised that activities conducted with external partners by students are not captured.
112. Partnerships with local government or businesses that are not bound by a financial transaction or written output are not currently represented by the metrics but would align with the perspective's definition. For instance, the contributions of external partners to, and the co-creation of, curriculums and wider university strategy such as Civic University Agreements. In addition, engagement with public policy was also discussed as relevant to this perspective and not currently reflected. Research England's work to explore this policy area is described in section 8 - Areas for future development of this report.
113. It was also raised that current metrics appear to value a larger absolute number of co-authored partnerships regardless of the number of engaged co-authors, or a singular partnership with a large cash partner contribution over multiple partnerships where each have smaller contributions. Therefore, engagement with a large number of partners in creating publications or leveraging contributions to research is not being captured.

114. A suggestion from the survey was to consider measuring partnerships by their strength or long-term sustainability rather than their associated financial transactions, however this group recognised the significant challenge in trying to do this. For instance, although many HEPs have wide range of strategic partners, clarifying a consistent definition for this would be difficult and equally not represent the full breadth of strong partnerships developed across the sector.
115. This group was also asked to consider additional metrics which could be explored to increase the diversity of activity captured in this perspective, the following were suggested:
- Academic staff time working with partners or partner time working with the HEP
 - A measure of partner access to facilities, materials, or IP
 - A measure of non-academic partners supervising PhD students, or student placements.
116. The group recognised that when considering further metrics for this perspective in particular, it would be important to balance the burden of additional data collection against the quality of this data. As a result, existing collections such as HESA's Destination of Leavers from Higher Education survey to collect information on students and entrepreneurship was suggested.

Future developments

117. **Short term**

- a. We will undertake further exploration of additional output types that could be included in the dataset for the co-authorship metric.
- b. We will consider whether it is more appropriate to change the title of the perspective to reference the current metrics, for example 'Collaborative research and co-authorship with non-academic partners'.

118. **Medium term** – we will focus on the development of sector-wide guidance for the recording of in-kind contributions to collaborative research and contribute to the wider HE-BCI review, to provide more robust data which could then be included in the KEF in the future. Section 8 - Areas for Future Development describes this work in more detail.

119. **Long term** – the most significant issue currently with this perspective is the narrow range of activity represented due to the robust data available, therefore continued exploration of additional data sources will be key in addressing this.

Skills, enterprise & entrepreneurship

120. The sector survey and focus groups were the primary source of feedback for this perspective which contains the following metrics.

Table 7 - Metrics used in the Skills, enterprise and entrepreneurship perspective and their numerators and denominators

Metric	Numerator	Denominator
CPD/CE income normalised by HEI income	Income from CPD/CE	HEI income ⁶
CPD/CE learner days delivered normalised by HEI income	Number of CPD/CE learner days	HEI income
Graduate start-ups rate by student FTE	Number of graduate start-ups	Student FTE

Survey

121. Respondents to the KEF survey were asked how well the Skills, enterprise and entrepreneurship perspective represents their performance and their confidence scores are illustrated below in figure 16. The average score out of 100 for this perspective was significantly lower relative to that of other perspectives at 34, with clusters X and V demonstrating particularly low confidence. These numbers also show a substantial reduction in confidence when compared to a similar question asked in the 2019 consultation.

⁶ 'HEI Income' is the combined total of: tuition fees and contracts, funding body grants and research grants and contracts taken from the HESA finance record

Figure 16 - Average confidence score that KEF results reflect provider performance by cluster, before and after KEF publication

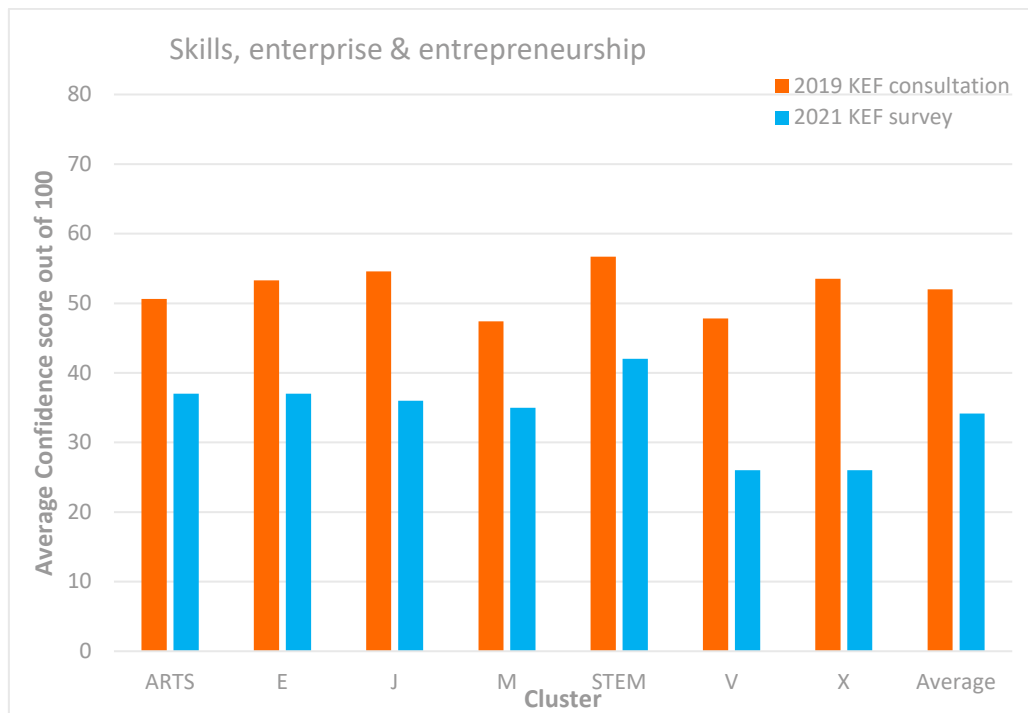
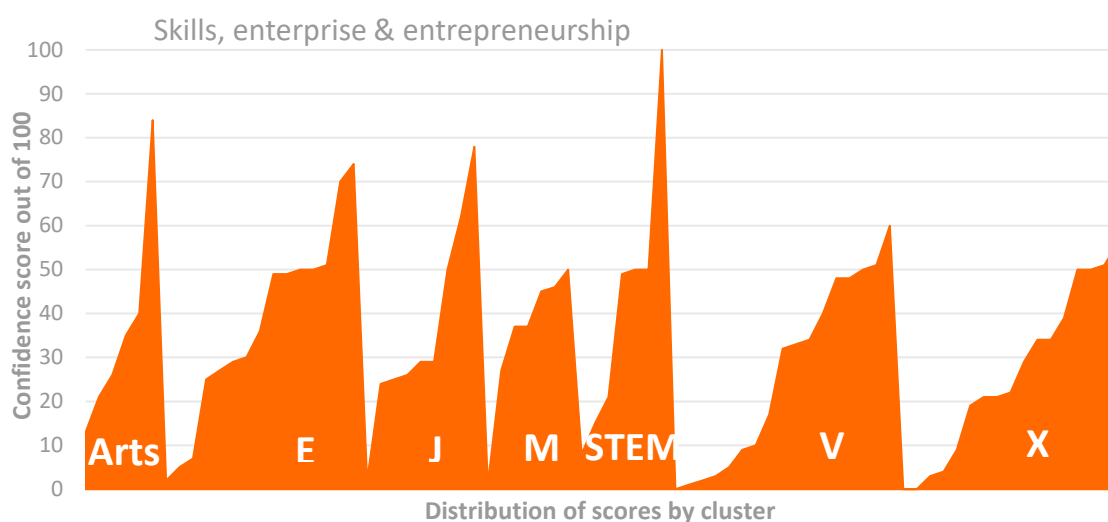


Figure 17 - Distribution of confidence scores out of 100 across all respondents for the Skills, enterprise and entrepreneurship perspective by cluster



122. The survey confidence scores demonstrated that this is the most poorly viewed perspective in terms of how the metrics represent a HEP's performance. The more detailed feedback indicated the reasoning for this, and largely highlights two areas that was felt needed addressing.

123. Firstly, that the chosen metrics do not adequately represent either skills or enterprise and entrepreneurship activities in sufficient breadth or detail. For example, when considering the representation of skills, it was felt that CPD reflects a very limited area of skills development, which does not capture other relevant student related activities such as placements, peer mentoring, working groups, live briefs, and incubation support and degree apprenticeships. Furthermore, comments expressed that graduate start-ups do not reflect the many and varied ways that providers support enterprise and entrepreneurial activities for both their students and staff. Therefore, enterprise and entrepreneurship activity is not being sufficiently represented.
124. Secondly, there was concern that the CPD/CE learner days metric is not sufficiently robust due to the following issues:
- a. The data is difficult to collect.
 - b. There are gaps in the data as historically HE-BCI has only required this data to be reported 'where they are available'.
 - c. The definitions in HE-BCI are not sufficiently clear to ensure consistent reporting across the sector.
125. Respondents were also concerned with the robustness of the 'HE-BCI Graduate start-ups rate by student FTE' metric, though to a lesser extent, due to:
- a. Significant variance in practice across the sector when reporting freelance/sole traders, which is exacerbated by vague definitions.
 - b. Sensitivity issues when calculating the metric values, as often low numerators are divided by significantly larger denominators.

Focus group

126. Feedback from the survey was used to identify discussion areas at the perspective focus group, and attendees were asked to focus on one of the areas below:

Skills	Enterprise & entrepreneurship	Perspective overview
<ul style="list-style-type: none"> • Improve representation of skills activities 	<ul style="list-style-type: none"> • Improve representation of enterprise and entrepreneurship activities 	<ul style="list-style-type: none"> • Perspective overview of basket of metrics to best effect

Perspective overview

127. Overall attendees felt that the metrics underpinning this perspective did not conclusively represent the title of this perspective. Additionally, it was suggested that the definitions of what could be included as 'skills' and 'enterprise' in the HE-BCI guidance need to be made clearer.

Skills

128. One group of attendees discussed specifically how the representation of skills could be improved, and this focussed on issues with the current CPD metrics and then ways of mitigating or addressing them.
129. Firstly, when considering the limitations of the CPD metrics, attendees commented that the KEF appeared biased toward CPD activities as CPD represents two of the three metrics in this perspective in the KEF, counting both income and learner days.
130. It was also noted that measures of CPD can be difficult to capture in a standardised way across the sector and this could be improved with clearer HE-BCI guidance. Specifically, the group commented that improvements were needed to explain why some activities are countable and why others are not.
131. Discussion also raised the issue that the current HE-BCI definitions for CPD do not reflect the variety of activities that are happening in practice. For example, whether should HE-BCI be updated to capture CPD activities now being delivered through social media and virtual platforms.
132. Secondly, attendees discussed potential mitigations for these issues or overall improvements for the CPD metrics. The group considered whether 'skills' should be

decoupled from 'enterprise and entrepreneurship', given that two of the three metrics included in this perspective are specifically related to skills, leaving a very narrow view of what comprises enterprise and entrepreneurship. However, the group concluded that 'skills' should not be removed from this perspective given they are an important prerequisite for equipping students to engage in entrepreneurship and enterprise activities.

133. The need for clearer guidance was also expressed to understand what activities could be captured within the 'skills' space via the HE-BCI return, such as apprenticeships. A clear definition of what 'skills' comprised would allow for a consistent approach to data collection. Additionally, it was queried whether the [QAA definition of entrepreneurship](#) could be used to capture a broader view of activities e.g., number of extracurricular learner hours or counts of students with 12 hours of entrepreneurship training or support.
134. The suitability of the current CPD metrics was also discussed as while they are proxies for impact, they do not necessarily measure skills 'progression'. Attendees questioned whether looking at alternative metrics such as 'repeat learning' or 'progression through courses' would be more meaningful to capture skills KE in future iterations of the KEF.
135. Similar to other perspective focus groups, the potential benefits of submitting a smaller 100 word narrative was noted to allow the showcasing of a broader range of activities.
136. The removal of current metrics for this perspective was considered and given the difficulties in capturing and ensuring consistent and accurate data, the overall view was that the CPD learner days metric should be removed. The group noted that consideration should be given to any additional burden if a perspective narrative was explored to represent activity as a result of the removal of a metric.
137. The group also discussed possible additional metrics, and therefore the feasibility of capturing partnerships where employers were actively facilitating the co-creation of skills. It was considered whether this would be more appropriate in a different perspective of the KEF such as Working with business. However, it was acknowledged that it would be useful to further understand how many businesses engage with CPD activities and what breadth of activities these encompass before developing further metrics.

Enterprise and entrepreneurship

138. The representation of the 'enterprise and entrepreneurship' element in this perspective and ways in which to improve it was discussed, specifically the graduate start-up metric. It was considered overall that a wider basket of measures reflecting activities that lead to outputs and outcomes are needed to enable university support and enterprise to be showcased.
139. It was raised that KEF metrics should present a wider view of enterprise and entrepreneurship than that currently expressed through this single metric. Primarily, this was commented to be due the limited robust data available such as the data collected through the HE-BCI survey. For example, the survey does not collect incubator statistics, and there is difficulty in knowing where to submit start-ups incentivised by social impact.
140. In addition, the number of graduate start-ups is very difficult to capture from students post-graduation. The group also commented that the metric reflects the volume of activity rather than indicators of quality or success such as using a reflection of a start-ups' longevity.
141. The discussion then looked to explore how some of the issues that were raised could be mitigated and/or improved. Attendees noted the following points:
- a. Additional metrics are needed fully capture 'enterprise and entrepreneurship' activity, which could be addressed when developing the HE-BCI survey collection.
 - b. Better capturing of the 'exchange' of knowledge in enterprise and entrepreneurship could be addressed by looking at international examples.
142. When considering potential additional metrics, the following were suggested:
- a. The number of external organisations engaged in enterprise and entrepreneurship into or outside of institutional curriculum.
 - b. Counts of students doing placements/apprenticeships with businesses with an enterprise/entrepreneurship focus.
 - c. The proportion of the student body engaged with one or more proxies of entrepreneurial intent.

- d. Turnover from enterprise and entrepreneurship activities, beyond just graduate start-ups.

143. The group discussed whether entrepreneurship and enterprise related metrics were better suited to the IP and commercialisation perspective of the KEF, but concluded that it merited its own focus, noting that its potential to capture a broader set of institutional engagements, such as student or graduate enterprise.
144. The group also suggested that this perspective could be retitled to emphasise that skills should focus on underpinning enterprise capabilities e.g. “Skills, enterprise and entrepreneurship education” or “Provision of CPD and graduate start-ups”.

Future developments

145. **Short term**

- a. We will consider removing CPD learner days as metric in the KEF.
- b. We will consider whether it is more appropriate to change the title of the perspective to reference the current metrics, for example ‘Skills, enterprise and entrepreneurship education’ or ‘Provision of CPD and graduate start-ups’.

146. **Long term** - we will seek to identify more appropriate measures of ‘skills and enterprise and entrepreneurship’ such as through the review of the HE-BCI survey.

Public & community engagement

147. The public & community engagement (P&CE) perspective underwent the most change following the KEF pilot, with the proposed metric being replaced by a self-assessment driven by a structured narrative which was co-designed with the National Coordinating Centre for Public Engagement (NCCPE). Full details of the approach can be found in the 2020 [KEF: Clustering and narrative template](#) publication.

148. The self-assessment asked for a score of between 1 - 5 against each of the following five aspects:

Aspect	Description
Strategy	Developing your strategy with the needs of users in mind
Support	Practical support in place to support public and community engagement
Activity	Activities undertaken to deliver your strategy
Results	Evidencing outcomes and impacts
Acting on results	Communicating and acting on results

149. The scores 1-5 represented the following broad stages of development, with fuller definitions for each aspect provided in the submission guidance.

Score	Stage of development
1	Planning phase, nothing yet in place
2	Embryonic, in the early stages of development
3	Developing, and implementation taking place
4	Fully developed and implemented in most but not all areas with outcomes and impacts becoming apparent
5	Fully developed and embedded across the institution to an exemplary level, with a culture of continuous improvement and good evidence on outcomes and impacts

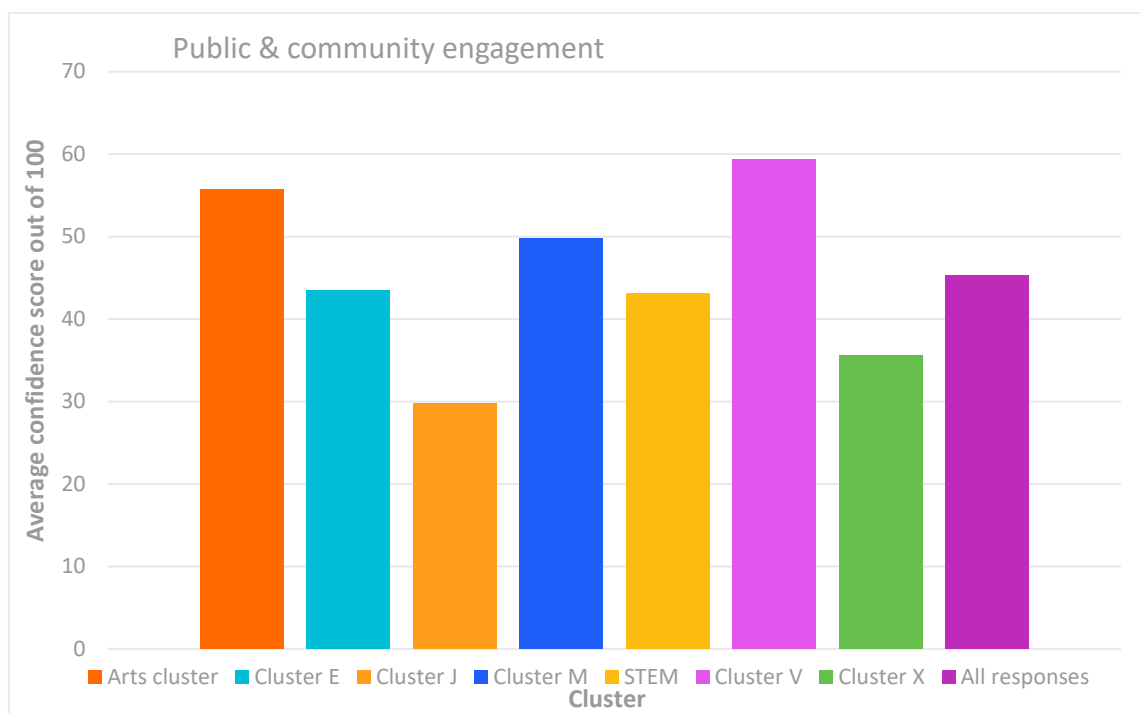
150. In addition to the KEF survey and dedicated focus group, we also commissioned NCCPE to undertake a review focused on the robustness of the public & community

engagement self-assessment process. Findings from each of these activities is presented below.

Survey

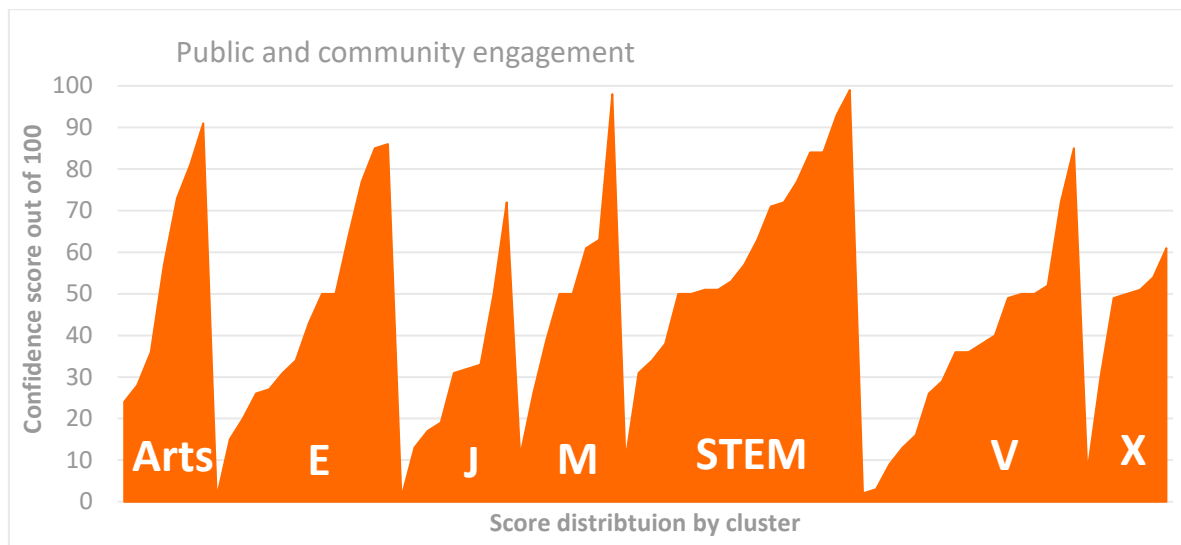
151. In the KEF survey, we asked how well the metric represented the performance of the respondent's provider. We also requested more detailed feedback on the burden and approval processes for the narrative elements.
152. The P&CE self-assessment was introduced following the initial KEF consultation and pilot, so it is not possible to make a direct comparison to the 2019 KEF consultation. However, overall the responses have demonstrated some improvement in confidence in the self-assessment as a representation of performance averaging at 45 when compared to the initially proposed metric. What is notable, is the variation in confidence between clusters as demonstrated by figure 18 with cluster J reporting 30/100 while the arts cluster and cluster V report well over 50/100.

Figure 18 - Average confidence score that KEF results reflect provider performance by cluster



153. Figure 19 further shows the breath of opinion within each cluster, with the STEM cluster and cluster V in particular using the whole scoring range.

Figure 19 - Distribution of P&CE confidence scores by cluster



154. Further questions sought to delve into this more deeply by asking explicitly about the self-assessment process. Figures 20 and 21 below reveal that despite the variation in confidence as a KEF metric, over 65% of respondents agreed that it had been helpful in focusing the narrative description of their work and over 90% were confident in the scores submitted for their own provider.

Figure 20 - Extent of support that the P&CE self-assessment process a helpful way to focus the narrative content

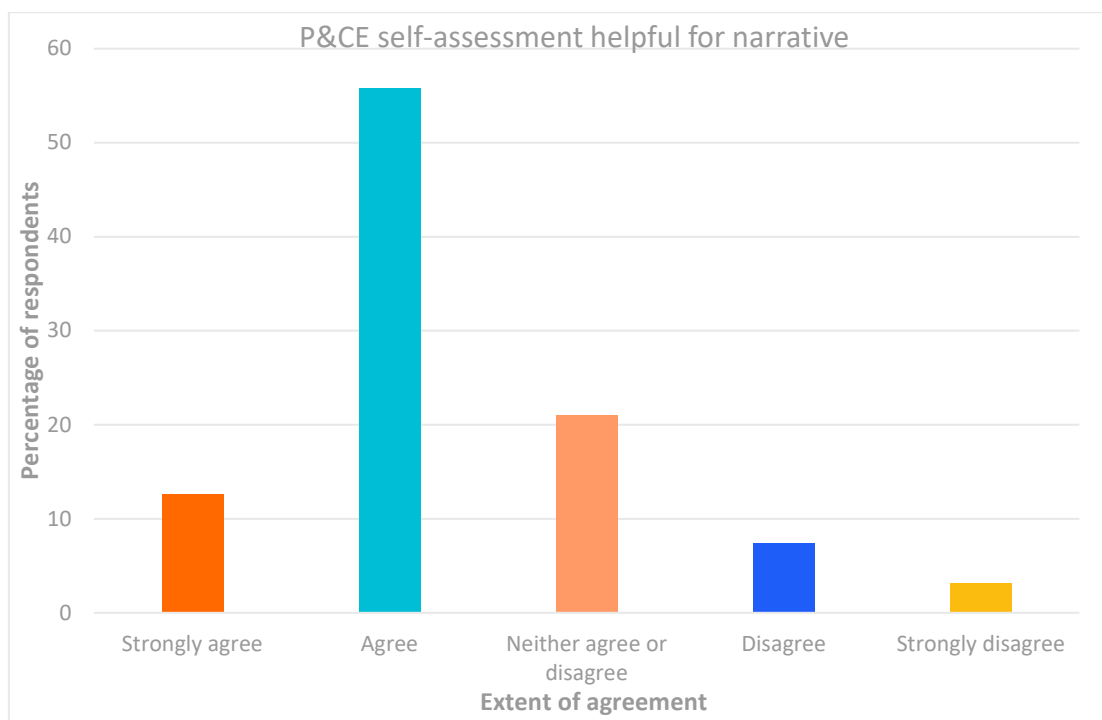
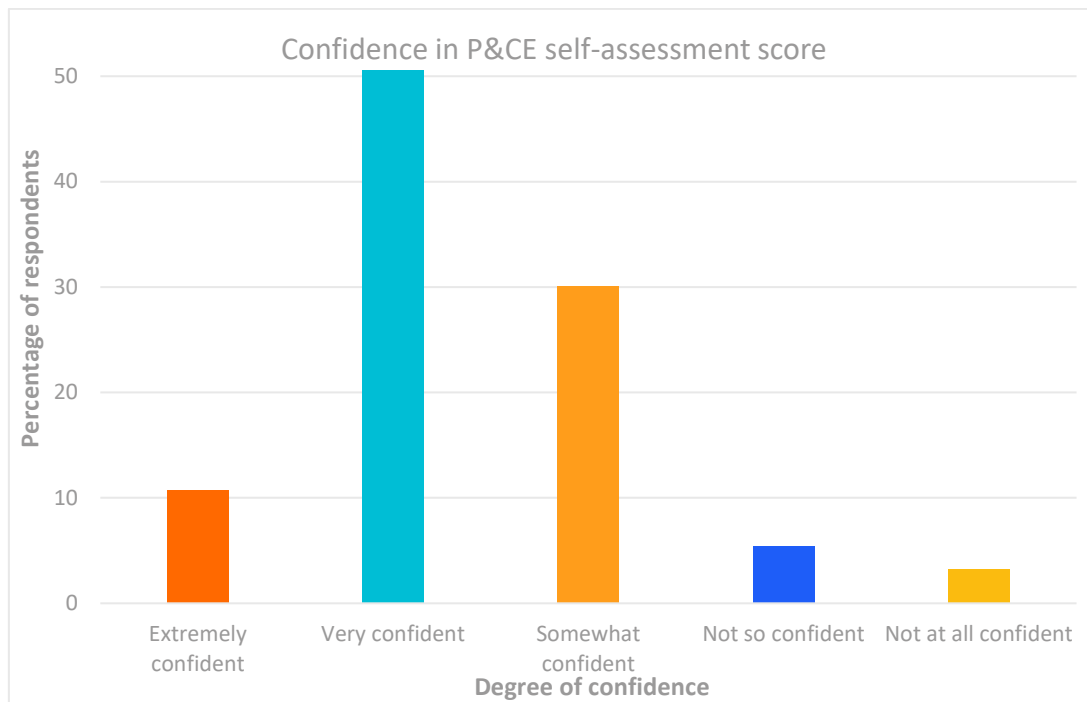
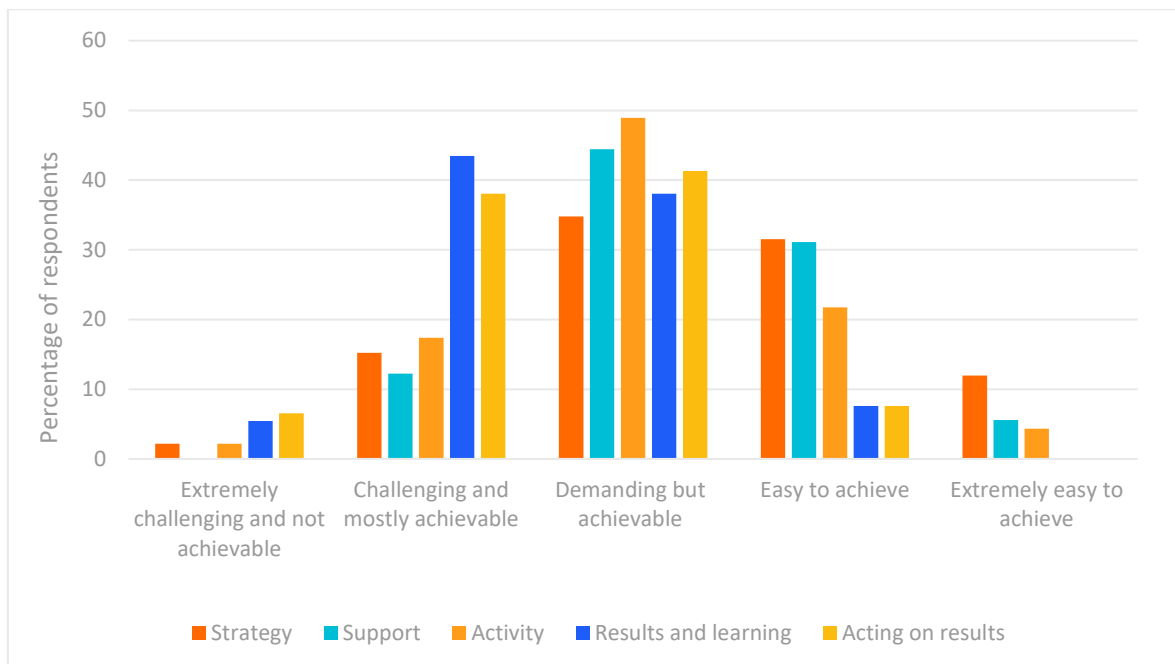


Figure 21 - Level of confidence in P&CE self-assessment scores submitted by own provider



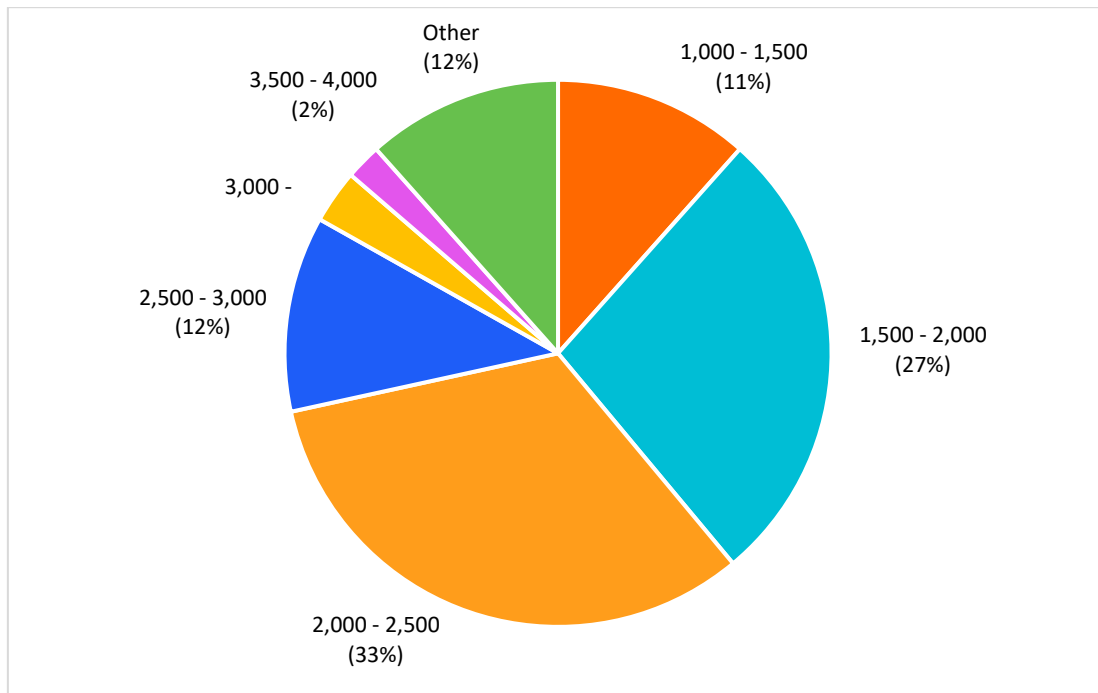
155. The scores were accompanied by more detailed comments to contextualise the responses. These revealed that while the self-assessment process had been demanding, it was considered justified in the absence of robust metrics being available. Many providers also expressed that it had been a useful process that generated wider strategic benefits and allowed them to reflect the distinctive strengths of their institution. However, some respondents were apprehensive about the self-assessment process being unmoderated, particularly with limited opportunities for score calibration.
156. The challenges encountered in securing evidence varied significantly between the five aspects. As shown in figure 22, over 75% of respondents found it achievable to source appropriate evidence for the first three aspects on strategy, support and activity. While 45% of respondents found it challenging or extremely challenging to source appropriate evidence to support scores for aspect four (results and learning) and aspect five (acting on results).

Figure 22 - Level of challenge to source appropriate P&CE evidence by aspect



157. With regard to the burden for this perspective, some respondents considered that there was too much overlap with the KE Concordat in content and timing, with Research England Higher Education Innovation Fund (HEIF) accountability and monitoring requirements and the Covid 19 pandemic compacting the burden further. While comments around future burden were relatively muted, they were most frequently expressed in relation to the frequency and extent of updates to the narrative statements.
158. The narrative statements were subject to a word limit of 2,000 words plus a short 120 word summary and although some feedback suggested that this made it challenging to demonstrate the breadth of activities, there was very little appetite for the word limit to be significantly increased. As illustrated in figure 23 below, 60% of respondents indicated that the maximum word count should be somewhere between 1,500 and 2,500 words.

Figure 23 - Preferred word length of future narrative statements (% of respondents)



NCCPE analysis report

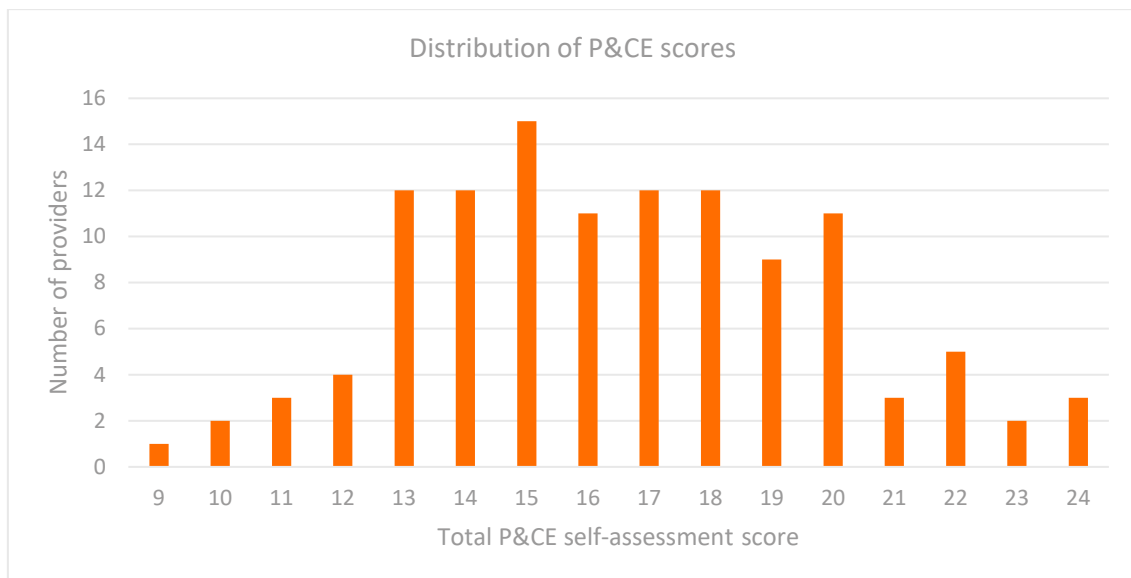
159. We commissioned NCCPE to undertake an analysis of the submitted narratives and self-assessment with two main objectives:

- i) **Self-assessment scores:** to assess the accuracy of the self-assessment scores provided by participants, based on the NCCPE's expert opinion and experience of working with providers to achieve the [Engage Watermark](#) and the evidence supplied by each provider.
- ii) **Value of narrative statements:** to consider the effectiveness of the template and whether it provided a clear basis for providers to present useful intelligence and evidence about their goals, activities and impact for public and community engagement. For example:
 - a. Did the template and questions elicit useful intelligence and evidence about HEP's public & community engagement goals, activities and impact?
 - b. Were areas of the template unclear to providers?

- c. Did the word limit create any obvious issues for respondents? Did it allow enough space for them to effectively respond to the prompts and questions?
- d. How many respondents chose to use infographics, and how did their responses differ in terms of quality of information shared?
- e. What worked well & what could be improved?
- f. Were any metrics used by providers to support their narrative that may be considered as future KEF metrics?

160. Regarding the self-assessment scores, NCCPE noted that providers used almost the entire range of scores from 9 to 24, highlighted in figure 24 below which suggested that providers had carefully considered their performance.

Figure 24 - Distribution of the total self-assessment score for all aspects



161. Whilst reassuring to see this distribution of scores, of greater importance to us was whether, the submitted scores accurately reflected provider performance. NCCPE reviewed the submissions taking account of how HEPs had used the criteria and guidance to provide an evidenced case for their submitted scores. NCCPE used their expert judgement of the accuracy of those scores, based on the evidence provided, and drawing on their extensive experience of working with providers to assess their support for public and community engagement.

162. To support their assessments, the NCCPE developed a coding scheme to judge the relative accuracy of the submitted scores, based on comparisons across the sample. and informed by their expert judgement. They identified seven different characteristics set out in table 8.

Table 8 - NCCPE scoring characteristics

Score low	Tough	These HEPs interpreted the guidance very literally and consistently erred on the side of caution. The under-scored themselves significantly compared with their peers.
	Modest	These HEPs assessed themselves fairly against the guidance and worked hard to match evidence against criteria/guidance. They erred on the side of caution in their self-assessment.
Score realistically	Realistic	These HEPs reflected realistically on their performance and provided concrete evidence to support claims.
Score generously	Positive	These HEPs used the guidance and criteria to structure their responses, but often scored themselves higher than the 'spirit' of the guidance, and their 'realistic' and 'modest' peers.
	Generous	These HEPs consistently gave themselves the benefit of the doubt and scored themselves more generously than the evidence they submitted merited.
Other	Mixed	These HEPs were overly generous in places, and too harsh in other compared to their peers.
	Off the pace	These HEPs used the guidance in a fairly haphazard way, and often misinterpreted it or failed to provide convincing corroboration of their claims. Tended to make broad generalized comments that weren't pinned down. Focus on P&CE was hazy.

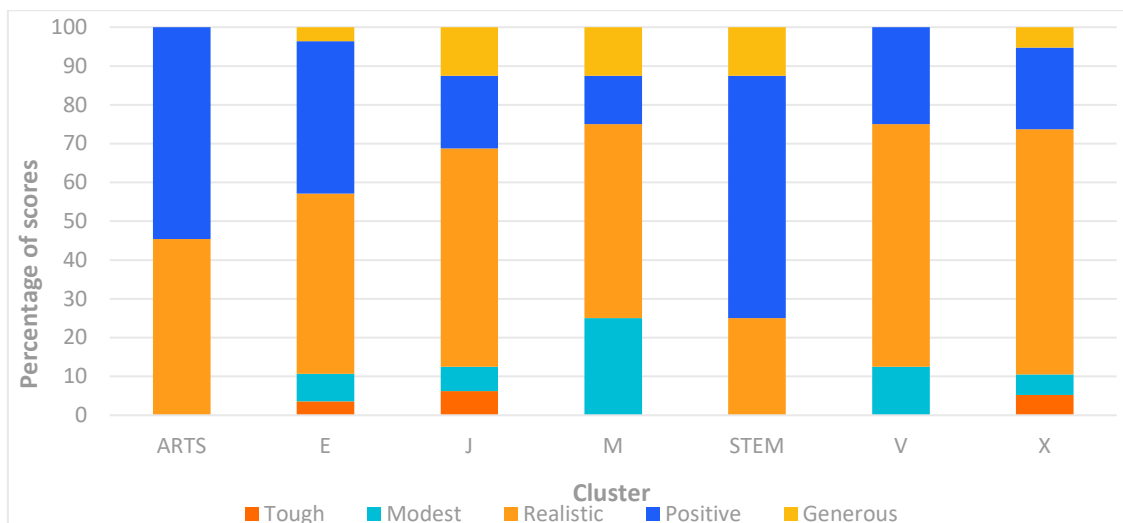
163. As illustrated by figure 25, in the judgement of NCCPE, over half of providers scored themselves realistically, with the remaining majority being 'positive' or 'modest' and only a very small proportion were judged to be 'tough' or 'generous'. Both Research England and NCCPE consider both 'realistic' and 'positive' to be within reasonable bounds of an essentially subjective exercise.

Figure 25 - Accuracy of HEPs' self-assessment scores, as coded by NCCPE



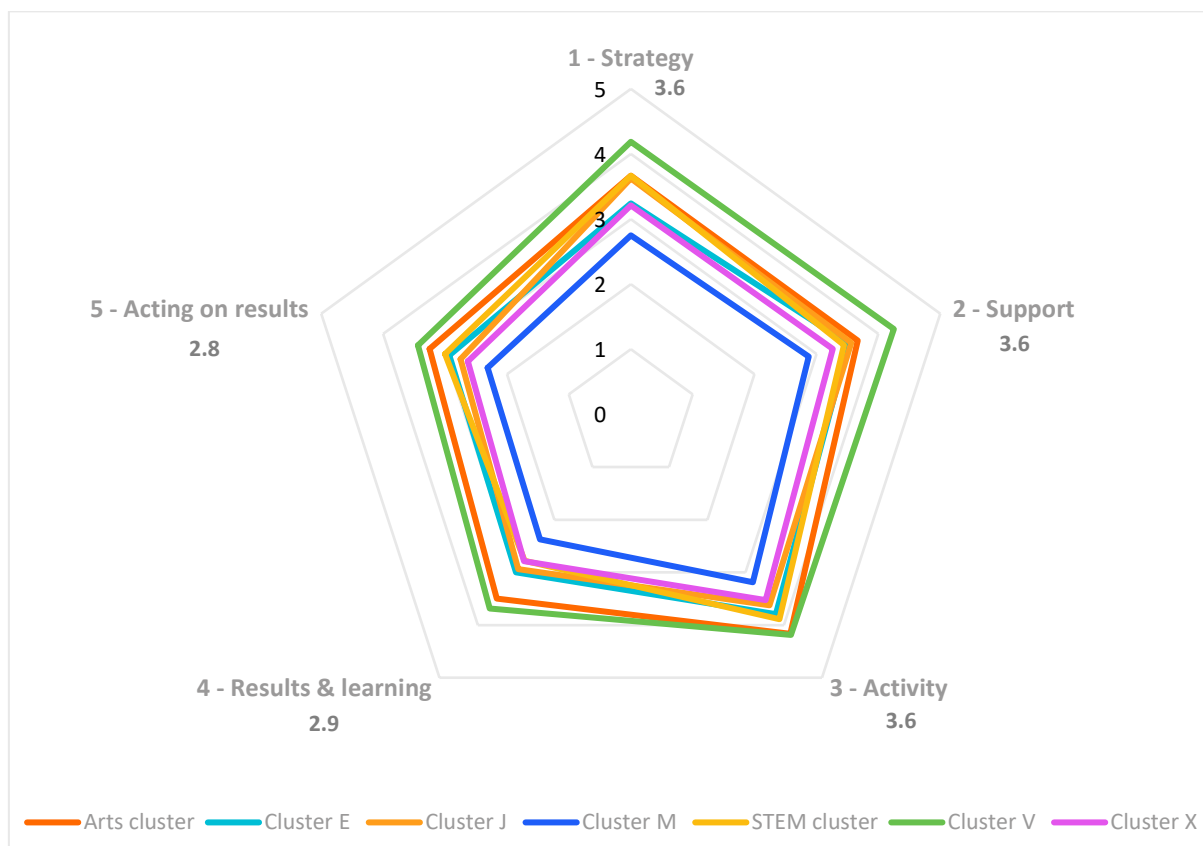
164. When we look at the scoring by average score for each aspect, it is evident that there is significant variation across clusters as illustrated by figure 26 below. In particular, cluster V shown in green, scores higher on average across the five aspects while cluster M in blue presents lower average scores. However, when the relative accuracy of scoring is scrutinised by cluster as shown in figure 27, there is no obvious correlation between a higher average cluster score and a higher proportion of providers scoring 'positively' or 'generously'. While cluster V providers had the highest average scores, they also had the joint highest proportion of 'realistic' scores with no scores assessed as 'generous'.

Figure 26 - Total self-assessment score accuracy by cluster (% scores by cluster)



165. In addition, figure 27 demonstrates variation in the average score across for each of the aspects. The aspects considering 'strategy' and 'support' commanded average scores of 3.5, peaking at 3.8 for 'activities' compared to the more evaluative aspects on 'results & learning' and 'acting on results', which averaged 2.9 and 2.8 respectively. Analysis by NCCPE noted that this is in line with expectations as the pilot demonstrated that providers find it relatively easy to describe activities while it is generally accepted that the evaluation of outcomes arising from P&CE is relatively immature.

Figure 27 - Average P&CE self-assessment score in each aspect by cluster



Implications and recommendations

166. Overall, while we are broadly satisfied that the self-assessment approach is a viable approach in the absence of other robust metrics, it remains our longer-term goal to move away from relying solely on the single self-assessment score to a broader range of metrics. In the meantime, we need to consider whether the template structure and the types of evidence requested are inclusive and applicable to the breadth of public and community engagement activities across the sector.

167. The NCCPE review demonstrates that the combined approach of narrative and self-assessment has proved to be a valuable method of obtaining useful intelligence from the sector about the support and activities for public and community engagement. The sector responded well to the opportunity to reflect honestly on their performance in this area, and the narrative template allowed them to provide rich and useful data about their different approaches. In NCCPE's expert opinion the process provided relatively robust comparative data while also revealing some extremely useful broader trends in how the sector is approaching the delivery of public and community engagement and how this might be further enhanced.
168. While NCCPE consider that the self-assessment and narrative process did provide a robust framework for HEPs to reflect on activity, and to allow meaningful comparisons to be drawn, they suggest that the value of the could be further enhanced by some developments to the process.
169. The NCCPE have made a number of specific recommendations to inform future development of the KEF as follows:
 - a. Modify the criteria for the scoring, to make clearer the distinctions between the five levels, in particular the distinction between 1 and 2 (to encourage more people to use the lowest score) and between 4 and 5 (to provide a higher bar for achieving a 5, linked to the provision of robust evidence of achievement).
 - b. Moderation: HEPs approached this process 'blind'. A moderation process could be undertaken next time where HEPs are invited to review the scoring scheme and examples drawn from this iteration of the process, and build a more robust collective understanding of the criteria for each level.
 - c. Combining narrative with data entry: by relying exclusively on a narrative approach, the process allowed a great deal of latitude in how HEPs interpreted the guidance and the evidence required. A balance of framing narrative with data points could address this, for instance requiring HEPs to submit details of the resources invested to support P&CE.
 - d. Collecting more useful intelligence about evaluation and acting on results: requiring HEPs to list strategic goals and how they monitor these, including internally focussed and engagement focussed activity, would help address the misunderstandings in aspects 4 and 5, described above.

170. The NCCPE have followed up their initial review with a deeper thematic analysis of the Public and community engagement narrative statements. The [Public and Community Engagement in the KEF: a thematic review](#) (NCCPE) was published in February 2022.

Focus groups

171. In designing the focus group discussion points, we built on both the KEF survey results and the NCCPE review report. NCCPE also attended the focus group to provide an overview of their findings to participants.
172. As we've seen in paragraphs 151-158 above, overall, a broadly positive picture emerged from the survey feedback as a sensible approach to a difficult challenge. Encouragingly, the comments in the surveys that expressed reservations also offered a relatively coherent set of challenges and suggestions for improvements and we used the focus group to test and explore these insights further:
- a. **Benchmarking / calibration:** some providers considered that the lack of opportunity for calibration meant their own 'tough' self-assessment led to them being perceived as performing particularly badly compared to peer that they deemed themselves to be on par with.
 - b. **Guidance / template:** there were some useful suggestions for how the guidance and template could be simplified and made more flexible (a number felt that it was too rigid/narrow/constraining).
 - c. **Burden:** concerns about burden were relatively muted, as people derived significant value from undertaking the process, but there were concerns about how frequently narratives should be updated.
 - d. **Sharing the results:** concerns about how useful the narratives and dashboards are for external audiences; there were a number of suggestions that case studies or specially written content would be needed.
173. A number of possible options were presented to the focus group around improving the self-assessment process through the use of moderation, modifications to the scoring criteria, and the structure of the narrative statements. We also explored a suggestion from NCCPE around the inclusion of data points within the narrative statements.

174. Discussion was centred on the following three areas through breakout groups with all attendees asked to consider whether the experience of repeating the same process again would begin to tackle these issues.

Robustness	Metrics & data points	Audience, burden & frequency
<ul style="list-style-type: none"> • Benchmarking e.g. calibration or moderation exercises. • Guidance 	<ul style="list-style-type: none"> • Use of optional or mandatory data points. • Possible new metrics available now. 	<ul style="list-style-type: none"> • Assessability to non HE partners • Burden and frequency of updates
Experience		
If nothing changed, would some issues be addressed simply through the experience of having done it before?		

Robustness

175. There was broad support in the discussions for the introduction of a benchmarking or calibration exercise prior to the submission of final scores, in particular a form of informal peer support such as cross cluster feedback pairing.
176. It was expressed that the involvement of front-line staff in the narrative statement was a strength in the robustness of the first iteration of the KEF. [The survey also indicated that 89% of providers consulted wider staff in drafting the narrative and 78% consulted on the self-assessment score.] While this was seen as a current strength in the robustness of scores there were concerns that this may be eroded over time particularly if the KEF gains higher profile or is linked to funding.
177. While NCCPE's analysis (refer to figure 24) demonstrated that providers used a broad range of scores, particularly in cluster E who used the full scoring range, figure 24 also shows that significant 'bunching' was observed across the 'mid – scoring' range with 63% of providers scoring between 13 and 18 out of the maximum 25. A potential consequence of 'bunched' data when considering the calculation of overall metric and perspective deciles, is that providers with relatively similar self-assessment scores are placed in notably different deciles. Therefore, there may appear to be larger differences in performance between providers than is the case in reality.
178. Discussion indicated that the most effective way to improve the quality of submissions would be further development of the guidance. Particularly in the following areas:

179. The most robust narrative statements were seen to set the context of the provider's strategic position and provide examples to evidence how it is working, and therefore the guidance could be improved to encourage this.
180. Increase the granularity of the scoring to improve the ability of providers to demonstrate incremental progress within a scoring boundary.
181. Provide models or toolkits of good practice. This would facilitate high quality submissions across the sector and assist and support providers with fewer resources. For example by highlighting examples of effective organograms and activity maps or making available tools to map community relations.

Metrics & data points

182. NCCPE suggested a number of possible data points to inform the discussions, and while the discussion demonstrated broad support for the optional inclusion of data indicators in the narratives, they also voiced concerns that this would need careful consideration of the following:
 - a. Timings – particularly in relation to the HE-BCI review and lead-in time to both gather data and to engage in peer-to-peer support, such as calibration exercises.
 - b. Provide examples – for example it would be beneficial to draw together examples from the first iteration, similar to the REF environment statements list of indicators.
 - c. Accessible to all – consider what can be consistently reported across all providers, and allow providers at different points in their public and community engagement journey to demonstrate good practice.
 - d. HE-BCI Table 5 – find balance between the burden of collecting information against the value and robustness of the data. The availability of funding would impact this balance significantly. Indicators may be a more useful term than metrics.
 - e. Overall, the group considered that while data indicators could be helpful, a combination of narrative and optional indicators that could be selected based on the circumstances of an individual provider would remain preferable.

Audience, burden & frequency

183. As demonstrated by the KEF survey, many providers found significant internal value in the completion of the self-assessment process and so improving the accessibility and usefulness of this perspective for external publics and partners was considered by the focus group. The attendees noted that the narrative statement contained useful reflection on practice but the publication of the scores could be confusing for external partners for the following reasons:

- a. It was not clear who the self-assessment score is for – it wasn't considered relevant to external stakeholders, and publication limited its value as a self-development tool.
- b. Trying to display the numerical self-assessment in the KEF dashboard using deciles in the same way as external metrics that are developed using a very different methodology was confusing and it was not seen to evidence meaningful performance or value to the communities the provider is working with.
- c. Regarding frequency, it was considered that an annual submission would be too burdensome and also not allow enough time to demonstrate progress. It was suggested that two to three years would be an appropriate timescale.
- d. The burden of future updates would also be very dependent on other competing requests for information such as the KE Concordat or the REF and the amount of notice provided. Support was also expressed for the simplification of the narrative structure, such as mirroring the local growth and regeneration template.

Future developments

184. Short term

- a. We will look to make amendments to the visualisation of the perspective to improve the understanding of the metric and balance it with the narrative statement.
- b. We will look to implement the following NCCPE recommendations (which were also reflected in focus group discussions) in preparation for future narrative submissions:

- i. Modify the criteria for the scoring, to make the distinctions between the five levels clearer.
 - ii. Encourage or facilitate moderation or calibration between HEPs to build a more robust collective understanding of the criteria for each level.
 - iii. Develop the guidance to specify the type of data and evidence that could be used to justify self-assessment scores.
 - iv. Increase the granularity of scoring
 - c. Consideration of frequency and timescales for narrative statements and self-assessment score updates.
185. **Medium term** – Further work to develop the evaluation and action on results aspects, to further improve the structure and information gathered to demonstrate distinctions between the two aspects.
186. **Long term** - In the long term, integrating robust metrics into the perspective to balance or replace the self-assessment or narrative elements.

Local growth & regeneration

187. Feedback on the local growth and regeneration (LG&R) perspective was sought primarily through the sector survey and the focus group discussions on the single metric. We have also undertaken high level indicative analysis of the information provided in the narrative statements. This perspective includes the elements set out in table 9 below.

Table 9 - Data sources of the LG&R perspective

Metric	Numerator	Denominator
Regeneration and development income normalised by HEI income	Regeneration and development income from all sources recorded in HE-BCI Table 3.	HEI income ⁷
Narrative statement – unscored and unassessed	N/A	N/A

188. We have always recognised that this metric on its own does not sufficiently capture the breadth of activity in this area of KE, which is why the single metric is accompanied by a narrative element. We considered this issue closely in the 2019 KEF pilot exercise and broadly concluded that there were no other appropriate metrics currently available and that it was more important that the perspective be represented, despite any flaws to the metric. Through the 2021 KEF survey and focus groups, we were seeking to determine if this was still the case.

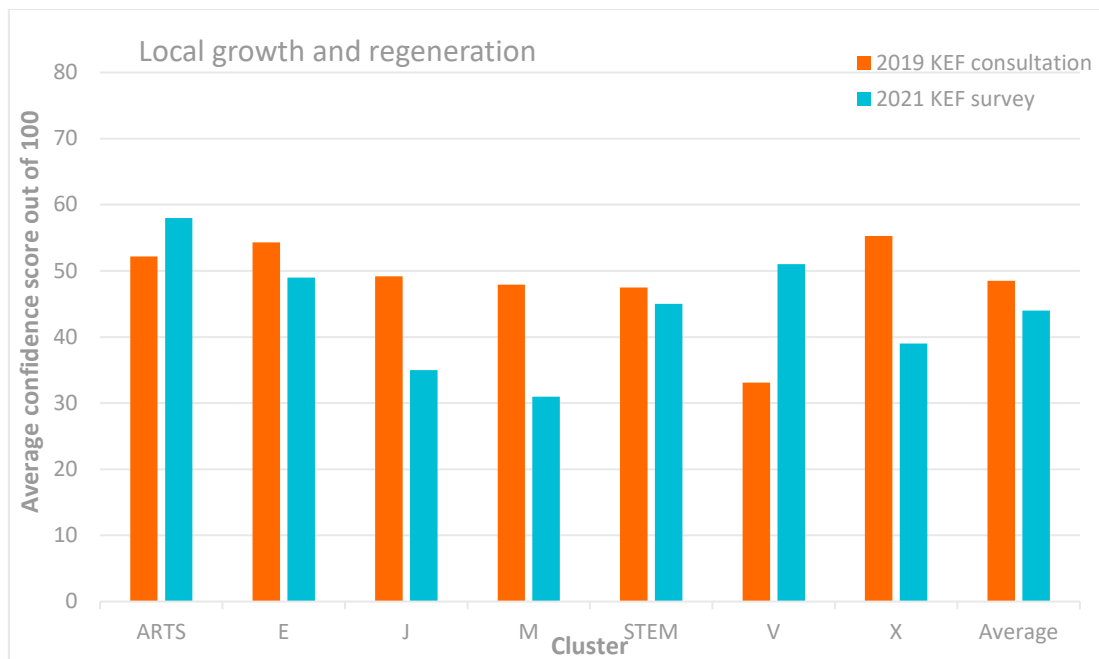
Survey

189. In the KEF survey, respondents were asked ‘how well does the single local growth and regeneration metric represent the performance of your institution?’ with the aim to compare confidence levels with those prior to the publication of the KEF results.
190. The overall average score (out of 100) in response to this question was 44, similar to the average observed when respondents were questioned on other perspectives. However, when this figure was compared to confidence levels demonstrated in the 2019 KEF consultation this perspective has shown the smallest overall change in

⁷ 'HEI Income' is the combined total of: tuition fees and contracts, funding body grants and research grants and contracts taken from the HESA finance record)

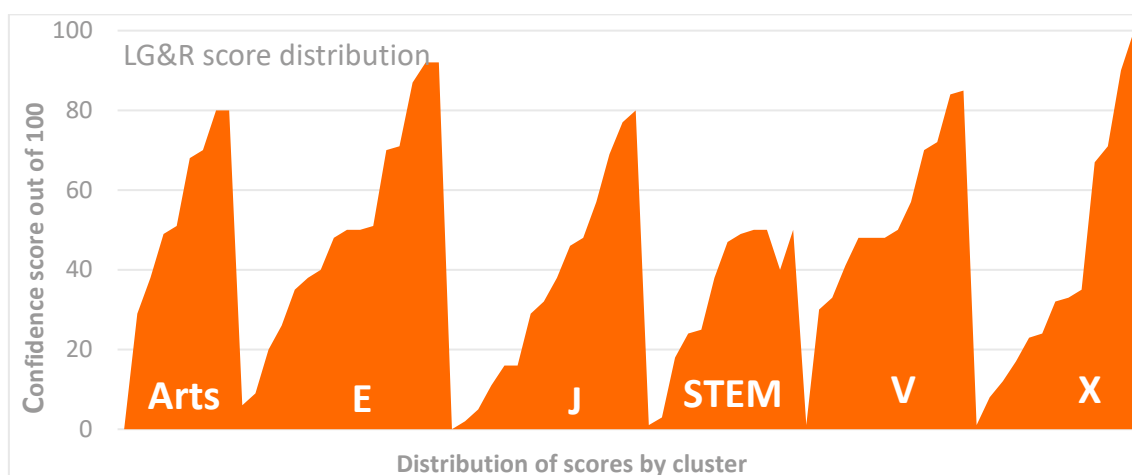
confidence compared to other perspectives, with a decrease to 44 from 49. Furthermore, as shown in figure 28, when examining the 2019 and 2021 results in more detail, more notable changes in both directions were observed at a cluster level with cluster M showing a 18% reduction in confidence, while cluster indicated an 18% increase in confidence.

Figure 28 - Average confidence score that KEF results reflect provider performance by cluster, before and after KEF publication



191. As demonstrated by figure 29, there continued to be a high level of variation of views within clusters in 2021.

Figure 29 - Distribution of LG&R 2021 confidence scores by cluster



192. When looking at the specific comments made in regard to this metric, there were four primary issues identified:

- a. **Location bias** - the single metric is largely dependent on the geographical location of the provider and the ability to influence the metric is limited by the opportunities available.
- b. **Socio-economic impact** - The metric doesn't include the socio-economic impact of other activities, for example developing innovation clusters to attract high value inward investment into a region
- c. **Non-monetised activities** - The metric doesn't measure non-monetised socially driven regeneration activities. These have been expanded by many providers through the narrative statements, but is the metric too limited to be useful as a standalone metric?
- d. **Presentation unclear** - It was not sufficiently clear how to understand or read the metric which led to a significant proportion of users misunderstanding the meaning of the data or the relationship between the metric and the narrative.

Focus group

193. We used the feedback from the survey to structure the discussions in the focus groups. Due to the strength of the concerns around this metric, we began by asking the group to consider whether the use of the single metric caused more harm than good. Similarly to the KEF pilot in 2019, individual views were mixed, but overall the view from the majority of attendees was that the work of universities in supporting local growth and regeneration was an extremely important area of knowledge exchange activity. The use of a metric to maintain the prominence of the perspective within the KEF was viewed as extremely important. Therefore, despite the recognised flaws, until a viable alternative is identified the regeneration income metric should remain in the KEF.

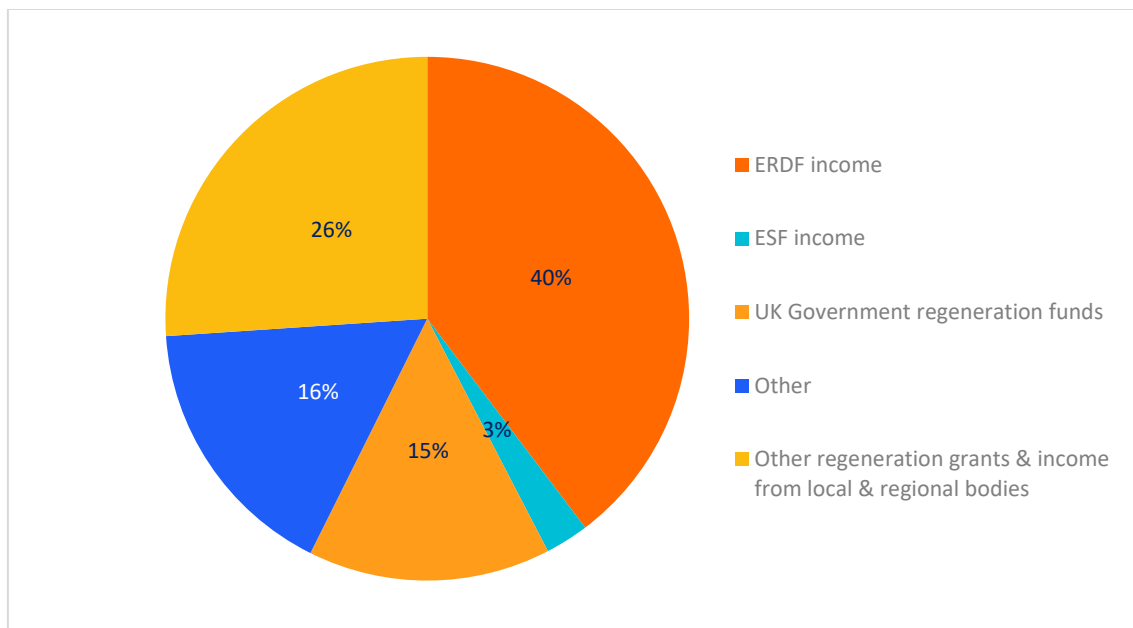
194. The key issues with the metric that were identified through the survey were also reflected across the focus group discussions, we therefore asked each group to focus on a particular route for improvement as set out below.

Mitigation	Replacement	Removal
•Improve current metric	•Are alternatives available	•Implications of removing the metric entirely
Key questions		
What are the benefits? What are the issues?		How can we improve it? Does it cause more harm than good?

195. Discussions to mitigate or refine the metric centred on the potential improvements that could be made to the presentation of the perspective and accessibility of the information to users, particularly non-HE users such as business and local public sector partners.
196. It was suggested that additional contextual information could be provided such as detail of where a provider has derived impact from its investments. For example, whether the metric could be developed beyond input metrics to include measures that demonstrated the resultant growth. Alternatively, it was suggested that the narrative could be developed to incorporate a form of templated impact assessment. Finally, would there be benefit from looking at all metrics, beyond the local growth and regeneration perspective, through a place lens for example by capturing the regional source of contract research income?
197. The exploration of alternative metrics was also discussed but no currently available alternatives were identified. However, there is scope to improve this picture in the future, particularly around the growing body of evidence around place based economic impact work such as job creation, green housing, campus infrastructure and other spill over impacts. Attendees felt that such data could be valuable as the basis of future alternative metrics. However, the significant additional burden of collecting such information was acknowledged when considering the incorporation of these elements in future HE-BCI collections. The design of this data collection would require careful planning, definitions, and guidance, with full consideration of the potential burden against the added value it would provide.
198. Finally, the group recognised the potential for the value of this metric changing over time, in particular as the impact of declining European funding becomes more

evident. When examining the sources of regeneration funding reported in HE-BCI, shown in figure 30, the single largest source of funding that contributes to the metric is European funding. In addition to providers' opportunity to apply for such funding being limited by their location, concerns were expressed about the future of regeneration funding and the role of universities in any UK replacement schemes.

Figure 30 – Source of regeneration funding reported to HE-BCI by HEPs in England in 2019-20⁸



199. Another element of discussion for this perspective was the timing of the data collection and narrative statement updates. Investments in local growth and regeneration activities are generally long term in nature and the view was put forward that it may be more valuable to have a longer time series of data included in the metric and that narrative statement updates should be every two or three years so that long term impacts and improvements can be demonstrated.

⁸ Source: HE-BCI Survey 'Income from regeneration and development programmes by HE provider', <https://www.hesa.ac.uk/data-and-analysis/business-community/regeneration>

Narrative statements

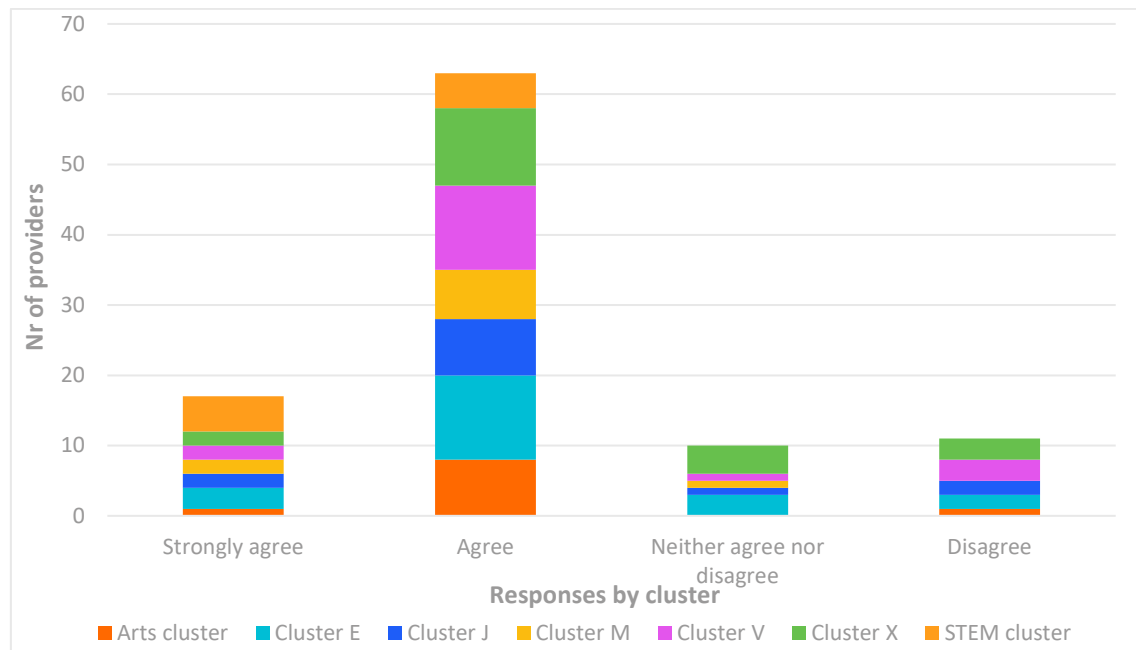
200. The metric for local growth and regeneration was supported by the optional submission of narrative statements by providers. In total 117 of the 136 eligible providers chose to provide a narrative statement using a template that requested the information given below in Table 10.

Table 10 – Local growth and regeneration narrative template contents

Aspect	Description
Summary	Summary of your approach to local growth and regeneration
Aspect 1: Strategic approach	Information on the strategic approach to local growth and regeneration as a means to understand intended achievements including: <ul style="list-style-type: none"> • Strategically relevant geographic areas at a local, regional, national or international level. • How these were identified. • How the 'needs' of the area(s) were identified.
Aspect 2: Activity	Information on the focus of approach and the activities delivered. Including how it was known that the activities met the needs that had been identified.
Aspect 3: Results	Description of the outcomes and/or impacts of the activity and how these were communicated or acted upon.

201. In the KEF survey we asked providers who had completed a narrative statement whether they considered that the narrative statement templates and questions enabled their institution to give an effective overview of their goals, activities and impact. As illustrated by figure 31 there is strong support for the templates with nearly 80 out of 101 respondents either agreeing or strongly agreeing that they were effective. Supporting comments noted that the 2,000 word limits were challenging, particularly for larger more complex organisations, while others felt it provided useful way to succinctly frame activity. (Refer to figure 23 for more feedback on word limits.) Constructive feedback was also received noting the overlap of information captured between sections within a single perspective and across the two perspective narrative statements. However, support was generally expressed for the simpler structure of the local growth and regeneration template, compared with the public and community engagement perspective.

Figure 31 – KEF survey - did the two narrative statement templates and questions enable providers to give an effective overview of their goals, activities and impact?



202. In addition to supporting the outcomes of the KEF it has been clear that the added value of the local growth and regeneration narrative statements as a standalone resource has been significant. For the first time, the KEF has provided a single collection of coherent, relatively comparable statements of how higher education providers are actively contributing to the economic and social health of their environment. Participating providers have found the opportunity to see the work and context of their peers in this space very useful and they have become an invaluable resource for Research England as we draw on the information to contribute to government evidence gathering to inform wider activities such as policy development.

203. We are also undertaking further analysis of the statements to provide indicative trends of the local growth and regeneration partners and activities at a sector level. It should be noted when considering the indicative trends presented below that:

- a. The analysis to date includes a representative sample of 78 narrative statements across all clusters and regions.
- b. The word limits were significant constraints on the amount and detail provided, therefore many providers used examples to represent activity. As such our analysis only relates to the activities and partners referenced. The absence of reference therefore does not necessarily mean the absence of the partner or activity type and the choice of examples presented may be

more reflective of particular provider priorities, strategic goals, geographic context or partner needs.

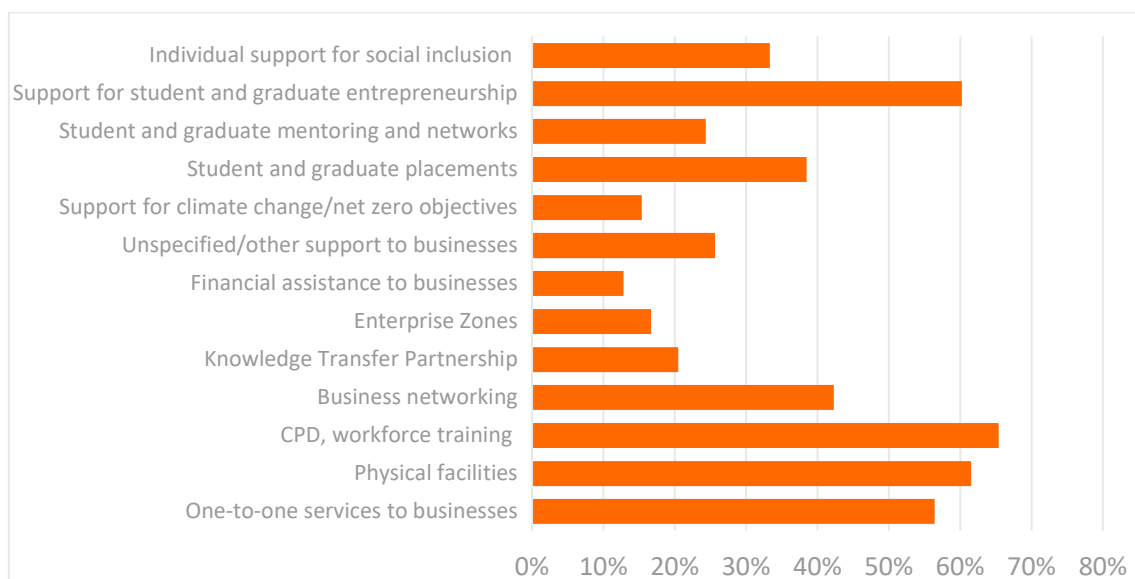
- c. The templates were relatively free form in the information provided, therefore a significant element of human judgement was involved in coding the information.

Local growth and regeneration services to businesses and individuals

204. Figure 32 illustrates the prevalence of different LG&R related services delivered by providers to both businesses and individuals. Here we can see that 'support for student and graduate entrepreneurship' was the most widely referenced form of support for students (60%), while the following three broad forms of support were offered by a majority of providers to businesses:

- a. One-to-one services (56%), such as consultancy services or business clinics.
- b. Physical facilities (62%), typically either premises for new or small firms, or access to specialist facilities (such as testing laboratories).
- c. CPD or other workforce training (65%). This covers a wide span of activity types from short workshops to degree apprenticeships.

Figure 32 - References to local growth and regeneration services provided to business and individuals

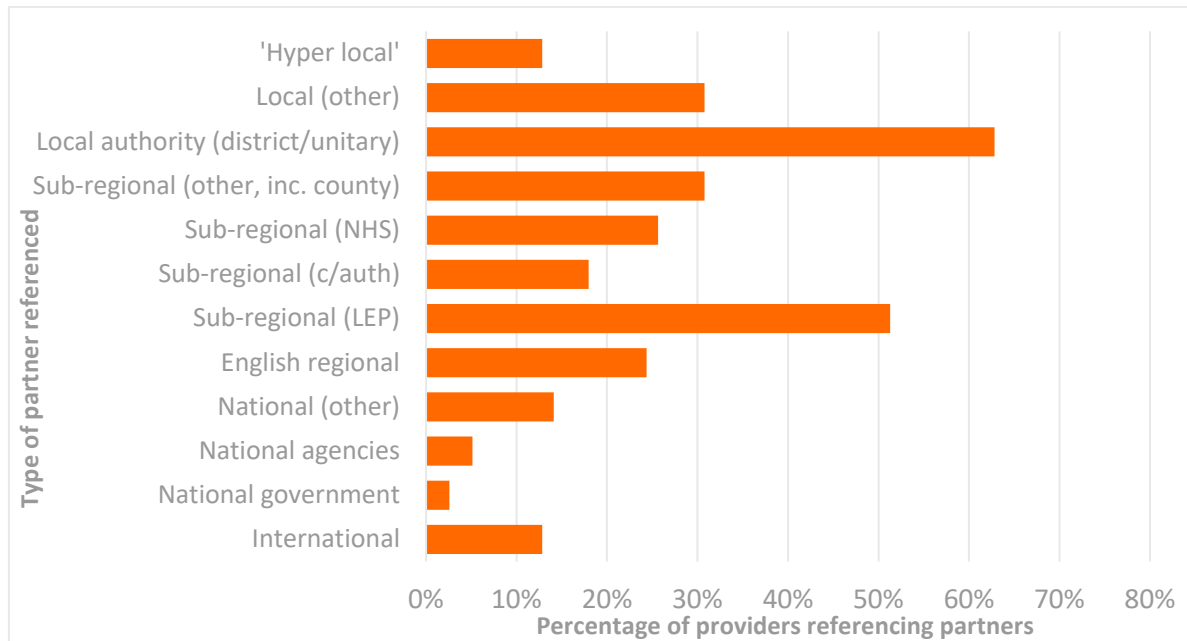


205. However, these high level breakdowns also concealed wider differences, with some notable indicative patterns emerging when the data is broken down into sub-groups. For example, providers performing in the top 50% of the local growth and regeneration metric were twice as likely to reference one-to-one business support services and half as likely again to reference provision of physical facilities. Similarly, London based providers were more than 30% less likely to reference one-to-one or physical facilities when compared to the rest of England. However, it should be noted that the regeneration metric is driven by funding, meaning that London providers are relatively poorly represented in the top 50% of providers.
206. In addition to providing direct support to businesses and individuals, many providers described other relevant LG&R activity with less identifiable beneficiaries. This was often through involvement in local partnership arrangements (such as Local Economic Partnerships), or through place-focused activities (such as festivals or other events).

Partnerships

207. Working in partnership with key local organisations is integral to local growth and regeneration activity, therefore our analysis sought to identify the types and focus of partnerships formed. As with activity types, it is likely that not all significant partners were explicitly listed, and even for those which were, the nature and depth of the partnerships were not always clear. Figure 33 illustrates the references to identifiable partners. Notably:
- a. District and unitary councils were the most often-identified partners (almost two-thirds of cases). Combined authorities are far fewer in number – but did appear to have a stronger focus where they did exist.
 - b. Local Enterprise Partnerships were the only other identifiable partners for a majority of providers – understandably, given their own growth and regeneration responsibilities. Their incidence may well have been higher but for the stronger profile of the combined authorities in areas such as London and Greater Manchester where these authorities may assume the roles of LEPs.
 - c. Few partnerships were identified with organisations at a much larger or smaller scale (e.g. national or sub-lower tier local authority level). Focus appeared to be very much on local and sub-regional geographies.

Figure 33 - References to local growth and regeneration partners in the narrative statements



Place based activities

208. Finally, we also analysed the narratives for 'place focused' activity that was not directly delivered to individuals or businesses. While individuals or organisations may benefit, these activities are open to a wider audience. We coded these according to the following two broad categories:

- a. **Growth-focused activity** – such relevant research on local economic issues or contributions to Local Economic Partnerships, Business Improvement Districts or other groups.
- b. **Inclusion-focused activity** – such as policy research, support for local regeneration schemes, often more related to cultural activity rather than economic inclusion, including festivals and events, or community development and environmental projects not focused on direct economic outputs.

209. While noting the particularly subjective nature of coding to these categories, we have identified a marked difference in references to growth-focused activity between London providers and the rest of the country, particularly the North and Midlands. As illustrated by figure 34, only one-third of London providers referenced place-based growth activity, compared with around three-quarters in the North and Midlands.

Figure 34 - Comparison of references to place based ‘growth’ or ‘inclusion’ focused activities by location of provider



Future developments

210. Short term

- a. We will look to make amendments to the visualisation of the perspective to improve the understanding of the metric and balance with the narrative statement.
- b. Consideration of frequency and timescales for narrative statements updates.

211. **Medium term** – A potential way to improve the understanding of this metric could be the provision of standardised information about the economic geography across England that provides context for the metrics and the narrative statements.

212. **Long term** – Many of the issues identified with the use of this metric are exacerbated by it being a single metric within the perspective. In the long term, balancing this input metric with measuring outputs around the outcomes and impact of university place based economic impact activities could present a more complete picture.

Other considerations

213. There is currently value in the continuation of this metric, however this picture could shift in the future as the funding landscape changes so it will be important to monitor changes over time and re-evaluate the utility of the metric.

6. Metrics and methodology

214. To review the metrics and methodologies used in the first iteration of KEF expert advice was sought through the formation of a KEF Metrics Expert Group. This section details the data problems this group addressed and the associated discussions.
215. The group membership comprised both members with significant expertise in data and statistical analysis, or analytical experience of knowledge exchange and its measurement. Membership of this group was as follows:
- **Tomas Coates Ulrichsen** – Director, University Commercialisation and Innovation Policy Evidence Unit, University of Cambridge
 - **Zoi Roupakia** – Research Associate, University Commercialisation and Innovation Policy Evidence Unit, University of Cambridge
 - **Lotte Boon** – Head of Research Systems and Information Management Team, University of Oxford
 - **Shirley Coleman** – Royal Statistical Society, Quality Improvement Section Chair (Newcastle University)
 - **Lyuba Dimitrova** – Lead Analyst, UKRI
 - **Maggie Smart** – Principal Analyst, Office for Students

Purpose and objectives

216. The KEF metrics expert group was established to provide specific advice and suggestions to Research England on the further development of the metrics and methods used in the KEF. The group were asked to comment on technical aspects of the KEF and the robustness of the analytical methods currently used to reflect the underlying data.
217. The purpose of the group was to provide insight and statistical expertise on various analytical methods used to handle and manipulate KEF data, including:
- a. Assisting in identifying potential methodological difficulties present in the first iteration and challenging current methods where appropriate.
 - b. Providing technical insight into current data challenges and the interdependencies of different methods.
 - c. Commenting on the viability of alternative methods suggested by the group and RE.

218. The group were not required to provide formal recommendations on changes to current methodology, only to offer thoughts and expertise to then inform any decisions we propose as part of wider KEF review.

Discussion topics

219. Over several meetings the group discussed a variety of specific data problems and also reviewed and explored the KEF method more broadly. The main issues for data and methods currently can be categorised as those that arise from the diversity of the data that is included in the KEF, and those that arise due to the mathematical processes of reaching a perspective value from contributing metric values.
220. A data problem discussed that arises due to the diversity of the HE sector and therefore the data representing providers' diverse activities, is the presence of outliers and the difference in orders of magnitude within an individual metric. In the current method the largest 3-year value across the sector for each metric is used to normalise all other values to a 0-1 scale before calculating the perspective deciles. Therefore, if the largest 3-year value is a significantly large outlier then the remaining data values are scaled to significantly smaller values than if the outlier were not there. This results in such metrics effectively contributing less towards the overall perspective decile, and relatively high or low performance in this metric may not be represented in the overall perspective decile appropriately.
221. Various solutions were discussed including introducing a metric cap, although an appropriate cap would be difficult to determine and implement. Alternative methods of implementing min-max scaling were also discussed, however a simpler suggestion to address this issue was the removal of the need to conduct a scaling step.
222. In addition, due to the diversity of the HE sector and their KE activities, data used in the KEF can be sparse and as a result a large number of institutions report a zero value for the 3-year average in some metrics. This issue is particularly apparent in the *IP and commercialisation* perspective where a count of spin-outs is used rather than HEI income for the denominator and consequently a large proportion of the sector report a zero value. In order to place these providers in a decile, the current method reduces the decile range and all zero-reporting institutions are all placed in a higher decile.
223. Therefore, one of the issues encountered with such sparse data is that relative performance across metrics is not necessarily consistent or accurately reflected. For instance, institutions reporting a zero metric value could in theory be placed in a

“top” decile if sufficiently few institutions are reporting non-zero values and fill few upper deciles. Alternative methods suggested included placing institutions with zero metric values in the lowest decile, or not deciling them at all. Furthermore, the removal of the requirement to decile would also reduce this issue associated with sparse data.

224. A further problem presented to the group was that robust data to represent KE activity is still relatively limited, and therefore the number of contributing metrics varies in each perspective. However, each perspective is presented equally on the KEF dashboard and so at a perspective level view, each metric is not equally influencing the perception of an institution’s KE activities. For instance, there are two contributing metrics in the *Research Partnerships* perspective compared to five in the *Working with Business* perspective, so an institution who may focus on a particular activity within *Working with Business* but who do not perform as well in a given *Research Partnerships* metric may not be fairly represented on the dashboard or by the relative decile scores.
225. However, it was raised that this difference in behaviour may to some extent be taken into account by clustering. This issue primarily stems from the need to combine metric values in some way to produce an overall perspective value, the possibility of removing perspective values was also discussed.
226. It was raised more generally if distinct methods could be employed to tackle issues that are more prominent in specific perspectives or metrics. However, it was deemed that not using a consistent methodology across the KEF dataset would not only be very complicated and decrease the transparency of the KEF, but also make future evolution of the KEF methodology more difficult.
227. In addition, a key consideration when exploring the current methodology and possible alternatives was how specific types of performance may be better reflected, which was also discussed by a number of the sector focus groups. For instance, how the selection of particular analytical methods may be favouring particular types of performance was discussed. Specifically, using an averaging step can allow a higher overall result for providers enables a more consistent performance across a greater number of metrics and areas of KE or extremely high volume performance in a narrower number of metrics areas of KE to be better represented in the final perspective values.
228. Finally, it was recognised that issues with the methodology used in the KEF are closely aligned with the visualisation tools chosen to present it. Therefore, potential changes to the methodology or the visualisation techniques should be considered alongside any changes to the other.

Proposed alternative method

229. As a result of the data problems explored above, an alternative KEF methodology was posed to this group. The proposed method seeks to improve on the current KEF method primarily through the removal of the scaling step and the use of deciles, which are sources of a number of the data problems above. The placement of institutions in deciles had resulted in inaccurate representations of performance in some metrics where data was particularly sparse and also created the need for a scaling step, which in turn allowed outliers to have a significant effect on the relative contribution of different metrics.
230. The proposed method is as follows:
- a. A three-year mean average value is calculated for each metric
 - b. All institutions in the whole sector are then ordered by their three-year averages to give a metric position (1st-134th). Note that ties are unlikely in the metric values. All providers reporting a zero value would be given an equal lowest position (134th).
 - c. For each institution the total perspective value is calculated by summing the positions of each contributing metric
 - d. Institutions are then ordered across the sector by their total perspective values to give a perspective position (1st-134th) across the sector
 - e. The sector is divided into quantiles based on their perspective positions, and their performance in each perspective given a label using an involvement level corresponding to their quantile (very high to very low). We are proposing to only display this involvement level, rather than the rank or position relative to the rest of sector
 - f. Cluster average involvement levels are calculated by taking the mean average of the perspective positions of institutions belonging to that cluster, and reporting the involvement level of the quartile in which the cluster average lies.
231. This method is similar to the current deciling method used, but positions are being used rather than the absolute metric values so the need for a scaling step is removed which was felt to contribute significantly to many of the data problems previously discussed by this group. Each metric is then equally represented in the perspective, and relative performance within a metric is also still reflected. As noted above in paragraph 230.b, all institutions reporting a zero value for a metric would be given an equal lowest position (134th).
232. However, an ongoing issue with this proposed method is that the summing of metric values to give a perspective value effectively encourages consistent average performance across metrics rather than excelling in specific areas of KE based on strategic decisions or institutional capacity. However, the group considered that this

issue exists in the current method where the scaled metric values are mean averaged to calculate the perspective value, so the alternative method is not exacerbating this issue.

Future Developments

233. It was apparent through these discussions that there is an important distinction between issues that arise due to the underlying data that is used in KEF and breadth of current data collection, and issues that are due to the analytical methods currently employed. Improving the breadth of underlying data is in many cases not a short-term endeavour and has been discussed at length earlier in this report. Conversely, there are various solutions and alternatives methods to the issues arising from the current analytical methods and these are potentially simpler to implement.
234. **Short term** – we will explore the implementation of an alternative methodology that could include the removal of deciles and/or the need for a min-max scaling step. In addition, we will explore the removal of the use of perspective values.
235. **Medium term** – we will explore alternative uses of perspectives that avoids the need to produce overall values, but instead employs perspectives as a lens in which to view or aggregate metrics.
236. **Long term** – in line with long term developments for specific perspectives, exploring the collection of additional robust data or the selection of data used in the KEF to ultimately increase the number of metrics would address a number of data complexities raised.

7. Data presentation and visualisation

237. This section contains the findings from the KEF survey and the user testing performed by the data visualisation agency AddTwo, alongside proposals for future development in the form of a summary of changes and examples of possible visualisation options to be considered in the KEF Options Survey.

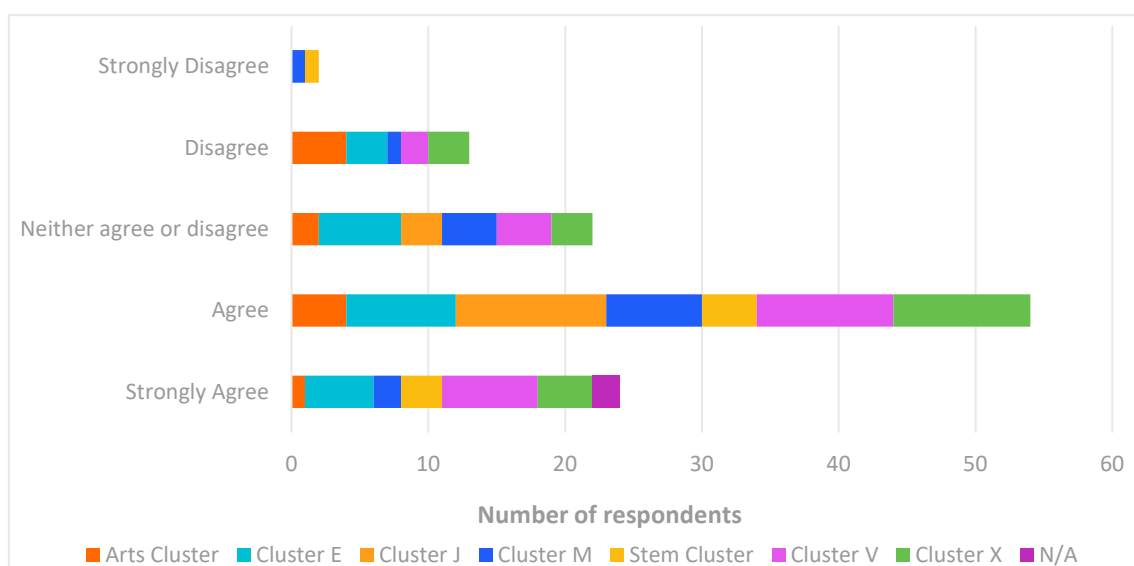
KEF survey

238. A number of questions in the KEF survey related to the methods by which KEF results are currently visualised. A summary of the responses is discussed below.

239. Respondents demonstrated a strong preference for the KEF perspectives to be displayed with equal weighting, with two thirds of providers either ‘agreeing’ or ‘agreeing strongly’ as illustrated in figure 35. Specific comments in the survey highlighted that this balanced approach enables all provider types and their diverse portfolios to be seen equally. Respondents noted it was hard to see how introducing a weighting would help. This would imply greater emphasis on one area of activity over another, when in fact knowledge exchange is context dependent.

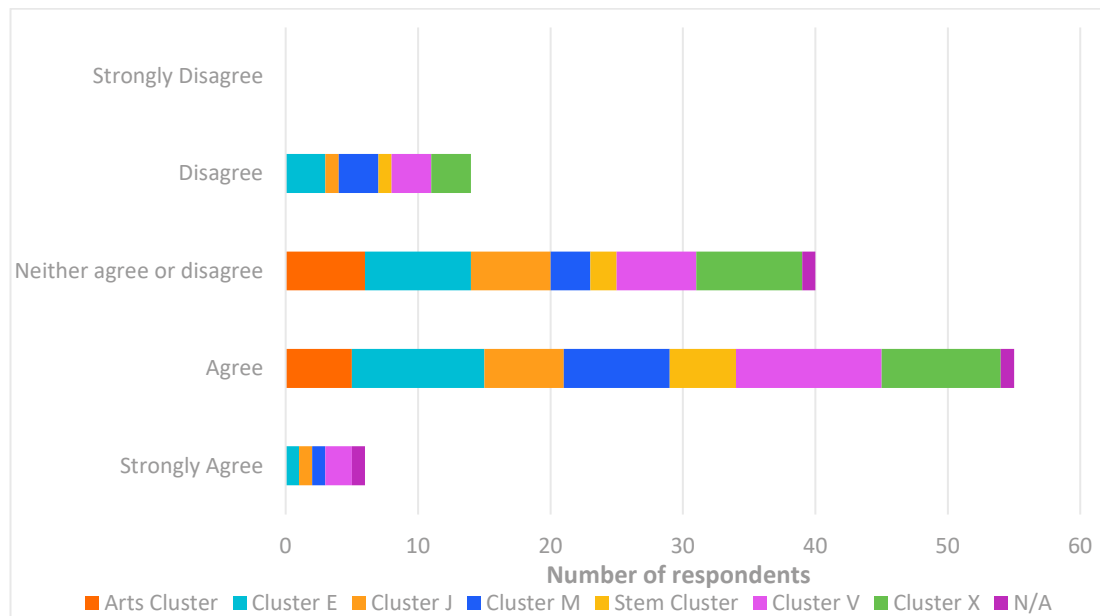
240. A minority of respondents felt that presentation of perspectives should be more reflective of provider missions, and as a result suggested that greater prominence should be given to provider contexts in which they operate.

Figure 35 – KEF survey responses to whether the seven perspectives should be displayed with equal weighting



241. Respondents presented a range of views when asked to consider whether metrics should be summed to display a single overall decile result for each perspective, as displayed in figure 36 below. Over half of respondents either 'agreed' or 'strongly' agreed with this statement, however a third of respondents did not present a fixed view with the remainder disagreeing with the statement.

Figure 36 – KEF survey responses to whether the metrics should be summed to display a single overall decile result for each perspective



242. There were a number of positive comments captured from the KEF survey feedback on the display of the KEF metrics:
- The results are presented in a clear and simple way, although some question around how useful this view is to potential collaborators.
 - Deciles were a good option to minimise the potential of the KEF becoming a 'competitive', exercise allowing a level of comparison to take place.
 - Summing the metrics was an adequate approach as disaggregating the metrics would only further complicate an already complex methodology.
 - Some noted that weighting of different metrics may be useful rather than assuming all metrics to be of equal weight in calculating the overall decile result.

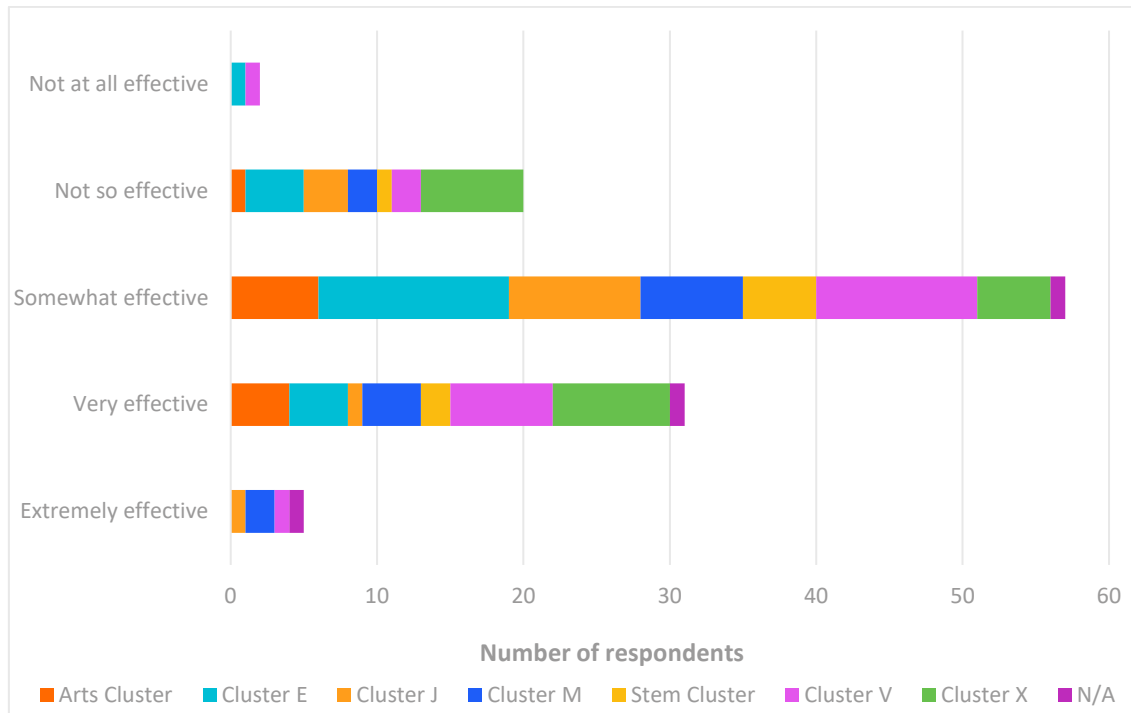
243. A number of drawbacks were also raised:

- a. Deciles are not always easily understood and can be a confusing way to interpret performance (e.g. some ambiguity around what meant by being either side of the top 50% and bottom 50%).
- b. Some of the language read quite negatively e.g. being in a 'bottom' percentile. The language invites a competitive view of the KEF e.g. top 10%, which was beyond the original objective of the exercise (presenting inter-cluster comparisons).
- c. Summing of the individual metric results makes it harder rather than easier to assess an institution's performance in each perspective, particularly when all institutional metrics are being used to calculate decile scores. Some noted that this undermined the approach to clustering.
- d. Scaling methods are resulting in uneven weighting of metrics within perspectives.
- e. Some raised potential methodological and visualization-related issues regarding averaging methods to achieve an overall decile result for each perspective.
- f. Some concerns were also expressed regarding data robustness causing some skewed results.

244. Providers were mixed over the effectiveness of presenting each institutions decile score against the average decile score for the cluster with the majority of providers reporting that it was somewhat effective.

245. Respondents were asked to consider the effectiveness of presenting each institutions decile score against the average decile score for clusters, as illustrated in figure 37 below. The survey results presented a mix of views with a third of respondents finding this approach either 'very effective' or 'extremely effective' compared to one fifth finding this 'not at all effective' or 'not so effective'. Half of the respondents fell somewhere in the middle, expressing their views on this approach to be 'somewhat effective'.

Figure 37 – KEF survey responses to the effectiveness of presenting each institutions decile score against the average decile score for the cluster



246. Whilst a number felt that comparison of decile scores against the decile averages had been well presented given the available space on the website, a number of general concerns and suggestions for overall improvement of the dashboard were raised as follows:

- a. The presentation and visualisation of the dashboards could be significantly improved by giving greater prominence to narrative statements.
- b. The contributions of each metric to the overall perspective is not always clear, requiring individual dashboards to be studied in great detail.
- c. Some concern was expressed for the visualisation of the Public and Community Engagement perspective, noting this required self-assessment scores across five aspects. The dashboard only visualises the final summed score as a full segment. This could imply that a provider has reached the top possible score, inviting a risk of complacency, rather than illustrating public and community engagement as an activity which needs continuous strategic support and investment.

- d. The 'institutional context' narrative does not stand out on the dashboard and it is not obvious where they are on a quick glance, and so could visible and intuitive links from the dashboard be included.
- e. Additional labelling to aid confusion, where "top X%" is stated, this should say "of all participating institutions" to ensure it is not read as top x% of the cluster.
- f. There is a lack of clarity over the audience and purpose of the KEF dashboard and there is no information about its usefulness outside of the HE sector.
- g. Respondents commented on renaming of perspectives to better represent the underpinning metrics.

AddTwo user testing

- 247. In addition to seeking feedback on the KEF dashboard, Research England commissioned data visualisation agency AddTwo to provide expert input into the review of the visualisation and explore possible options for improvements.
- 248. The initial feedback received through the KEF survey was used to frame more in-depth user testing. AddTwo hosted one to one interviews with a small, inclusive sample of 8 representatives from a range of stakeholder backgrounds to explore potential options for re-visualising the KEF dashboard.
- 249. The findings from the user testing groups echoed a number of the comments that was captured via the KEF survey, however additional comments were raised in relation to the KEF dashboard throughout the user testing sessions:
 - a. "The individual charts are hard to understand and extract information from."
 - b. "It is not always easy to work out how to navigate down through the site, particular to metric level."
 - c. "There are issues with basic functionality e.g. clicking the back button does not seem to work, the site is also slow to load, or 'forgets' the page you were on if your screen is left to idle."
 - d. "It is particularly hard for visually impaired users to navigate and inaccessible to screen readers."

- e. “It is easy to miss the average line, or it could be easily misinterpreted.”
 - f. An additional comment was raised in relation to a visual bias introduced to the presentation of results through use of a polar area chart. Users noted that the space each segment take up should be correlated to the values represented as a total area, rather than plotting measures as a circular radius as these are not directly proportional to decile numbers.
250. To date, AddTwo have worked with Research England to develop some early examples of possible visualisation options for future iterations of the KEF. We have presented some sample indicative images of these options at Annex A and we will seek high level views on these through the KEF Options Survey in the spring of 2022 (refer to section 9 - Summary of findings and recommendations for more information). However, further development work would be required before significant changes to the visualisation of the KEF could be implemented.

Future developments

251. **Short and medium term** – we will continue to develop and explore alternative visualisation options, and look to implement some changes were possible for the second iteration of the KEF. Visualisation options in the future will also be dependent on any changes to the underlying methodology.

8. Areas for future development

Contributions in-kind to collaborative research

252. We consider that in-kind contributions represent an important proxy for knowledge exchange activity and performance and constitute valuable evidence to demonstrate how publicly funded research leverages in private investment. However, there is currently significant variance in the practice of recording contributions across the sector. While we initially proposed in-kind contributions to be included in the KEF, it became evident from the KEF consultation and pilot that this was not currently a sufficiently robust metric.
253. It is a medium term aim to incorporate contributions in-kind into the KEF, and to this end we have been undertaking a separate work stream to investigate how we can facilitate improved data recording to the Higher Education Business and Community Interactions (HE-BCI) Survey. Whilst our main motivation for this work is to improve the data collected through the HE-BCI survey for purposes such as the KEF, we consider that guidance for more robust measurement of in-kind contributions could be also useful to other councils of UKRI, and the devolved funding bodies.
254. Progress in this work stream is currently as follows:
- a. **August 2020** – An initial round table event to discuss issues around collecting and recording in-kind contributions to explore definitions, principles for placing value on different types and principles and good practice in collecting and recording contributions. Representatives from English HEPs, the devolved funding bodies and their HEPs and business representatives attended the session and a discussion paper was published in January 2021.
 - b. **April 2021** – A follow up round table event was held after an open call for participation to members of PraxisAuril and ARMA. Attendees discussed principles for ‘types and methodologies’, ‘guidance’, and considered other issues around dependences with other reporting requirements, system barriers and the burden versus benefit of various options.
 - c. **Next steps** – We plan to use the discussion outcomes from the first two sessions to stimulate further discussion with UK regulatory and funder stakeholders, to ultimately develop more detailed set of good practice guidelines that will inform the HESA led review of the HE-BCI data collection.

KE with arts and cultural organisations

255. Another area we are looking to address through the future development of the KEF is its suitability for capturing KE with arts and cultural organisations, as discussed previously in this report. Many of the current KEF metrics reflect monetised activities or use income as a proxy for impact, however there are typically significantly fewer monetary transactions in the arts and cultural KE. Therefore, the current metrics and the underlying data used are likely to not be reflecting the breadth this activity.
256. We hope that ultimately we will be able to mitigate this issue through the development and use of new metrics as discussed in the sections considering specific perspectives. We will continue to work alongside experts and groups who have greater knowledge and experience of KE in arts and culture to inform this development work, such as providing funding for the National Centre for Cultural and Academic Exchange (NCACE) to evidence KE with the arts and cultural sector and its successes.

Incorporating the ‘voice of the user’

257. Another possible development area for future iterations of the KEF is how to incorporate a voice of the user aspect to reflect the quality and depth of relationships and interaction of HEPs with their partners. This was also raised specifically in the KEF focus groups in relation to the suitability of metrics in the *Research Partnerships* perspective.
258. We have previously been working with Bsquared consulting to investigate investigate the current performance of the HE sector with engaging and building relationships with their partners. We will publish this work and use it to inform further discussion and exploration around how such an element could practically be designed and then implemented in the KEF.

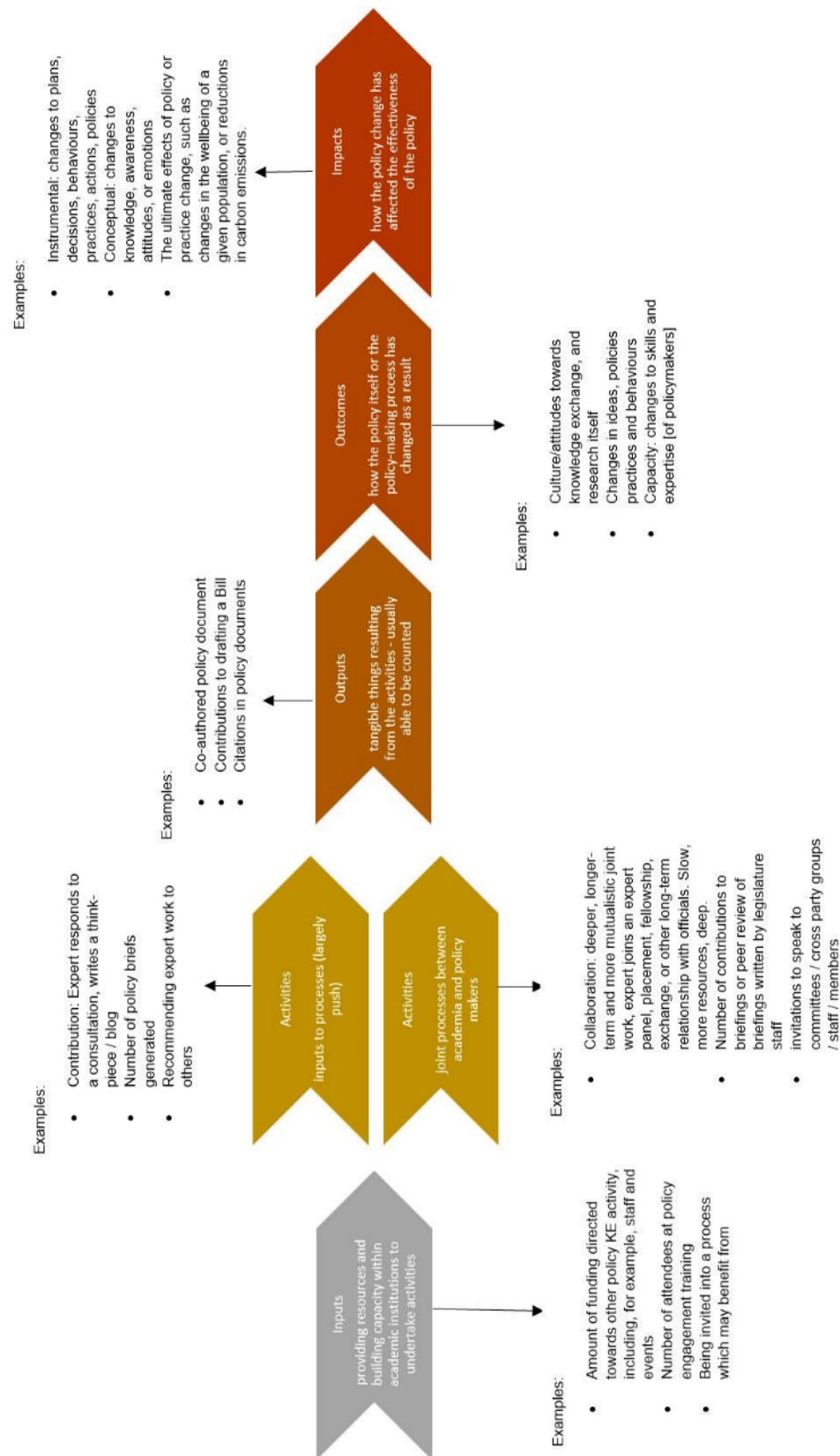
KEF and policy engagement

259. This section will discuss some early work that looks to explore the inclusion of policy engagement activities in HEPs as an additional perspective in the KEF.
260. There is much activity in the sector focused around increasing the impact of research on policy making with various networks and groups that exist across the sector. This would include embedding good practice and understanding lessons learnt to facilitate HEP strategic priorities in engaging policy makers and associated communities. None of this activity is currently captured in the KEF, however it is

considered an important form of knowledge exchange across the higher education landscape.

261. This initiative emerged as a result of early engagements with the sector at a roundtable event in March 2020 which sought to reflect on sector wide experiences and learning of research policy engagement processes. HEPs were the main representatives at these sessions but they were also attended by other stakeholders such as the Areas of Research Interest (ARI) fellows.
262. To consider how policy engagement related activities could be measured for the purposes of the KEF, Research England engaged in a number of very early discussions with HEPs, government stakeholders and sector networks, including the Parliamentary Office of Science and Technology (POST), Universities Policy Engagement Network (UPEN) and the Open Innovation (OI) network to explore what inputs, activities, outputs, outcomes and impacts comprise the variety of complex pathways that result in successful policy engagement.
263. By means of acknowledging the complexity of potential pathways available to HEPs engaged in a diverse variety of policy engagement endeavours, Research England devised a draft logic model of these activities (see figure 38 overleaf). This was done for the sole purpose of bringing clarity to discussions through providing a structure to frame thoughts from sector stakeholders around what potential measures might be feasible to capture and include in future iterations of the KEF.

Figure 38 – Research England draft logic model of examples comprising potential HEP policy engagement pathways



264. In early September 2021 Research England convened a small round table event with a group of policy engagement experts from across the sector. The overarching focus of the session took a practical approach exploring appropriate measures capturing policy engagement related activities in HEPs. Views were also sought on suitable approaches for embedding policy engagement as an additional perspective in the KEF.
265. A number of input measures were suggested by the group. Members emphasised these were easier to capture as metrics and noted the relative difficulty of capturing measures the further the logic model progressed towards impact measures. It was acknowledged that inputs are essential to underpin the outputs of policy engagement activity and can be a good indication of the relative importance providers are placing on these activities. However, it was recognised that they were not necessarily useful proxies for impact. The group discussed the complexity and relative burden potentially associated with capturing latter stages of the logic model, specifically ‘outcomes’ and ‘impacts’. ‘Activities’ and ‘output’ phases of the logic model are therefore likely to be where future metrics are best focussed in the KEF for policy engagement activities.
266. Early thoughts around ‘activities’ and ‘output’ metrics were suggested by the group. The group considered these as potentially suitable metrics to develop for longer-term iterations of the KEF:
- a. Counts of events with a policy engagement focus.
 - b. Activities that captured some level of ‘coproduction’ efforts to enable policy engagement.
 - c. Counts of citations in policy documents.
267. One potential metric idea well received by the group involved tracking the number of policy document citations using an example database tool named ‘Overton’. The group considered this tool to be a low burden method for incorporating counts of policy document citations in the KEF. Further work would be needed to explore the limitations of using database citation tools for the purpose of KEF metrics, along with further testing to ensure they were largely representative at a provider level.
268. Given the lack and relative low maturity of metrics available for policy engagement activities collected by universities, there was consensus that it would not be sufficient to include metrics on their own for the first iteration of the KEF. The group noted that inclusion of a narrative statement or maturity self-assessment exercise (as per the public and community engagement perspective) would be a helpful

addition to any basket of metrics selected, as this would provide greater flexibility for providers to showcase any additional measures and context-based factors through the narratives. Attendees also noted it would allow providers to further incentivise and offer enhanced visibility to academics supporting their provider's policy engagement initiatives.

269. The group noted that inclusion of narrative statements would also assist against potential gamification of metrics, given that the self-assessment model demands reflection at a provider level to reveal the scale and broader ecosystem of organisational activities. They also commented how useful the guidance and examples included within the public and community engagement had been, and supported the idea of having something similar for any future policy engagement perspective.

Future developments

270. Policy engagement activity sits as a key area of knowledge exchange that goes uncaptured by the HE-BCI survey, and the subsequent KEF. Delegates were supportive of additional recognition of policy engagement activities providers are engaged with through the exercise.
271. **Medium and long term** – in the absence of robust metrics, we may look to develop a narrative/maturity self-assessment narrative to allow institutions to showcase the policy engagement work they are currently undertaking
272. **Long term** – in line with long term developments for specific perspectives, exploring the collection of additional robust data or the selection of data used in the KEF to ultimately increase the number of metrics would address a number of data complexities raised.

9. Summary of findings and recommendations

273. This section summarises the findings of the review, the changes we will take forward for decision with the sector from the KEF Options Survey for KEF2, as well as areas that require more development.

KEF purpose

274. The KEF was developed with the following purposes:

- a. **HEP performance improvement** – To provide 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. **Information for external users** – To provide businesses and other/future users of HEP knowledge with an additional source of information, for purposes such as increasing visibility of potential university partners and their associated strengths, contributing to internal decision-making processes.
- c. **Accountability** – Underpinning both of these purposes is the objective of providing more easily accessible and comparable information on performance, for the purpose of greater transparency and public accountability.

275. We have used the survey, focus groups and other forms of evidence to consider how the first iteration of the KEF has performed against these purposes.

- a. **HEP performance improvement** – Overall the survey and focus groups have demonstrated that the KEF has been positively received as a useful tool with a positive impact on providers. In addition to incentivising KE discussions, activity and strategic planning, data collection is improving and for many it has provided a useful basis for KE Concordat action planning. However, we recognise that there remains room for improvement, particularly in improving the limited range of KE activities that are represented by the metrics.

- b. **Information for external users** – Since inception of the KEF, ensuring value for external users has been a challenging element when using data currently readily available. An important step forward for future iterations of the KEF would be to embed the voice of users of university higher education knowledge exchange into the KEF. To this end we have also commenced work to consider the ‘voice of the user’ (see section 8 – Areas for Future Development) to explore how this could best be achieved. The findings from the KEF survey and focus groups highlight that the KEF has been of limited direct value to external users in its current form. Particular feedback expressed by the focus groups noted the language and visualisation used to express the metrics are not easily accessible to external users.
- c. **Accountability** – The development of the KEF and KE concordat have substantially increased the information available on the use of Research England’s knowledge exchange funding. This has enabled us to reduce additional information that we request periodically from providers on their plans for HEIF. In addition, the availability of the data and narrative statements has provided an invaluable evidence resource for government and policy makers on the knowledge exchange work of providers. In particular, the narrative statements on local growth and regeneration have, for the first time, brought together data from the English HE sector on the role of universities to support economic growth and regeneration across the country.

Short term changes for consideration through the KEF Options Survey

276. This section describes changes and areas of work that we will either take forward for development of KEF2, or for the development of the narrative statements. We will seek further feedback for these changes through the KEF Options Survey before decisions for KEF2 are finalised. For the majority of changes the survey will seek opinions on a preferred decision from a small number of options. For example, whether a perspective title should change to proposal A, proposal B, or remain as in KEF1.
277. Not all of the proposed short term changes will be possible to implement for KEF2. For the proposals that relate to changes to narrative statements, self-assessment scores and dashboard visualisation, the KEF options survey will seek opinions on presented options to set a direction of travel which will then require further development by Research England.

278. The KEF Options Survey will be launched in early 2022 in the format of a short online survey communicated to wide range of stakeholders. This will include key knowledge exchange or KEF provider points of contact, as well as those subscribed to the Research England KEF jiscmail list⁹. The KEF options survey will be open to any interested parties who wish to contribute a response.

Short term proposals for change to the methodology or dashboard visualisation

279. We are proposing an alternative methodology (as detailed above in section 6 – Metrics and Methodology) which could be used to calculate results in KEF2. The key aspects of this method which will be taken forward for sector consideration are as follows:
- a. Removal of deciles and therefore removing the need for scaling. We propose instead moving to measuring activity through ‘involvement levels’.
 - b. Thoughts around what to call ‘involvement levels’, how many should we use?
 - c. Removal of a perspective score, and use perspectives as a grouping tool for metrics and show only metric scores.
280. In addition, we are proposing the following potential changes to the KEF dashboard design and data visualisations, some of which may be possible to implement for KEF2:
- a. The addition of a landing page (and/or a map view).
 - b. Using individual ‘tiles’ as alternatives to the polar area chart, to represent metric and perspective performance (as demonstrated In Annex A).
 - c. Presenting the distribution of providers within a cluster for a given perspective and/or metric.
 - d. Enabling the provision of narrative statements to a more easily accessible format.

⁹ The Research England KEF jiscmail list is open to subscription via <https://www.jiscmail.ac.uk/cgi-bin/webadmin?A0=KEF>

- e. The addition of further pages to examine overall cluster performance each perspective.
- f. Including the use of filtering or other functions to enable the comparison of providers for individual perspectives.

Short term proposals for change to the perspectives or metrics

Table 11 – Proposed changes for each perspective for sector consideration in the KEF options survey

Perspective	Proposed change
Public & community engagement	Consider NCCPEs' recommendations to evolve the narrative statement criteria, particularly around scoring of aspects 4 and 5 (for development with next call for narratives and therefore not part of KEF options survey).
	Consideration of frequency and timescales for narrative statements and self-assessment score updates.
Local growth and regeneration	Consideration of frequency and timescales for narrative statement updates.
IP & commercialisation	Consider alternative spin-out denominators: <ul style="list-style-type: none"> • Number of active firms • Number still active which have survived at least 3 years • Research income.
	Change title of the perspective for example 'Research Commercialisation'.
Working with business	Change title of the perspective for example 'Business services' or 'Research and development for business'.
Working with the public & third sector	Change title of the perspective for example 'Research & development services for the public & third sector'.
Research partnerships	Addition of further output types to co-authorship metric.
	Change title of the perspective for example to 'Collaborative research and co-authorship with non-academic partners'.
Skills, enterprise and entrepreneurship	Removal of CPD learner days metric.
	Change title of the perspective for example to 'Skills, enterprise and entrepreneurship education' or 'Provision of CPD and graduate start-ups'.

Proposals for change in the medium term

281. A key area of discussion throughout the KEF review was the extent to which the breadth of KE activity conducted by the sector is being captured, to which a significant barrier is availability of robust data. A number of alternatives could be considered in the medium term whilst data collection is explored.
- a. Many of the sector focus groups suggested additional narratives for other perspectives to capture activity not currently represented through the metrics. However, this would add significant burden to the exercise.
 - b. In addition, the use of perspectives as a means of grouping metrics could be explored to be more flexible, and look to address the current issue of overlap of activities and metrics between perspectives.
282. For some perspectives there are improvements that could be possible in the medium term but which would require additional development in order to be implemented in the KEF. Table 12 below summarises these proposals.

Table 12 – Changes that could be possible in the medium term, with only some additional development

Perspective	Medium term proposals
Public & community engagement	Development of the 'evaluation' (aspect 4) and 'action on results' (aspect 5) aspects. Further improvement to the structure and information gathered is needed to demonstrate distinctions between the two aspects.
Local growth and regeneration	Development of standardized information about the economic geography across England that provides context for the metrics and the narrative statements.
Research partnerships, and Working business	Development of a more detailed set of sector-wide guidance for the recording of in-kind contributions to collaborative research that will inform the HESA-led review of the HE-BCI data collection.
Non-perspective specific	
General	Potential consideration and exploration of an alternative and more flexible use of perspectives, such 'tagging' metrics aligned with activity type or KE area.
Policy engagement	Development of a narrative/maturity self-assessment narrative to allow institutions to showcase the policy engagement work they are currently undertaking.

Proposals for change in the long-term

283. The proposals for change in the long-term are more speculative in nature and would require significant further exploration and development, these are summarised by perspective in table 13 below.

Table 13 – Long term suggestions that would require significant further development

Perspective	Long term proposals
Public & community engagement	Integration of robust metrics to balance or replace the self-assessment or narrative elements.
Local growth and regeneration	Balancing the current single input metric with measuring the outcomes and impact of university place based economic impact activities.
IP & commercialisation	Exploration of additional data sources and improving current data collection to represent a broader range of KE activity.
Working with business, and Working with the public & third sector	Exploration of additional measures to balance the existing income-based metrics to capture a broader range of interactions.
Research partnerships	Exploration of additional data sources to address the narrow range of activity represented.
Skills, enterprise and entrepreneurship	Exploration of additional, more appropriate measures of 'skills and enterprise & entrepreneurship'.
Non-perspective specific	
Policy engagement	Development of a narrative/maturity self-assessment narrative to allow institutions to showcase the policy engagement work they are currently undertaking
	Exploration of the collection of additional robust data or the selection of data used in the KEF to ultimately increase the number of metrics which could be used to capture this activity.
'Voice of the user'	Exploration of how such an element could practically be designed and then implemented in the KEF.

Timings for future iterations

284. The second iteration of the KEF will be published in summer 2022 following the release of 2020-21 HE-BCI data and the implementation of potential outcomes from the KEF Options Survey. The second iteration will be updated using data from 2020-21, 2019-20, and 2018-19, and therefore there will be two new years' worth compared to data used for the first iteration of the KEF (which used data from 2018-19, 2017-18 and 2016-17)
285. We **will not** require providers to submit new narratives for the second iteration of the KEF. However, prior to publication of KEF2 providers will be given the opportunity to request minor adjustments to correct factual inaccuracies only. Without a substantive new call for narrative submissions, we will not accept revised or new self-assessment scores.
286. The cluster groups confirmed for English HEPs for the first iteration will not be altered for the second iteration as, in the absence of updated REF results, we do not anticipate significant change.
287. It is anticipated that future iterations of the KEF will be published annually, in line with the original KEF principles. The timing of narrative submissions and any further clustering exercises will continue to be considered as we evolve future iterations of the KEF. Further development of the KEF will also be informed by the review of knowledge exchange funding.

Annex A – Draft example visualisation for future KEF dashboard

We have presented below some early examples of possible future KEF visualisations, created in partnership with data visualisation agency AddTwo. Significant changes to the presentation of this data would be subject to further development and consideration with key stakeholders.

Figure 39 - High level sample KEF visualisations

The image below sees the landing page of the KEF moving away from the current ‘polar area chart’ toward a ‘tiled view’ of providers. The landing page headline data would look to present a high level introductory descriptions of the providers, with a ribbon at the top of the page to offer various filtering options.

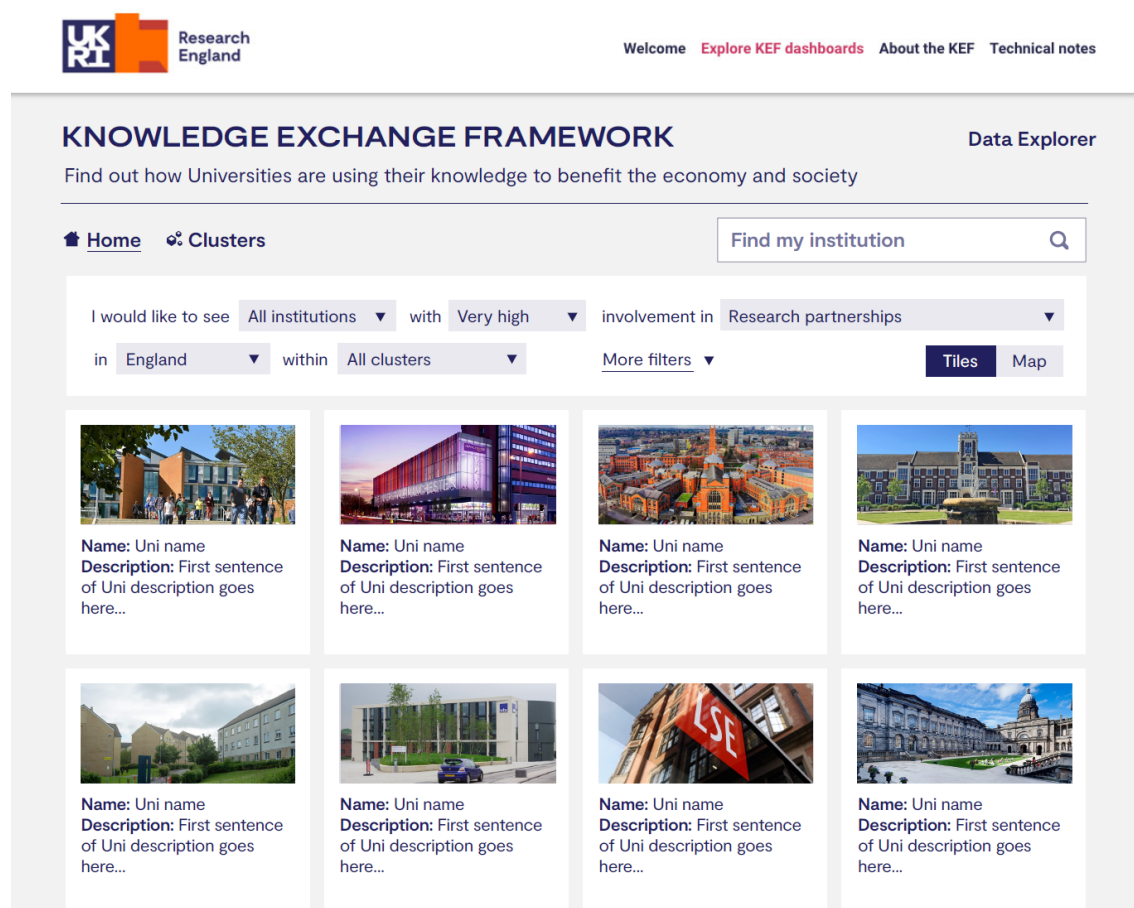
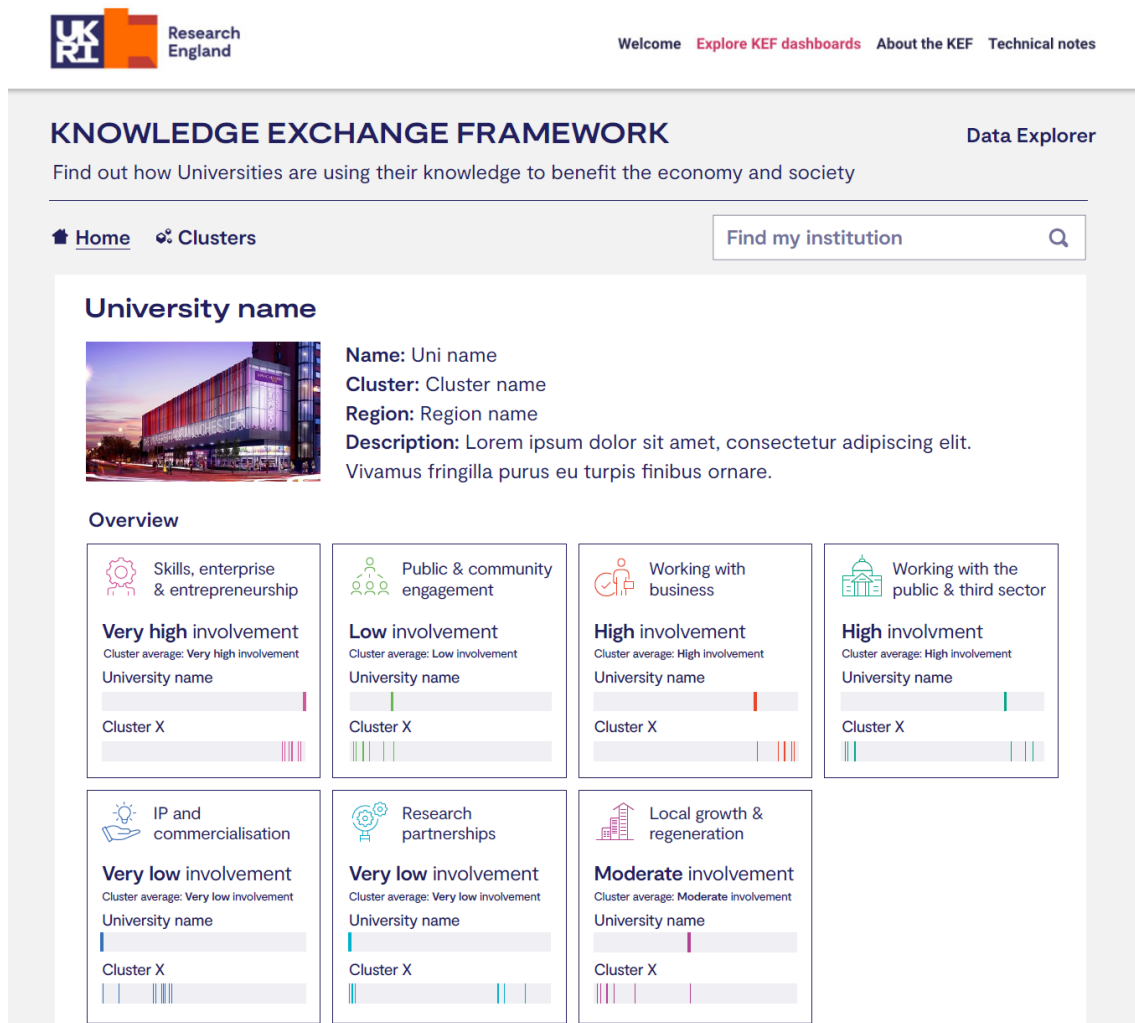


Figure 40 - Perspective level sample KEF visualisations

Exploration of individual provider tiles would present a drill down of provider performance across perspectives. In place of the current comparison labels indicating ‘top’ or ‘bottom’ percentage of providers, the new visualisations could give an indication of how ‘involved’ that provider is in comparison to its cluster peers for a particular perspective. The visualisations would look to simplify the graphics that enable providers to compare their performance against their cluster peers. Further work will be undertaken to present updated ‘metric level’ visualisations.



Annex B – Glossary of acronyms

ARI	Areas of Research Interest
ARMA	Association of Research Managers and Administrators
CPD/CE	Continuing Professional Development/Continuing Education
DLHE	Destinations of Leavers from Higher Education
ERDF	European Regional Development Fund
ESF	European Social Fund
FTE	Full Time Equivalent
HE	Higher Education
HE-BCI	Higher Education Business and Community Interaction Survey
HEFCE	Higher Education Funding Council for England
HEIF	Higher Education Innovation Funding
HEP	Higher Education Provider
HESA	Higher Education Statistics Authority
IP	Intellectual Property
IUK	Innovate UK
KE	Knowledge Exchange
KEF	Knowledge Exchange Framework
NCACE	National Centre for Cultural and Academic Exchange
NCCPE	National Coordinating Centre for Public Engagement
OfS	Office for Students
OI	Open Innovation
POST	Parliamentary Office of Science and Technology
PVC	Pro Vice Chancellor
QAA	Quality Assurance Agency
RE	Research England
REF	Research Excellence Framework
SME	Small and Medium-Sized Organisations
STEM	Science Technology Engineering and Mathematics
UKRI	UK Research and Innovation
UPEN	University Policy Engagement Network

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