ERS
Research &
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KEEP+ ERDF Summative report

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Table of Contents

Executive Summary i

1 Introduction 1

Background to KEEP+ 1

Evaluation objectives 2

2 Relevance and consistency of the programme 4

Economic and Policy Context 4

Specific Market Failures 5

Appropriateness of design 8

3 Progress against contracted targets 11

Progress Narrative 11

Progress Summary and future plans 15

4 Experience delivering and managing KEEP+ 17

Management and delivery arrangements 17

Engagement and referrals 19

Interventions 21

Delivery experience 23

Satisfaction with service 24

5 Outcomes and Impacts 27

Timing 27

6 Value for Money 31

7 Recommendations and lessons learnt 37

8 Conclusions 39

EXECUTIVE SUMMARY

Introduction to KEEP+

E1 KEEP+ is an ERDF supported Innovation programme operated for SMEs in four LEP areas (SELEP; New Anglia; GCGP and Herts). The programme is led by Anglia Ruskin University (ARU) with five other delivery partners (Brighton University; Essex University; Greenwich University; Hertfordshire University and University of Suffolk). The service provides matched funded contributions to a menu of five support options (academic and private consultancy the support of a student or graduate and a capital investment) offered by the programme. Design of the programme is based on an earlier ERDF programme (*Low Carbon KEEP*). Delivery started in January 2017, with an interim report covering the first 24 months of activity to December 2018 and this final report capturing the final 12 months of activity.

Relevance and Market Failure

E2 Our business survey found evidence of market failure, with two-thirds of businesses having never sought external support previously, with barriers such as lack of finance, high costs and uncertainty in knowing how to find an innovation partner all holding businesses back. Innovation was lower, in terms of patent applications per business, in SELEP (53.8/1,000) and New Anglia (58.4/1,000), compared to the England average (67.6/1,000)

E3 Stakeholders also saw the product offer as filling a niche in providing a range of support (the five services) with scaled levels suitable for small-scale new entrants to mid-sized projects up to £199,999.

Progress against contracted targets

E4 KEEP+ originally intended to work with 354 SMEs, but the lower than anticipated early levels of engagement led to a project change request in September 2018 revising this target to 180. As well as working with fewer businesses, projects were also smaller than anticipated, such that there was an underspend, addressed by introducing a higher threshold for grants up to £199,999 in value.

E5 The reasons for lower than anticipated outturns were the reduction from nine to six delivery partners, limiting capacity, while HCLG advice recommended a new procurement process, which was more laborious, both off-putting to some businesses, as well as slowing the process for everyone.

E6 KEEP+ came very close to achieving the numbers of supported businesses (C1), but fell below the jobs created total (C8). Where the programme did best was in terms of innovation, with new to market (C28) and new to firm (C29) products, exceeding targets by 37%.

Programme Management and delivery

E7 Throughout the delivery of KEEP+ the management team at ARU remained small, but there were some changes in personnel. The Marketing Manager left during delivery and the Programme Manager was promoted, though remained in an oversight role. A new programme manager and an additional finance assistant were recruited and the marketing role was discontinued.

E8 Further support (0.3 FTE) was expected in each of the partners. However, the outturn was that other partners contributed less (on average 48%), while ARU contributed more (143%).

E9 Despite the relatively small central team, stakeholder views were positive about communication within the wider referral network, by phone, email and bimonthly meetings keeping all parities informed. The hands-on and can-do attitude of staff was also praised, emphasising their philosophy of helping business and putting the client first.

E10 Businesses also praised the academics and consultants that had been engaged through KEEP+, usually giving them very high ratings with respect to skills and experience, working to a high standard and understanding the needs of the project. Graduates and interns were rated on the same questions, and still recorded good satisfaction, but lower than more experienced professionals.

Business outcomes

E11 Businesses were making progress in terms of innovation. Self-reported progress on the Technology Readiness Level (TRL) scale recorded an increase from 3.75 (before support) to 6.25 (after support). However, not all products were market-ready and two-thirds (68%) of businesses expected to realise benefits in the next 1-5 years.

E12 Participating businesses were growing, with average increases over three years of:

- £613,000 increase in sales
- £212,000 increase in GVA
- 4.8 FTE increase in employment

Net Economic Impacts and value for money

E13 Gross changes in business performance were high, but survey evidence from our small sample found low levels of additionality. Deadweight was high (70%), while displacement (14%) and leakage (17%) were low.

E14 Total Net Economic benefits were an estimated £9.2million GVA and 152 FTE jobs.

E15 KEEP+ compares very favourably with average values from the English ERDF programme (2014-2020). This is especially true for innovation, with relatively inexpensive new to market and new to firm outputs.

E16 These benefits created a Benefit Cost Ratio (BCR) of 2.18. This compared favourably to other Innovation programmes.

Recommendations

E17 Our recommendations are largely based on the Project Change Request (PCR) submitted in January 2020. These changes include:

- Recruiting a new Business Development Manager, charged with increasing engagements across the four LEP areas.
- Decreasing the contribution of delivery partners, to a total contribution of just £90,000.
- Securing agreements for support from other HEIs across the four LEP areas (e.g. University of East Anglia and University of Kent).
- Underspend across 2017-20 would enable a higher intervention rate of 50% in Phase2.
- The offer to businesses would remain the same, although Innovation Interns would be dropped, due to low uptake.

E18 We would agree with these suggested changes, apart from the intervention rate, since this would effectively mean that fewer businesses could be supported, without a strong evidence base for making this change.

1 INTRODUCTION

1.1 In September 2018 ERS Ltd was commissioned by Anglia Ruskin University to undertake an evaluation of the KEEP+ Programme. This summative evaluation relates to the operation of the programme to December 2019 and captures performance to the end of the programme.

1.2 The next short section describes KEEP+ in more detail, including the service offer. This is followed with a further section on the evaluation aims and objectives.

Background to KEEP+

1.3 KEEP+ is focussed on providing research and innovation services for SMEs. This relates to funding used for the purposes of: *Research and innovation activities in public research centres and centres of competence including networking; technology transfer and university enterprise co-operation primarily benefiting SMEs; Cluster support and business networks primarily benefitting SMEs; and Research and innovation processes in SMEs (including voucher schemes, process, design, service and social innovation).*

1.4 The rationale for establishing KEEP+ is based on market failure, in terms of gaps in service provision. The Innovation UK (IUK) Knowledge Transfer Partnership (KTP) product is a longer intervention (12-36 months). The proposition is therefore aimed at shorter interventions, especially the innovation intern.

1.5 KEEP+ builds on the earlier European Regional Development Fund (ERDF) funded Low Carbon KEEP, which operated from 2010-2015 and was delivered by a similar consortium of delivery providers. The network of delivery partners and connections with the local knowledge base and referral agencies was therefore largely already established.

1.6 It is a three-year Programme operating under priority 1 (b) of the 2013–2020 ERDF funding round. The ERDF element is used to match fund the contributions of businesses, increasing the affordability of support.

1.7 It is delivered by a partnership of six academic institutions across the South East and East of England. The partners are: Anglia Ruskin University; University of Brighton; University of Essex; University of Hertfordshire; University of Greenwich and University of Suffolk.

1.8 Internally, within Anglia Ruskin University there is oversight of the project by Senior Management, ultimately reporting to the Director of the Research and Innovation Development Office.

1.9 Anglia Ruskin University is the lead for the partnership and directly employs a delivery team. The original team was a Programme Manager, Marketing Manager and Project Finance Officer. During delivery the Programme Manager has moved to a more senior role in ARU, although as the instigator of the offer retains an interest, working sometimes as much as two days per week on KEEP+, working alongside a newly appointed Programme

Manager. The Marketing Manager left mid-programme, but was not replaced. A finance assistant has been added to help ensure that targets are met in the final months of delivery.

1.10 It covers the four LEP areas: Cambridgeshire and Peterborough Combined Authority; Hertfordshire (Hertfordshire LEP); Suffolk and Norfolk (New Anglia LEP) and Essex, Kent and East Sussex (South East LEP).

1.11 There are five strands of delivery, offering a range of different services:

- ***KEEPs (Knowledge Exchange and Embed Partnership)*** – A three way collaboration between a business, a University (the knowledge base) and a graduate employee who will work with the business to achieve agreed goals (Limited capital funding may also be available to support the approved collaborative activity).
- ***RICs (Research and Innovation Collaboration)*** - a collaborative research and development activity with a Knowledge Base, for projects that require more feasibility work and greater levels of research support than a KEEP (Limited capital funding may also be available to support the approved collaborative activity).
- ***Innovation Internships*** - for SMEs in need of graduate level skills to develop a new product or service. The business will directly employ the graduate on a 12 week contract to work on its premises.
- ***Stand Alone Capital Grant*** – for businesses who are looking to purchase specialist equipment vital to the development of a product or service.
  - Smaller grants supporting investments of up to £24,999, offering a 40% grant.
  - Larger grants supporting investments of up to £199,000 offering a 30% grant.
- ***Grants for Consultancy Support*** – ideal for SMEs looking for a fast and effective injection of expertise to solve a problem or provide specific technical knowledge to contribute to a project.
  - Smaller grants supporting investments of up to £24,999, offering a 40% grant.
  - Larger grants supporting investments of up to £199,000 offering a 30% grant.

Evaluation objectives

1.12 The evaluation objectives are shown below, with the headline question corresponding to the relevant section of the report. Nested within these headline questions are some of the relevant research questions.

- **Relevance and consistency**: What was the economic and policy context when KEEP+ was designed?; What were the specific market failures KEEP+ sought to address?; Were the design and delivery model appropriate?
- **Progress**: what progress has the project made against contractual spending, output and any other targets (including contribution to cross cutting themes). How well did engagement work? What factors have impacted on performance, positively or

negatively and to what extent? What results are expected to be achieved over the project's lifetime?

- **Delivery and management**: what governance, management and delivery arrangements are in place? How effective have these been? Is there scope for a change of approach within the project lifetime (if needed)? What arrangements would be appropriate were the project to continue?
- **Impacts**: what impacts are evident in participating SMEs? What impact is attributable to the project? How do these compare to any expectations/estimates? Are SMEs continuing to work with knowledge brokers? How has KEEP+ developed capacity and expertise among knowledge brokers and what comes next for them? Are there any additional outcomes and impacts that ought to be considered (intended or unintended)?
- **Assessing value for money**: has the project been cost-effective/demonstrated good value for money in light of its intended and unintended outcomes and impacts? Has the programme added value to the regional SME business community?

1.13 To deliver this evaluation we reviewed information and analysed data from a range of sources. Specifically, this included:

- A detailed review of project documentation and data;
- Interviews with strategic and operational staff and wider stakeholders; and
- E-surveys of benefitting businesses, participating academics, consultants and interns.
- Follow-up interviews to construct case studies
- Interviews of programme and partners

2 RELEVANCE AND CONSISTENCY OF THE PROGRAMME

Economic and Policy Context

UK Universities and the benefits of working collaboratively

2.1 The UK has an unrivalled research base in relative terms, when comparing population size and investment in research with high quality research outputs. With just 0.9% of global population and 3% of global research spending, the UK has 3.9% of global researchers, but achieves 9.5% of article downloads, 11.6% of citations and 15.9% of the world's most highly cited articles[1]. The research base also has 31 of the top 200 Universities in the world, showing a strength in depth in UK higher education[2].

2.2 This effort from UK Universities is not just restricted to academic research, but also results in important benefits in terms of commercialisation. In 2011-12 universities contributed £3.4 billion through commercialisation of new knowledge, delivery of professional training and consultancy.

2.3 The private return on investment in innovation is believed to be 30%, with returns to society two or three times higher still. Furthermore, there is strong evidence that there are important catalytic effects in transforming innovation activity across a number of areas. Receiving a grant increases spending on R&D by 30%, becoming 40% more likely to introduce new products to market, 40% more likely to engage in product innovation and almost 30% more likely to employ STEM graduates[3].

R, D & I in the South East and East of England

2.4 Table 2.1 shows patent applications in the four target LEP areas, alongside resident working age population, number of businesses and patents per capita and patents per business. The area as a whole is slightly ahead of the UK average, but lifted by the presence of Cambridge and to a lesser extent Hertfordshire. However, New Anglia and the very large SELEP area exhibited lower than average levels of patent applications.

[1] BIS (2014) Our plan for growth: science and innovation

[2] Times Higher Education (2018) Top 200 World Rankings

[3] BIS (2014) Estimating the Effect of UK Direct Public Support for Innovation

Table 2.1: Patent Applications by LEP area (1982-2018)					
	Patents	**Working age population**	**Business population**	**Patents per 1,000 population**	**Patents per 1,000 businesses**
GCGP	6,303	531,900	36,155	11.85	174.3
Hertfordshire LEP	4,464	739,500	65,640	6.0	68.0
New Anglia	3,681	976,900	62,990	3.8	58.4
SELEP	10,134	2,770,800	188,535	3.7	53.8
KEEP+ area	24,582	5,019,100	353,320	4.9	69.6
England	159,561	33,049,500	2,360,780	4.6	67.6

Source: Patent Applications Open data IPO (1982-2018)

2.5 Table 2.2 reproduces the EU Regional Innovation Scoreboard for the South East and East of England regions. The numbers are an index, showing relative performance, with 100 representing the average. For the area covered by KEEP+ the indication is that there is already higher than average levels of Innovation, in terms of the Index as a whole, as well as levels of Public Sector and Business R&D Expenditure.

Table 2.2: Regional Innovation Scoreboard				
	South East		**East**	
	UK	**EU**	**UK**	**EU**
R&D Expenditures Public sector	114	97	125	106
R&D Expenditures Business sector	121	111	158	144
RII (2017)	111	130	105	123

Source: EU Regional Innovation Scoreboard (2019)

2.6 While the Innovation Scoreboard and patent application data indicate high levels of observed innovation, all of these represent supply-side measures and actual uptake. However, there may still be considerable unmet demand. Market failure for SMEs, in particular, can stem from a lack of understanding of the marketplace and knowledge about sourcing suppliers, as well as affordability. Aspects of market failure were considered in our surveys, as well as consultations with stakeholders.

Specific Market Failures

2.7 The KEEP+ service offer is distinctive and responds to a market failure in provision, filling a gap in the type of service offered. One of the key products (the KEEP) is effectively a short KTP, providing a more flexible offer than the standard KTP. Similarly, the other services are different from those offered by other funded projects.

2.8 Overall, finance additionality was high, with 97% of businesses indicating that they could not have afforded the service. Market failure in this instance was simply the costs of paying for services. Our survey of businesses asked a number of further questions that related to market failure, with results shown in Tables 2.3 and 2.4.

Table 2.3 Barriers to Innovation

Barrier	%
Lack of finance	70
Innovation costs too high	51
Difficulty finding partners for innovation	32
Uncertain of benefits from innovation	11
Lack of information on markets	11
Lack of information on technology	8
Capacity	5

Source: ERS survey of KEEP+ businesses (2019)

2.9 Table 2.3 shows the reported barriers to innovation, with respondents able to choose multiple answers. The two most frequent answers related to aspects of affordability, with two-thirds reporting an internal lack of finance, while just over half conceived of affordability in terms of market prices, which they believed to be high. A further idea related idea was the risk-reward dilemma, which a subsidy partly alleviates:

> *"The particular innovation has a relatively high risk of failure and requiring further future development, but relative to the potential reward of success it was worth perusing with capital support."* Business, SELEP

2.10 Just under one-third of businesses reported difficulty in finding innovation partners. A further survey question found that two-thirds of businesses had not previously sought external research expertise and support in this area. Therefore, the role in facilitating the matching of support is in itself important.

2.11 Table 2.4 shows the reasons for participating in KEEP+, comprising both internal factors associated with developing the business, as well as the added value that KEEP+ would represent. Two of the responses (highlighted), draw attention to aspects of market failure, in terms of *increasing innovation capacity* mentioned by over half of respondents (also mentioned in Table 2.3) and *developing a relationship with a knowledge provider* cited by almost a third of respondents.

Table 2.4 Motivation to participate in KEEP+	
Motivation	**%**
Develop a new product or service	72
Grow and/or enter new markets	58
Develop innovation capacity	47
Improve the quality of products or services	42
Develop a relationship with a knowledge provider	25
Reduce organisational costs	22

Source: ERS survey of KEEP+ businesses (2019)

2.12 Quite apart from whether there is market failure in a more general or abstract sense, it is clear that those businesses that have been assisted by KEEP+ would not have gone ahead with their project. This was for a variety of reasons, including affordability and price, as well as internal reasons such as capacity and expertise and the know-how and know-who associated with procuring support.

2.13 In addition to arguments concerning market failure, it is also an important strategic priority of the participating HEIs to boost their own research activities with businesses. Table 2.5 shows the results from the Higher Education Business and Community Interaction (HEBCI) Survey for the six KEEP+ delivery partners. The table shows the amount of contract research and levels of consultancy and provides a breakdown for SMEs and larger businesses, showing the number and value of engagements.

2.14 The results show a relative underperformance in terms of contract research, but slightly better performance in terms of consultancy (contract value). In the context of these results, KEEP+ represents an important contribution to research and consultancy in these institutions.

Table 2.5 Scale of commercial research and consultancy with commercial businesses								
	Contract Research				Consultancy			
	SMEs		Large		SMEs		Large	
	No.	£ 000s	No.	£ 000s	No.	£ 000s	No.	£ 000s
Anglia Ruskin	5	95	30	238	12	73	16	20
Brighton	4	221	15	318	23	114	5	37
Essex	2	18	17	262	19	54	2	2
Greenwich	9	67	33	856	64	244	63	377
Hertfordshire	8	222	2	32	202	1818	24	194
Suffolk	0	0	1	9	1	10	-	-
KEEP DP Tot.	**28**	**628**	**98**	**1715**	**321**	**2313**	**110**	**630**
% UK HEIs	0.9%	0.9%	0.9%	0.3%	0.5%	2.8%	0.9%	0.6%

Source: HE-BCI survey (2017/18)

Appropriateness of design

2.15 While some of the other comments in this section point to a need for intervention in the most general terms for the economy of the South East and East of England, as well as the specific concerns of the assisted businesses, there remains a case to be made that the design of KEEP+ as a solution is aligned to business needs. The issues of concern are the nature of the offer and the scale at which it is delivered vis-à-vis the wider business support available to SMEs in the area.

2.16 The offer itself was seen as a strength by stakeholders, in that it offered a menu of support, with a range of possible solutions for businesses, including capital investments, as well as supporting technical expertise:

> *"The access to both academic support and specialist private sector consulting is what really sets KEEP+ aside from other available programmes".* Stakeholder
>
> *"What I think KEEP+ offers which is unlike other programmes is a wider scope of support through the multiple channels."* Stakeholder
>
> *"KEEP+ is a flagship programme for what it does in the region, once you go outside of that the other place you can go to is InnovateUK which is much more constrained in what they can do because it's a national programme"* Stakeholder

2.17 Flexibility, in selecting the best knowledge base was also seen as a key virtue, in terms of KEEP+ representing the gateway to expertise, rather than simply a channel to support the host HEIs:

"The fact that businesses can work with leading academics from any higher education institute is particularly useful as often the appropriate specialists won't necessarily be based at one of the delivery partner universities." Stakeholder

"A great thing about KEEP+ is that it isn't precious. A lot of research universities are reluctant to work with us, so we go down the list to find ones more oriented to industry." Stakeholder

2.18 The offer was also seen as appropriate in terms of the scale of support, as well as the intervention level (the proportion of support subsidised). For some stakeholders the value was seen as the wide range in scale, as well as applauding the recent changes to extend the upper support threshold:

"Appeals to both businesses looking to do their first innovation as well as established businesses looking to improve processes or develop new product lines." Stakeholder

"One of the main niche's that KEEP+ fills, is that it offers mid-level innovation support unlike other programmes which are geared more towards start-up." Stakeholder

"Since the PCR request the offer has gone from being good to great … the intervention levels of 30% for purchases up to £199,999 and 40% for purchases up to £24,999 are really good" Stakeholder

2.19 These stakeholder comments can also be verified through a question in the business survey which asked whether expectations had been met. The results were overwhelmingly positive, with 45% reporting that KEEP+ was *extremely effective* in meeting business needs and objectives, with a further 41% reporting it was *very effective*. Remembering that the majority of respondents had not previously used external innovation support previously this was a creditable result.

2.20 There were two criticisms of the design, rather than the service received. A first criticism was the intervention rate, which was seen as too low, rather than the more common 50:50 funding support. The second was that payment in arrears was challenging for cash-constrained businesses. Several businesses mentioned this, suggesting that it was the cash-flowing of the project that was problematic:

“For very small companies that couldn't do the innovation without the subsidy, requiring them to find other funding first before making the payment, almost defeats the purpose of the subsidy.” Business, London

“Please do not make participants pay in advance for consultancy services. Please leave room for things to go wrong-& need to be rethought”. Business, New Anglia

3 PROGRESS AGAINST CONTRACTED TARGETS

Progress Narrative

3.1 This short subsection describes the early progress of KEEP+, detailing a later start and lower than expected engagements and programme spending. These factors led to a Project Change Request to be submitted to reprofile downwards to more realistic targets. The next subsection describes progress towards the end of the programme and future plans going forward, where a continuation is being sought to extend delivery for a further three years.

Fewer engagements

3.2 The initial set-up of KEEP+ was premised on a set of perfectly reasonable suppositions drawn from the experience of managing the previous Low Carbon KEEP and doing so with an established set of delivery partners. The initial business case confidently proposed to work with 354 SMEs on this basis.

3.3 However, there were to be a number of external changes which caused early difficulties for the programme, resulting in a late start to the programme and very few early engagements of businesses. The timeline was such that an expected March 2016 start date was set back because approval slipped in pre-referendum purdah. Following the result, a period of uncertainty resulted, only clarified after a Treasury announcement in October 2016. These events ultimately led to the withdrawal of one of the original delivery partners (University of East Anglia).

3.4 The effect of Brexit was not just a deferred start, but arguably levels of general business investment have been suppressed because of the uncertainty of outcomes (value of sterling, tariffs on their purchases and sales etc.).

3.5 In addition to changing political circumstances, the process of contracting between knowledge bases and SMEs also changed, under advice from the then Department of Communities and Local Government (DCLG) (now the Ministry of Housing, Communities and Local Government (MHCLG)). The previous Low Carbon KEEP process was reasonably efficient and allowed contracting between Universities and businesses, where they had built a relationship and identified a suitable project to be funded. However, the new arrangement added an interim stage to the process, whereby a procurement exercise was required to ensure that the SME was supported by the best supplier. This resulted in a protracted period of advertising procurement opportunities being imposed on the process for each opportunity, as well as companies effectively contracting with the knowledge base and paying them for their services and claiming expenditure in arrears from KEEP+.

Although the effects are difficult to gauge, timing and cashflow challenges for businesses can have only made the programme less attractive for businesses.

3.6 The consequences of these changes were that the anticipated time to project commencement would be 12 weeks. While there are two fixed periods of 10 days (assessment) and 20 days (procurement), it was believed that the 12 week period would be sufficient. However, this has in practice taken longer than expected, partly because of companies taking longer at each of the stages.

3.7 A further consequence of these changes is that the rate of attrition from the process is also higher than expected, with companies frustrated with the process, or facing changed circumstances themselves.

3.8 After formal commencement of the programme in January 2017, a further delivery partner withdrew (University of Kent), after concerns regarding evidencing of ERDF requirements. Again, this contraction of delivery partners may have contributed to a possible decline in outputs.

Lower programme spending

3.9 While fewer engagements have the consequence of lower match funding expenditure, there have also been challenges in terms of the balance of uptake of services, which has had implications for the budget. The original assumptions were that the majority of activity would be with KEEPs and RICs and that budgets of £60,000 per project would attract £30,000 of ERDF spending. The outturn has seen greater appetite for capital and consultancy grants (which had been introduced with the permission of MHCLG in April 2018), which were offered at lower thresholds and consequently there has been lower levels of spending, compounding the issues of fewer participating SMEs.

Project Change Request

3.10 The results of the discussion above are summarised in Table 3.1, showing the numbers engaged and the levels of private sector investment for every quarter of 2018. Early indications are that engagements are gradually building up, with increased numbers of engaged SMEs and parallel increases in project spending.

Table 3.1 KEEP+ Engagement and spend profiled by quarter				
Outputs	**Q1**	**Q2**	**Q3**	**Q4**
SMEs receiving support (C1) 2018	0	5	25	27
Private Investment (C6) 2018	£18,858	£38,500	£172,984	£273,363

Source: KEEP+ Monitoring data (November 2019)

3.11 Given the performance of the programme to September 2018, a Project Change Request (PCR) was submitted to DCLG in September 2018. This sought to reduce all targets for every indicator, especially the level of ERDF matched funding (Table 3.2). The initial target of supporting 354 SMEs is clearly untenable and this was reduced by half to 180. Other targets were reduced in keeping with the anticipated lower throughput. Early indications were that it might be possible to increase the proportion of businesses that have new to market products and this target was increased.

3.12 The PCR also recommended that larger grants be made available, with a value of up to £199,999, as described in paragraph 1.11.

Table 3.2 Project Output Targets (before and after PCR)		
Outputs	**Original target**	**Revised Target**
C1 Number SMEs	354	180
C2 Number receiving grants	354	180
C6 Private investment matching public support	8,980,119	2,556,044
C8 Employment increase	193	50
C26 Researchers in improved facilities	195	10
C28 SMEs introducing new to the market products	67	120
C29 SMEs introducing new to the firm products	266	140

Source: KEEP+ Monitoring data (November 2019)

3.13 A further change noted in the PCR was a relaxation of requirements for Innovation Interns. This element of the programme had also attracted lower rates of activity, but DCLG permitted a more straightforward process, which it is hoped will increase uptake.

3.14 Stakeholders were largely positive about the changes introduced as part of the PCR recognising how they responded to demand, in particular increasing the scale of consultancy and capital grants.

"All changes that have been made throughout the programme have been changes for the better." Stakeholder

"The PCR has improved the project a great deal… it was a good offer to start off with but now it's a great offer." Stakeholder

Towards the end: Completing projects, finalising claims and waiting list

3.15 While most sections of this report focus on inward referrals and business outcomes, the next few paragraphs consider the work carried out by consultants and the associated lead times and the challenges this poses in reporting.

3.16 The challenges of long lead times (application-final report) are that until the final report is presented, the output may not be counted for that project. On the face of it, until these final reports are submitted, KEEP+ has failed to deliver on these outputs, but the explanation is one of timing and deferred impacts, which will later be realised.

3.17 Internally, these expected outputs are closely monitored, as each committed project has expected outputs (C1, C2, C6, C8, C26, C28, C29). At any point in time it is therefore possible to see where the final claim is likely to stand, based on anticipated results for each supported project. Many of these outputs are therefore not realised until the final claim period, although very work work-in-progress during the final stages.

3.18 For new engagements towards the end of the programme this does cause challenges, since the programme has fully committed expenditure and is essentially servicing the companies in response to these lead times, rather than take on new work, unlikely to be completed by the final claim.

3.19 KEEP+ has therefore started a waiting list, which by November 2019 had 25 business listed, all ready to start, if there were funds available. This discontinuity in the funding lifecycle is of course the reality for time-limited funding, but challenging for businesses as well as stakeholders:

"Particularly in the last 9 months they've dropped off. Perhaps a reflection of the fact they had no money to give away, or that they didn't need us."

"Funds have dried up, haven't they?"

Progress Summary and future plans

Output Achievement

3.20 Table 3.3 shows expected project outputs against the revised PCR. Overall, KEEP+ was able to meet or exceed every one of these targets. The analysis is based on expected results from monitoring information provided in November 2019 and therefore subject to some final changes.

3.21 The numbers of supported SMEs is only just below target (98%). As an innovation programme, KEEP+ has had particular successes, with new to market and new to firm targets exceeded (137%).

Table 3.3 Project Output Targets, Actual and Variance

Outputs	Revised Target	Outturn	Variance %
C1 Number SMEs	180	177	98.3
C2 Number receiving grants	180	176	97.8
C6 Private investment matching public support (£)	2,556,044	3,235,954	126.3
C8 Employment increase	50	41	82
C26 Researchers in improved facilities	10	28	280
C28 SMEs introducing new to the market products	120	164	136.7
C29 SMEs introducing new to the firm products	140	192	137.1

Source: KEEP+ Monitoring data (November 2019)

Future Plans

3.22 Towards the end of delivery, KEEP+ has performed well and plans to continue delivery, with a largely similar delivery structure and service offer. A further Project Change Request was submitted in mid-January, with delivery for Phase 2 starting in April 2020. Future plans would include the following changes to the service going forward:

- Four of the six delivery partners made lower than expected contributions. Due to a reduced capacity across the partnership, the Phase 2 partnership contribution has been reduced to 90,000.
- A new role of Business Development Manager is planned for Phase 2, largely in response to fewer than expected referrals from the wider business support community. This new outward-facing role would seek to build demand from businesses, working with agencies such as LEPs, Growth Hubs, Chambers of Commerce across the large KEEP+ area.

- Coverage across this area could also be strengthened in terms of delivery partners. While the formal partnership would remain in place, agreements from institutions such as University of East Anglia and University of Kent to support KEEP+ would help strengthen the partnership.
- Underspend from 2017-20 could be used to increase the intervention rate to 50%, which is also likely to increase demand further.
- The offer to businesses would largely remain the same, with the exception of Innovation Interns which would be dropped because of a lack of uptake.

4 EXPERIENCE DELIVERING AND MANAGING KEEP+

Management and delivery arrangements

4.1 Overall, the KEEP+ programme owes a great deal to its predecessor (Low Carbon KEEP) and the retained experience of the Programme Manager from that project. The earlier project operated with just two FTE members of staff and the intention was always to run KEEP+ with a similarly lean central administration team, with a view to maximise the benefits for participating SMEs.

4.2 The Central team are all employed by Anglia Ruskin University. At the start of delivery there were three roles: Programme Manager, Marketing Manager and Finance Co-ordinator. In the course of delivery, the marketing manager moved to another job and the programme manager was promoted within Anglia Ruskin University. The response to these changes was that the former programme manager maintained a relationship with KEEP+ given her familiarity with the programme, but with additional support from a new Programme Manager. The marketing role was discontinued and in order to bring in all the financial claims before the end of the programme a further finance assistant was brought in as support.

4.3 In addition to the central team at Anglia Ruskin University, members of staff based in the network of delivery partners also contribute to the programme. These staff are employed by the host institutions but part of their costs is recouped from KEEP+ to market and promote the service, as well as participate in the grant panels, attend networking and steering groups. The original intention was to recognise these inputs with approximately 0.3 FTE in each delivery partner, for a total of 3.3 FTE, although with a contraction in the partnership, this was closer to 2 FTE.

4.4 The outturn from the contribution of delivery partners proved rather different, with most of the partners contributing less time than expected, with Anglia Ruskin carrying a heavier load (Table 4.1). This was because of greater internal pressures in each of the member institutions and a reduced capacity to be able to support KEEP+.

Table 4.1 Delivery partners and contributions (Planned and outturn)			
	Committed	**Actual**	**%**
University of Brighton	£40,214	£28,778	14
University of Hertfordshire	£45,000	£16,444	8
University of Essex	£40,000	£10,832	5
University of Suffolk	£40,241	£8,878	4
Anglia Ruskin University	£43,214	£105,221	50
University of Greenwich	£40,214	£41,815	20
Total	**£257,773**	**£211,970**	

4.5 Despite the small size of the team, feedback from stakeholders was that levels of service are high and that communication is on the whole effective:

> *"the team are really timely and communication has been great. We have bi-monthly referral meetings with the programme team and raise any questions we have."* Stakeholder

> *"The KEEP+ team are really good at ensuring that we are kept in the loop of any changes to the project so that we can provide subsequent advice to our members. They are always just a phone call away if we have any problems and it is clear that they are really passionate about the programme which fills you with confidence."* Stakeholder

4.6 Although praise was evident, there remained some concerns about the small size of the team, such that they were able to keep the programme running smoothly, but that additional capacity would have enabled additional activities.

> *"However, it seems like the programme is under-resourced for the size of grants. More support for applications would be useful, and also time to follow up on applications that have gone quiet."* Stakeholder

4.7 In addition to a marketing role in KEEP+ there is also a separate budget line for marketing. This has included the development of a website (http://keepplus.co.uk/), marketing materials, advertising and promotion and events.

4.8 For beneficiaries, the view was that marketing materials were effective, with three quarters of survey respondents agreeing with the statement that "*marketing materials represent the service that you received*". While the message may have faithfully represented, there may be issues of the message not being adequately promoted.

4.9 More broadly, the marketing proposition is challenging, since it is not a general business support programme which could be promoted through a broadcast campaign, but instead a niche innovation service, with a relatively smaller audience and the need for more targeted marketing.

4.10 At its inception, KEEP+ benefitted from the social media presence of the preceding Low Carbon KEEP programme, with a Twitter Account opened in 2011. Although there are just over 1,000 followers, there is limited recent content. Businesses and Stakeholders both suggested it should be marketed more:

> *"Should be more widely marketed - most people have not heard or know of it, but it is a very good programme."* Stakeholder

Engagement and referrals

4.11 A number of different channels of engagement are used by KEEP+. While the remainder of this short section unpacks the referrals from different agencies, an initial remark concerning the approach of the central team is worth making. Generating leads is certainly important and a network is required to do this, but KEEP+ succeeds in terms of the way in which leads are engaged within the programme team, in such a way that activity can happen, rather than adopting a 'rules first' approach as other programmes can:

> *"The KEEP+ team are really hands-on and pragmatic, always thinking of the business first."* Stakeholder

> *"Other programmes are primarily focused on meeting KPIs, KEEP+ always has the client at the heart of everything."* Stakeholder

> *"The team adopt a human approach from the outset, rather than purely using eligibility forms."* Stakeholder

4.12 While stakeholders reported the process of inward referral as being smooth, there was some criticism of the failure to communicate outcomes. Having made a referral, support agencies are keen to later learn the outcomes of the referral, in part to inform future referral, but also to validate and confirm signposting in the first instance.

> *"There isn't much of a feedback loop for us to identify the outcomes achieved by businesses unless we are dealing with them on a continual basis. This is something we would like to see more of in the future."* Stakeholder

> *"It would be nice maybe to have more direct feedbacks on outputs. Unless we're dealing with the client continually the outcomes aren't always apparent to us."* Stakeholder

4.13 Overall demand may have been suppressed by Brexit. Stakeholders opined that there had perhaps been an initial drop off in demand for support generally as a consequence of the referendum result, but there had been a recovery more recently:

"Brexit was perhaps an issue for a little bit but I think people have held off for as long as they can and we've noticed our phones have been ringing more than ever enquiring about funding and innovation support."

Table 4.2 Referral sources	
Universities	
Anglia Ruskin	32
University of Greenwich	15
University of Brighton	13
University of Essex	10
University of Suffolk	9
University of Hertfordshire	7
London South Bank University	6
Agencies	
New Anglia Growth Hub	34
SELEP	32
NHS England	13
MEDBIC	7
Herts Growth Hub	4
Enterprise Europe Network	3
Marketing	
Personal referral	54
Previous ERDF Involvement	40
Event	23
Website	12
Telemarketing	9

Source: KEEP+ Monitoring data (single sources excluded)

4.14 Table 4.2 shows the referrals into KEEP+, shown in the categories of *Universities* (mainly delivery partners), *agencies* and *other marketing*. Universities (especially Anglia Ruskin) were responsible for many of the referrals themselves, including some which were not delivery partners, particularly London South Bank. Business support agencies were responsible for an almost equal number, showing the value of partner referrals in securing engagements. The majority were provided by SELEP and New Anglia. Marketing was also very useful for the programme, with personal referrals from satisfied businesses and previous ERDF involvement, as well as active marketing in the form of events, website and telemarketing.

4.15 These inward referrals are geographically concentrated in the SELEP and New Anglia areas, although for a relatively small area GCGP businesses receive their fair share of support (Table 4.3). By contrast, Hertfordshire LEP businesses are the least engaged, despite a business population very similar to New Anglia.

4.16 Importantly, the areas where activity is highest (New Anglia and SELEP) also correspond to those with the lowest patents per business (Table 2.1). This suggests that outcomes have been targeted to where need was greatest and possibly attracting higher project additionality.

Table 4.3 Businesses engaged and interventions by LEP area

Outputs	Eligible SMEs	KEEP+ Interventions	Business population
GCGP	32	14	36,155
Hertfordshire	17	9	65,640
New Anglia	78	44	62,990
SELEP	127	73	188,535

Source: KEEP+ Monitoring data (November 2019), UK Business Counts (2019)

Interventions

4.17 This short section provides more description on the types of intervention and support received by businesses participating in KEEP+. Table 4.4 shows the type of intervention, indicating the popularity of capital and consultancy grants, but lower uptake of Innovation Interns, KEEPs or RICs.

Table 4.4 Uptake by type of support			
Outputs	**Uptake**	**KEEP+ investment**	**Av. investment**
Consultancy	118	£ 1,510,950	£ 12,805
Large grant	*13*	*£ 551,627*	*£ 42,432*
Small grant	*44*	*£ 311,193*	*£ 7,072*
Capital	71	£ 872,392	£ 12,287
Large grant	*12*	*£ 405,023*	*£ 33,751*
Small grant	*26*	*£ 176,229*	*£ 6,778*
KEEP	22	£ 638,544	£ 29,025
Internship	16	£ 38,594	£ 2,412
RIC	9	£ 168,717	£ 18,746

Source: KEEP+ Monitoring data (November 2019)

4.18 KEEPs and RICS bundle together revenue and capital grants for a composite offer to businesses, but more often this was either revenue in the form of knowledge exchange or consultancy grants or capital in a single package.

4.19 The table also shows the uptake of large and small grants, after the advent of the Project Change Request in September 2018. Although small grants tend to prevail, there was clearly unmet demand for the very largest projects (up to £199,000), despite a lower intervention rate of 30%.

4.20 Table 4.5 shows the Knowledge Base selected by businesses. Most often there was only one knowledge base responding to opportunities but there were several instances where two or three institutions responded. The process was intended to be competitive and the publication of opportunities meant that other Institutions became involved with delivery as the knowledge base. However, the majority of Universities selected were from among the six delivery providers, especially Anglia Ruskin.

Table 4.5 Knowledge Bases selected by businesses	
Delivery partners	
Anglia Ruskin University	16
University of Greenwich	10
University of Essex	6
University of Hertfordshire	4
University of Brighton	2
Other Universities	
University of Westminster	6
University of Kent	2
London South Bank University	2
Queen Marys University	2
John Innes Centre	1
Cranfield University	1
Bath	1

Source: KEEP+ Monitoring data (November 2019)

Delivery experience

4.21 Business beneficiaries mainly believed contracting with KEEP+ worked well, with all respondents providing a response of either '*effective*' or '*very effective*'. Project delivery does depend on the co-operation of all parties, including administration, consultants and the businesses themselves. One important aspect of this is the timing associated with delivery. Only a minority of businesses (17%) reported difficulties with timing, but programme monitoring information more often showed that it was more the case that businesses were dragging their feet, rather than tardiness on the part of KEEP+.

4.22 The time taken between confirming eligibility and a full application being made was on typically 35 days, although 12% of applications took longer than six months.

4.23 By contrast, internal processes, such as the time taken to list procurement opportunities after eligibility checks only took eight days and were often completed the same day.

4.24 On reflection, our view of timings is that is companies themselves which are rather slower in submitting paperwork. However, it is to be conceded that there are many different stages in the process, which although perhaps necessary, result in a much slower process overall. In total, projects typically took 10 months to be completed. This perception of cumulative timing, as well as following correct procedures was complained about by businesses:

> *"My idea of moving forwards was in weeks whilst this project moved forward in months"* Business, SELEP

> *"There were a number of small items that were required and we received a number of quotes by email. The quotes were then requested to be on company headed formal quotations in PDF format."* Business, SELEP

4.25 Businesses also confided that some of the challenges faced, were very much internal to the business and an inherent feature of their complex project:

> *"The equipment has been more difficult to use than expected."* Business, GCGP

> *"We had a project management resource issue at our end."* Business, GCGP

> *"It is a complex project and design alterations are frequent"* Business, SELEP

4.26 From the point of consultants providing the service, KEEP+ was seen as working well, with the staged approach viewed as particularly helpful:

> *"Clear stages and deadlines helped to successfully complete the delivery. The development has been separated into stages with a delivery deadline for each stage."* Consultant

> *"KEEP+ has been a very straightforward and efficient process."* Consultant

Satisfaction with service

4.27 Overall, levels of satisfactions with the service were high, with businesses praising central administration ("*KEEP+ has been a joy to work with in comparison to other funding organisations*" Business, SELEP) as well as particular experts or institutions that businesses believed had made a genuine difference (*"I have developed a great relationship with my contractors who have performed exceptionally well and delivered results ahead of schedule".* Ultimately this has resulted in some businesses supporting KEEP+ through recommendations: "*I have recommended the scheme to multiple companies as it was a great way to help support company growth quickly"* Business, London.

4.28 Once engaged and actively working with a knowledge base, consultant or other service, businesses were very happy with the service received. Businesses were asked to rate the knowledge base or consultant three key questions: *appropriate skills and experience*; *conducting work to a high standard*; *understanding the specific needs of the project*. They invariably gave the highest rating, recognising high-level skills, used appropriately, with work carried out to a high standard.

4.29 Businesses were asked similar questions relating to their graduate or intern, enquiring about: *appropriate skills and experience*; *conducting work to a high standard* and *understanding the commercial/applied business environment*. These answers tend to be *good* or *agree*, rather than the highest rating of *very good* or *strongly agree*. The lowest ratings were for the question concerning the understanding of the commercial environment, which included some *average* ratings.

4.30 Business also noted that the value of the process was often best expressed in terms of the facilitating role, such that the relationship that had been fostered, would in their estimation simply not have happened without KEEP+: *"We wouldn't have got to meet such technically competent interns*". Business, London; *"KEEP+ helped us find such an excellent person to take on the role"* Business, SELEP.

4.31 While the process of working with KEEP+ can be presented as standardised, the actual projects themselves are far from homogeneous, with businesses at different scales, projects at different stages, posing different levels of challenges and with owners with differing levels of innovation expertise. Consequently, the resulting outcomes and views of the process can be very different indeed.

4.32 Some businesses were quite sanguine about difficulties, indicating that they were an inherent part of challenging projects: *"The project itself is a challenge! There has been constant testing and iteration in development"; "Normal design issues to overcome".*

4.33 Other businesses recognised that there were challenges resulting from their business situation, rather than the KEEP+ project: "*Some work has been delayed due to circumstances outside our control".* A small minority of the interviewed businesses are pure R&D pre-revenue businesses without a product in the market and for them their challenges were business-based, rather than delivery based per se: "*financial pressure on our end*"; "*running out of funding*"; "*timely, before we ran out of runway*".

4.34 There were relatively few criticisms of the service itself and none that reflected badly on the relationship with KEEP+ staff, but rather a disappointment in working with the chosen consultant or academic.

> *"I am hoping in the final phase to repair the programme, but it will need to be adapted. I feel this project was designed with big academic departments in mind who have much more capacity to cover for failures."* Business, New Anglia

"The academic institution failed to deliver on any timescales and or innovation. In the end we completed the work in house. It cost us time, effort and money and now some missed sales opportunities." Business, SELEP

"The problem was having to rely on consultants. Mine was not good, so I paid for a service I did not receive." Business, New Anglia.

5 OUTCOMES AND IMPACTS

Timing

5.1 A preliminary remark is that, in keeping with an innovation programme, some of the business impacts are deferred, with demonstrable impacts only expected in the future. Encouragingly, survey evidence (Table 5.1) shows that in most cases, business impacts are imminent, either in the next six months (32%), or the next 12 months (a further 27%). For a minority of businesses, KEEP+ is providing a service associated with longer-term outcomes. Some of the businesses are also pre-revenue

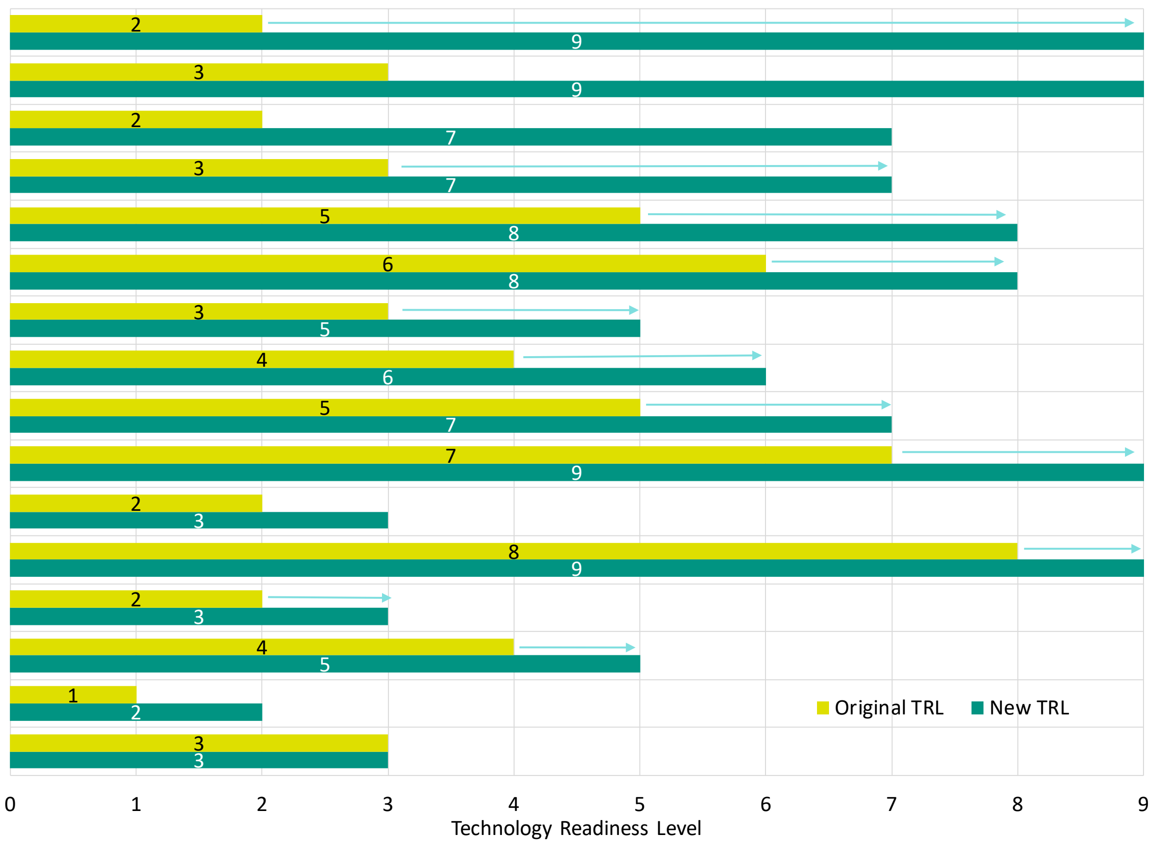
Table 5.1 When might business impacts be expected

Motivation	%
Up to six months	32
Up to a year	27
Up to two years	24
Between two to five years	6
Over five years	12

Source: ERS survey of KEEP+ businesses (2019)

5.2 Our survey also asked about Technology Readiness Levels (Figure 5.1), comparing the initial baseline with the endline. This shows similar results, with some projects rather nearer to market when they started, with others still in their infancy. Some projects have improved very considerably, moving from *potential Technology concept formulated* (TRL2) to *Actual system proven in operational environment* (TRL9). Others are more challenging and progress has been slower and KEEP+ is providing an interim incremental solution to innovation issues. The next short section considers outcomes, some of which are concerned with continued support and advancement to other innovation products (e.g. KTPs). This sheds further light on the finding that 42% of businesses reported that it was *too early to say* whether the projects objectives had been realised, since the time horizons are, in some instances, more long-term.

Figure 5.1 Improvements to Technology Readiness Levels



Outcomes

5.3 A number of outcomes are evident (Table 5.2). Overall, the impression is that KEEP+ has made a difference to outcomes across many dimensions. For as many as 45% of businesses this has involved introducing new or significantly improved products and 30% had improved product quality, in keeping with those reporting higher TRL levels. Free text responses further supported this, although there were other outcomes in terms of formalising patents: “*Filing of two USA Provisional Patents, and one Global PCT*”.

5.4 While some other projects have not resulted in immediate impacts for assisted businesses, there are, however, a range of other softer outcomes. The most frequently reported outcome was an improvement in technical capability or understanding (76%). More than one-third of businesses (36%) reported an improved understanding of the benefits of innovation, such that they have changed mindsets and attitudes to innovation. Other businesses recognise some unintended outcomes, in terms of improved management practices or reduced environmental impact.

Table 5.2 Business Outcomes	
Outcome	**%**
Improved technical capability or understanding	76
Introduction of new or significantly improved products	45
Improved understanding of the benefits of innovation	36
Improved product quality	30
Improved productivity	30
New or significantly improved management practices	27
Reduced environmental impact	12

Source: ERS survey of KEEP+ businesses (2019)

5.5 There are also further outcomes, associated with building the relationships with knowledge brokers and continuing these relationships in the future and accessing further funded support. Although, this might not be more widely applicable, as many as 39% of surveyed businesses reported the intention of continuing on to a full KTP. Unlocking further funding was also seen as an important outcome:

> *"University of Suffolk business engagement staff explained and showed me a world of funding and business connections which I previously didn't believe existed in Suffolk."* Business, New Anglia

5.6 Other outcomes include the extent to which the cross-cutting themes were achieved in beneficiary businesses (Table 5.3). The two cross-cutting themes under consideration were sustainable development and equality of access and opportunity. Both outcomes have occurred to some extent in most companies, especially sustainable development.

Table 5.3 Embedding Cross Cutting themes		
Embeddedness	**Sustainable development (%)**	**Equality of access and opportunity (%)**
Extensively	9	3
A lot	27	21
Some	52	39
A little	15	18
Not at all	3	18

Source: ERS survey of KEEP+ businesses (2019)

Business Impacts

5.7 While some of the outcomes are encouraging, the key results for business support activity remain those associated with business growth, measured in terms of employment and turnover. We first consider the changes in these metrics in descriptive terms, before proceeding to conduct an assessment of economic impact in section 6.

5.8 Our business survey asked for performance metrics at three time-intervals: historic data from 12 months ago, the most recent trading period and anticipated results 12 months into the future.

5.9 Table 5.4 shows that recent growth has been impressive, with employment and sales both increasing by 17%. Furthermore, as ongoing projects are completed and processes are implemented in businesses, further growth in the coming 12 months is expected for employment (40%) and sales (65%).

Table 5.4 Business metrics: Averages and percentage change

	Previous 12 months	Latest 12 months	Future 12 months	Previous % change	Future % change
Employment	12.0	14.0	16.8	17%	40%
Sales	£0.94m	£1.10m	£1.55m	17%	65%

Source: ERS survey of KEEP+ businesses (2019)

6 VALUE FOR MONEY

6.1 This section of the report examines value for money. This results in producing an economic assessment and the estimation of a benefit cost ratio (BCR).

6.2 Through this whole assessment we are examining the benefits to the public purse, setting the investment of funding, against the benefits reported by businesses. However, with an intervention rate as low as 30% in some cases, this does mean that businesses are themselves paying for the majority of support. Although not part of a conventional consideration of value for money, our survey also asked businesses for a qualitative response as to whether they believed their investment had represented value for money for their business. More than two thirds of businesses indicated that they believed that the service they had received represented *very good* value for money.

Economic Impact Assessment

Introduction

6.3 This economic impact assessment focusses on the benefits of KEEP+ to the economy of the South East and East of England. While earlier sections of this report describe programme outputs and outcomes, an economic impact assessment considers how the *economy* benefits, expressed in terms of jobs created and Gross Value Added (GVA) created.

6.4 An initial statement of economic impact reports the **gross benefits,** which is simply the change in business performance pre-intervention, compared with performance after assistance from KEEP+.

6.5 Some of these gross benefits are only manifested in the assisted businesses, while for the economy as a whole there are a number of **additionality**[4] factors which apply, resulting in *net benefits* for the local economy. In keeping with government guidance, this impact analysis considers the following additionality factors:

- Deadweight: outputs/outcomes that would have been secured anyway without the support from the project.
- Displacement: existing business activities in the area no longer take place due to the project;
- Leakage: benefits that accrue outside of the area being considered.

6.6 To assess additionality, the business survey incorporated questions relating to 'what would have happened anyway' in terms of turnover and employment growth in the absence of KEEP+, and the location of their staff, competitors, suppliers and customers. As well as the

[4] Impact for the economy arising from an intervention is 'additional' if it would not have occurred in the absence of the intervention.

additionality factors described above, it is also important to consider multiplier effects, which capture the indirect and induced economic impacts. The multiplier used in this analysis is taken from BIS (2009) *Research to Improve the Assessment of Additionality*[5] which suggests a multiplier of 1.4 at a regional level for 'Business Development and Competitiveness' interventions.

Gross Change in company performance at end of programme

6.7 The first step of an economic impact assessment is to identify average growth in turnover and employment across the beneficiary businesses since they received the project support. The average change per beneficiary in turnover was approximately £159,000, equivalent to an increase in GVA of £59,000 with an average growth in employment of 2.0 FTEs at the time of the survey. These gross employment and turnover estimates do not take into account how much of that change is attributable to KEEP+, nor the extent to which benefits are retained in the local economy. This is accounted for by applying the concept of additionality.

Gross Change in company performance (three years of benefits)

6.8 The end of programme benefits identified in paragraph 6.7 require one final treatment to recognise more fully realised benefits. Since some KEEP+ supported businesses have only recently concluded their project, some further projection of benefits is necessary and we choose to model benefits for a total of three years, requiring some extrapolation of future business growth. This requires estimating both future growth, as well as allowing for a full three years of benefits to emerge. Based on our estimation, a full three years of benefits would result in an uplift of £613,000 per business or £212,000 GVA and 4.8 FTE jobs.

Additionality

6.9 Table 6.1 below summarises the findings of the business e-survey in relation to each of the factors of additionality. Attribution of outcomes was mainly due to the efforts of businesses themselves, with deadweight for employment growth estimates to be 69% and deadweight for sales growth to be 73%. Most businesses traded with a more national and international customer base and had few local competitors, with an estimated displacement of just 14%. Finally, leakage was estimated at 17%. Applying all these measures, 17.9% of employment impacts and 17.6% of sales impacts were economically additional. A final stage was to add a multiplier of 1.4, based on the BIS Additionality Guidance (see above).

[5] BIS (2009) Research to Improve the Assessment of Additionality, available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/191512/Research_to_improve_the_assessment_of_additionality.pdf

Table 6.1 Estimates of Additionality		
	KEEP+ Estimate	Narrative
Deadweight – (Employment)	69%	Compared to typical values, these estimates of deadweight are relatively high. It is to be noted that KEEP+ businesses were already on a growth trajectory before support and businesses will credit much of the growth to their own endeavours.
Deadweight (Turnover)	73%	
Displacement	14%	This figure is relatively low indeed, reflecting the fact that these are specialist businesses with few competitors to displace.
Leakage	17%	Leakage can be considered low, compared to other estimates.

Source: ERS survey of KEEP+ businesses (2019)

6.10 Although deadweight is estimated at high levels, by using a single survey question to report on additionality, it is possible to ask more subtle questions relating to business outcomes associated with the project (Table 6.2). This shows very high project additionality, with no businesses reporting project outcomes that would have been exactly the same, with some gains from the process evident. The distinction between deadweight of close to 70% and these results, is that other revenue streams in the business and indeed their own financial investment and effort are also responsible for the wider business outcomes. Nevertheless, for each of the projects, half indicated that they would have either probably or definitely not have achieved the same outcomes. For other businesses, the additionality was in terms of bringing forward benefits earlier, or having more impact or at a better quality.

Table 6.2 Project additionality	
Outcome	**%**
Same outcomes at the same speed, scale and quality	6%
Same outcomes, but not as quickly	27%
Same outcomes, but not at the same scale	9%
Same outcomes, but at a lower quality	9%
Probably would not have achieved the same outcomes	33%
Definitely would not have achieved the same outcomes	15%

Source: ERS survey of KEEP+ businesses (2019)

6.11 Accelerating outcomes was something businesses emphasised when invited to describe success factors of the process:

> *"It's helped us hire the expertise we needed to get the project completed faster than we otherwise would have been able."*
>
> *"This new product is one we have been working toward for several years, so to see it come into fruition is amazing. We anticipate our new software will open several new revenue streams for us."*

6.12 This evidence from businesses was echoed by our stakeholder interviews, especially focusing on bringing forward outcomes and accelerating innovation:

> *"Without the programme … People still would undertake R&D and innovation but it would take them an eternity … KEEP+ just helps to speed up that process".* Stakeholder
>
> *"Innovation would have probably still occurred in some businesses but this would be much slower, what the programme has done has encouraged people who do have capital to undertake innovation and R&D activities by eliminating some risk".* Stakeholder

Net Additional Impacts

6.13 The factors of additionality described above are applied to employment and turnover/GVA to calculate the net additional impact. The findings from the survey sample are then extrapolated to the total number of businesses assisted (as at January 2019) and translated into GVA. These figures are summarised in Table 6.3.

Table 6.3: Net Economic Impact (3 years of benefits)	
Employment	**FTE / £**
Net Additional Jobs created per Business	0.86 FTE
Net Additional Jobs created Impact (extrapolated to 177 beneficiaries)	151.7 FTE
Sales	**£**
Net Additional GVA Increase per Business	£52,171
Net Additional GVA (extrapolated to 177 beneficiaries)	£9,234,000

Source: ERS survey of KEEP+ businesses (2019), Annual Business Survey (2017)

6.14 Based on assisting 177 businesses, the estimated total net benefits for KEEP+ at January 2019 were an estimated £9,234,000 in GVA. Set against estimated project costs of £4.245 million this produces a Benefit Cost Ratio (BCR) of 2.18, meaning that for every pound of public money invested in KEEP+ creates benefits to the economy of £2.12. Assuming that 152 jobs are created, this would translate into a cost per net additional job of £27,978.

Efficiency Benchmarks

6.15 Table 6.4 compares Innovating for Growth against national averages for the ERDF programme (2014-2020)[6]. Comparisons are made for the number of enterprises (C1), Number of employment increases (C8) and Number of new to firm products (C29). The second column of the table shows outputs and unit cost per output for the programme at December 2019. The final column shows both mean and median values of unit costs for the whole ERDF programme in England, to provide effective benchmarks.

Table 6.4 Unit costs for KEEP+ against England ERDF Benchmark

Output	Actual Performance (at December 2019)	England ERDF Benchmark (mean and median unit cost)
C1: Number of enterprises receiving support	177 – Unit cost of £23,983	Mean = £34,000 Median = £10,200 (N=623)
C8: Number of employment increases in supported enterprises	41 – Unit cost of £103,537	Mean = £71,000 Median = £25,700 (N=758)
C29: Number of enterprises with new to market products	164 – Unit cost of £25,884	Mean = £94,000 Median = £28,000 (N=78)
C29: Number of enterprises with new to firm products	192 – Unit cost of £22,109	Mean = £94,000 Median = £28,000 (N=78)

6.16 The unit cost for enterprises supported (C1) is higher than the typical median value for ERDF projects, but below the arithmetical mean. The job creation (C8) target is higher than

[6] Regeneris (2013) England ERDF Programme 2014-20: Output Unit Costs and Definitions

the average value. However, it is with respect to new to market (C28) and new to firm (C29) products that KEEP+ represents exceptional value, well below the mean and even below the median value.

6.17 Overall, the outputs can be regarded as efficient against a benchmark of the rest of the ERDF programme in England.

Value for Money Benchmarks

6.18 This may be benchmarked with other innovation programmes, as shown in Table 6.5 to compare economic effectiveness. As a whole, Innovation Programmes may be characterised as having relatively low returns on investment and relatively high cost per job. KEEP+ sits mid-table in terms of BCR, but one of the higher cost per net job estimates.

Table 6.5: Comparison of cost effectiveness with other innovation programmes

	Cost per job	Public money BCR
Welsh Business Innovation Support Project (2015)	£6,230	2.8
Smart grant (2015)	£28,156	2.76
KEEP+	£27,978	2.18
Invest NI Innovation Vouchers Programme (2014)	£15,350	1.4
SMARTCymru (2016)	£62,232	1.06

7 RECOMMENDATIONS AND LESSONS LEARNT

7.1 This section draws together some of the recommendations and lessons learnt as the 2017-20 KEEP+ programme draws to an end. To some extent the Project Change Request submitted in September 2018, reflects lessons learnt and self-awareness on the part of programme management and resulted in much-needed changes in a timely fashion during the course of delivery.

7.2 The 2018 Project Change Request responded to a number of issues:

- Low levels of early engagement were addressed by reducing the levels of outputs, starting with the number of businesses engaged, with corresponding downward adjustments through the other outputs. These outputs remain ambitious and they should be monitored through the rest of delivery.
- Unexpectedly high numbers of businesses had opted for projects with relatively low amounts of matched funding attached to them. While the lower levels of grant would remain, a second higher tier of grant funding would be made available, for very substantive projects with a value of up to £199,999.
- Given these two factors there was a dramatic underspend, which was resolved by reducing the overall budget.

7.3 The immediate reaction to lower than anticipated engagement of businesses would be that more conservative outputs should have been established at the outset. However, original figures, were based on a successful Low Carbon KEEP programme and changes to procurement rules did make KEEP+ more challenging.

7.4 At the end of the funded period an extension has been sought for a Phase 2 of KEEP+. Like the earlier PCR, this recognises a number of issues, such that it is not simply seeking additional funding, but also advocating a series of amendments to improve delivery in Phase 2. Some of these important suggestions include:

- A lower than expected contribution from most of the delivery partners across 2017-20 suggests a lower contribution going forward.

Table 7.1 Delivery partners and contributions (Planned, outturn and Phase 2)				
	Committed	**Actual**	**%**	**Phase 2**
University of Brighton	£40,214	£28,778	14	£12,000
University of Hertfordshire	£45,000	£16,444	8	£7,000
University of Essex	£40,000	£10,832	5	£5,000
University of Suffolk	£40,241	£8,878	4	£4,000
Anglia Ruskin University	£43,214	£105,221	50	£44,000
University of Greenwich	£40,214	£41,815	20	£18,000
Total	**£257,773**	**£211,970**		**£90,000**

- Four of the six delivery partners made lower than expected contributions. Due to a reduced capacity across the partnership, the Phase 2 partnership contribution has been reduced to 90,000.
- A new role of Business Development Manager is planned for Phase 2, largely in response to fewer than expected referrals from the wider business support community. This new outward-facing role would seek to build demand from businesses, working with agencies such as LEPs, Growth Hubs, Chambers of Commerce across the large KEEP+ area.
- Coverage across this area could also be strengthened in terms of delivery partners. While the formal partnership would remain in place, agreements from institutions such as University of East Anglia and University of Kent to support KEEP+ would help strengthen the partnership.
- Underspend from 2017-20 could be used to increase the intervention rate to 50%, which is also likely to increase demand further.
- The offer to businesses would largely remain the same, with the exception of Innovation Interns which would be dropped because of a lack of uptake.

7.5 We would agree with all of these suggestions, except perhaps for the intervention level. A higher intervention level might well facilitate easier engagement, but there is limited evidence that the extant intervention rate had dissuaded participation. It is also true that a higher intervention level would mean fewer businesses could be supported (assuming projects remain at the same scale).

8 CONCLUSIONS

Overall Introduction to KEEP+

8.1 Overall, KEEP+ is performing well, although there were early concerns concerning achieving targets and underspend. Key features of success include:

- A hands-on, customer-focussed delivery team
- Positive business outcomes creating business growth with high levels of project additionality around outcomes, timing and scale
- An economic assessment suggests a positive Benefit Cost Ratio for KEEP+.

Relevance and Market Failure

8.2 Our business survey found evidence of market failure, with two-thirds of businesses having never sought external support previously, with barriers such as lack of finance, high costs and uncertainty in knowing how to find an innovation partner all holding businesses back. Innovation was lower, in terms of patent applications per business, in SELEP (53.8/1,000) and New Anglia (58.4/1,000), compared to the England average (67.6/1,000)

8.3 Stakeholders also saw the product offer as filling a niche in providing a range of support (the five services) with scaled levels suitable for small-scale new entrants to mid-sized projects up to £199,999.

Progress against contracted targets

8.4 KEEP+ originally intended to work with 354 SMEs, but the lower than anticipated early levels of engagement led to a project change request in September 2018 revising this target to 180. As well as working with fewer businesses, projects were also smaller than anticipated, such that there was an underspend, addressed by introducing a higher threshold for grants up to £199,999 in value.

8.5 The reasons for lower than anticipated outturns were the reduction from nine to six delivery partners, limiting capacity, while HCLG advice recommended a new procurement process, which was more laborious, both off-putting to some businesses, as well as slowing the process for everyone.

8.6 KEEP+ came very close to achieving the numbers of supported businesses (C1), but fell below the jobs created total (C8). Where the programme did best was in terms of innovation, with new to market (C28) and new to firm (C29) products, exceeding targets by 37%.

Programme Management and delivery

8.7 Throughout the delivery of KEEP+ the management team at ARU remained small, but there were some changes in personnel. The Marketing Manager left during delivery and the Programme Manager was promoted, though remained in an oversight role. A new programme manager and an additional finance assistant were recruited and the marketing role was discontinued.

8.8 Further support (0.3 FTE) was expected in each of the partners. However, the outturn was that other partners contributed less (on average 48%), while ARU contributed more (143%).

8.9 Despite the relatively small central team, stakeholder views were positive about communication within the wider referral network, by phone, email and bimonthly meetings keeping all parities informed. The hands-on and can-do attitude of staff was also praised, emphasising their philosophy of helping business and putting the client first.

8.10 Businesses also praised the academics and consultants that had been engaged through KEEP+, usually giving them very high ratings with respect to skills and experience, working to a high standard and understanding the needs of the project. Graduates and interns were rated on the same questions, and still recorded good satisfaction, but lower than more experienced professionals.

Business outcomes

8.11 Businesses were making progress in terms of innovation. Self-reported progress on the Technology Readiness Level (TRL) scale recorded an increase from 3.75 (before support) to 6.25 (after support). However, not all products were market-ready and two-thirds (68%) of businesses expected to realise benefits in the next 1-5 years.

8.12 Participating businesses were growing, with average increases over three years of:

- £613,000 increase in sales
- £212,000 increase in GVA
- 4.8 FTE increase in employment

Net Economic Impacts and value for money

8.13 Gross changes in business performance were high, but survey evidence from our small sample found low levels of additionality. Deadweight was high (70%), while displacement (14%) and leakage (17%) were low.

8.14 Total Net Economic benefits were an estimated £9.2million GVA and 152 FTE jobs.

8.15 KEEP+ compares very favourably with average values from the English ERDF programme (2014-2020). This is especially true for innovation, with relatively inexpensive new to market and new to firm outputs.

8.16 These benefits created a Benefit Cost Ratio (BCR) of 2.18. This compared favourably to other Innovation programmes.

Recommendations

8.17 Our recommendations are largely based on the Project Change Request (PCR) submitted in January 2020. These changes include:

- Recruiting a new Business Development Manager, charged with increasing engagements across the four LEP areas.
- Decreasing the contribution of delivery partners, to a total contribution of just £90,000.
- Securing agreements for support from other HEIs across the four LEP areas (e.g. University of East Anglia and University of Kent).
- Underspend across 2017-20 would enable a higher intervention rate of 50% in Phase2.
- The offer to businesses would remain the same, although Innovation Interns would be dropped, due to low uptake.

8.18 We would agree with these suggested changes, apart from the intervention rate, since this would effectively mean that fewer businesses could be supported, without a strong evidence base for making this change.

APPENDIX 1 KEEP+ CLIENT CASE STUDIES

CASE STUDY A1: Linguisticator

linguisticator.com

Aaron Ralby, CEO

Consultancy Support

Aaron is the founder and CEO of Linguisticator. Founded in 2011, the business delivers online courses that use specialist spatial memory techniques to teach languages. Aaron started by delivering courses in practical linguistics and expanded to increasing numbers of languages, and has recently developed virtual reality software to teach memory palace skills in new and innovative ways.

Finding out about KEEP+

Linguisticator initially applied for the KEEP strand with the University of Westminster, looking for advice around the development of new virtual reality software for language learning. Following visa complications, KEEP+ staff recommended they apply for a consultancy grant instead. Aaron was impressed by the flexibility of the offer and the clarity and brevity of the application process.

Help from KEEP+

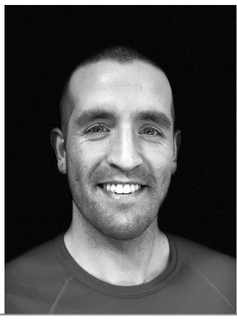
The grant allowed Linguisticator to hire a **consultant** to help create new VR software to stand alongside their existing training courses. This had previously only been a prototype demo, and Aaron was pleased to be able to get the chance to realise it within a software environment. He particularly appreciated the focus and work ethic of the consultant.

Outcomes & Impact

VR software is now core to Linguisticator's offer, and has provided a platform to which new content can be added continually. A free version and a premium version have now been released publicly, and Aaron is working to expand their module library. Workshops and demonstrations have been successful, and Linguisticator have also applied for a second KEEP+ grant for a different development project as a result of the success of the first.

Future Plans

Now that their software is fully functional and market-ready, Aaron is focusing on building new spaces within the VR software for different language courses and modules. Linguisticator is also building its public presence, by demonstrating models through workshops, on YouTube, and in schools.



"Without KEEP+, we wouldn't have been able to develop a new product, which is now core to our operation […] the consultant was fantastic, motivated and hard-working."

CASE STUDY A2: Flit (Cambridge) Limited

www.flit.bike

Alex Murray, Managing Director and Co-Founder

Capital grant and consultancy

Alex is the co-founder and managing director of Flit, a company that produces light-weight, high quality folding electric bikes for use by urban commuters. Flit's flagship ebike, the FLIT-16, was launched in July 2019 following a successful Kickstarter campaign, and is now available for pre-order.

Finding out about KEEP+

Alex was looking for grants in order to increase the speed and ambition of key core projects. He heard about KEEP+ through the Enterprise Europe Network, who signpost Flit to funding opportunities. He found the team were realistic about the personnel limitations of SMEs and had designed their application process thoughtfully with this in mind.

Help from KEEP+

Alex received a **capital grant** from KEEP+ which he used for prototyping, and purchasing 3D printers to aid this process. They also received a **consultancy grant** which supported Intellectual Property protection, design consultancy, and product testing. He felt that the support met all his expectations, and particularly appreciated the light touch and lack of prohibitive conditions of the grant.

Outcomes & Impact

With help from the KEEP+ grant, Flit have now taken more robust action on IP, a topic that SMEs normally stay clear of due to a lack of expertise. This has allowed them to become more ambitious with their products; they were able to launch and patent a new electric bike battery which is now going through final certification.

Future Plans

Since the support from KEEP+, Flit Bike have finished FLIT-16 development and pre-sale marketing, and have begun manufacturing. They plan to begin delivering the ebikes in spring and summer 2020. Patents, trademarks, and design rights have all been secured as a result of the KEEP+ support.

"IP is normally a sensitive topic for small organisations, so most stay away […] KEEP+ are good at this, where other programmes aren't. As a result we've become much more ambitious."

CASE STUDY A3: Action on Blood

https://www.facebook.com/actiononblood/

Abiola Okubanjo, CEO & Founder

Innovation Intern

Abiola is the founder and CEO of Action on Blood. The social enterprise was initially launched to safely supply blood and blood products across Nigeria and wider Africa by increasing public knowledge and willingness around blood donations. Action on Blood has recently expanded its remit, with a focus on transforming cultural attitudes to health in communities by recruiting and training peer advocates.

Finding out about KEEP+

Anglia Ruskin University had a stall at a business start-up event that Abiola attended, and mentioned the KEEP+ programme to her. She was pleased that the application process was straightforward and quick, and that the programme was open to smaller start-ups.

Help from KEEP+

KEEP+ provided funding for Action on Blood to hire an **Innovation Intern** to help understand and extend its innovation offer. Due to complications around cashflow, a second intern was also hired after the first left – Abiola found both amazing, as they brought a huge amount of new ideas.

Outcomes & Impact

Abiola now has a much clearer sense of how to launch new technologies and monetise them thanks to the innovation support she received. She used this new knowledge, particularly with off-the-shelf apps, to successfully apply for NHS funding for a new app proposal.

Future Plans

Action on Blood are planning to put their innovation knowledge to use in three new projects for the NHS which will help to explain the new organ donation opt-out law. Among other things, they plan to launch an app with videos from black donors recording they've had a conversation about organ donation with their family and friends.

"I'm so much more enthused that we're on the right track with innovation. I'm not a techy person but the experts got me really up to speed; I wouldn't have that without KEEP+."

CASE STUDY A4: Texcel Technology PLC

www.texceltechnology.com

Peter Shawyer, Commercial Director

Knowledge Exchange Embed Partnership (KEEP)

Peter Shawyer is the commercial director of Texcel Technology. Established for over four decades, Texcel is an electronic manufacturing company. Initially specialising in the design and manufacture of ship loading computers, the business has moved into the field of contract electronic manufacturing, with a focus on technical competence and high-quality customer service.

Finding out about KEEP+

Peter approached a contact at the University of Greenwich and asked them what they could offer him in terms of funding, and was signposted to KEEP+. He was impressed by the clarity of the programme information and the speed of the application process, by the standards of government funded support programmes.

Help from KEEP+

Texcel entered a **Knowledge Exchange Embed Partnership (KEEP)** with the University of Greenwich, and received specialised support from an academic as well as a student intern. Peter found that the academic in particular was excellent and provided them with vital expertise.

Outcomes & Impact

The support from KEEP+ helped Texcel to develop their awareness of different uses of data and KPI charts; this has allowed them to display information in a new way to ensure that all staff understand the business processes more clearly.

Future Plans

Texcel are now using a new distribution of data in order to enhance their business offer. They would recommend the KEEP+ programme to their business contacts, particularly the academic aspect.

"The academic was fantastic; we would have failed completely without this person. They brought intelligence, competence, and expertise."