

Integrated Knowledge Systems

Project Proposition

ACCELERATING **GROWTH**

EDINBURGH AND SOUTH EAST SCOTLAND CITY REGION DEAL

Contents

1	Introduction						
1.1	About this document						
1.2	Project V	ision					
1.3	Overview	of the Integrated Knowledge System (IKS)					
1.4	Project S	ummary5					
	1.4.1	Phase one: MIS Development with Talent Bank5					
	1.4.2	Phase two: Marketplace Type and Community Benefits8					
	1.4.3	Phase Three: Big Data Analysis and Visualisation9					
2	Strategic	Case					
2.1	PART A: 1	he Strategic Context					
	2.1.1	National Context and Strategy Alignment 10					
	2.1.2	Alignment across the IRES Programme11					
2.2	PART B: T	he Case for Change					
	2.2.1	Existing Arrangements, Challenges and Opportunities					
3	Economi	c Case					
3.1	Current L	abour Market Context					
3.2	Change w	ve want to effect					
3.3	Identifica	tion of Options					
3.4	Program	ne Option Analysis					
3.5	Preferred	Option					
3.6	Impact of	f implementing the IKS project					
3.7	Summary	of Outcomes, Benefits and KPIs					
3.8	How will	we measure success?					
4	Commer	cial Case and Financial Case25					
5	Financial Projections						
6	Management Case						
6.1	Project Management Structure						
6.2	Phased Approach						
6.3	Project Plan						
7	Sustainability						
8	Risk Mitigation Plan						

Integrated Knowledge Systems

Project Proposition

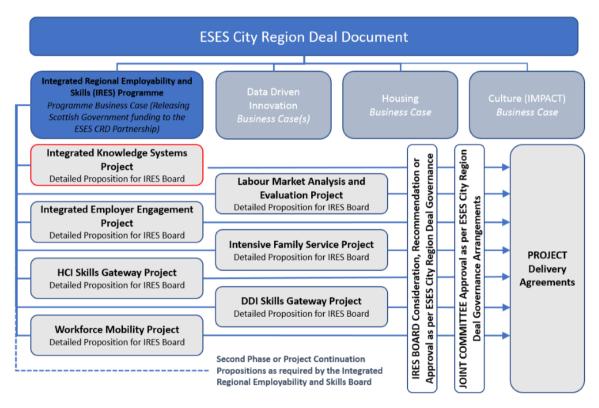
Version 3.0

11 February 2019

1 Introduction

1.1 About this document

This Project Proposition sets out a detailed case for IRES investment in a seven-year programme of activity to create a regional change around integrating information systems. This is to better understand who our workforce is and their skill level, what provision is in place to support them, and what service interventions are working effectively. It will also better support job recruitment and matching, support employer engagement, and maximise community benefit offers. Better use of data analysis and predictive data will underpin all elements. This change management proposition will also bring regional partner savings through economies of scale.



1.2 Project Vision

The Integrated Knowledge Systems (IKS) theme will bring together stakeholders to create new system pathways that support integration for a clear regional client journey to the best employment outcome. It will include capturing engagement, service intervention, job readiness,

job-matching, link to growth sectors, in-work support, upskilling and career progression. Further to this, it will streamline data gathering, processing and analysis; producing 'big data' trends that can inform future investment and better use of resources for increased economic impact. The vision is for integrated knowledge systems that are fit for purpose and future proofed for opportunities developing over the next 10 years.

The collaborative approach between industry sector, local authorities, universities, colleges, third sector, skills agencies and government will make a significant impact to address the challenges faced and leave a positive legacy for the future.

1.3 Overview of the Integrated Knowledge System (IKS)

The Integrated Knowledge Systems theme will bring about a much-required alignment of a multitude of systems in the employability and skills sector. Change funds will be used to support all relevant stakeholders with a common purpose to achieve inclusive growth through an improved employability pipeline systems integration to better support local individuals and employers. A greater number of people will be better equipped to access the economic growth being generated, employers will be better able to source local talent, and a critical window of opportunity will be enhanced to tackle poverty and inequality.

Often more disadvantaged clients need support from several agencies to make the breakthrough into sustainable employment. A key feature will be a joined-up referral tracking process, where a client can be quickly linked to any service they need by a caseworker. This could be an employability project with tracked referrals to literacy training, housing support, childcare facilities and so on. An integrated system will provide a seamless cross regional solution.

A new Talent Bank feature will provide a 'live pool' of regional job ready candidates for job matching in response to economic growth stimulated across the IRES and wider City Region Deal. Community Benefit software will be developed and implemented further to capture, monitor, and track all community benefit clauses at a regional level, bringing joined up alignment and consistency of service standards. This in turn will enhance future community benefit asks, making better use of an often untapped and underutilised resource.

Learning and aligning with the Developing Young Workforce approach, we will also develop a 'Marketplace Offer' where employers and community benefit clauses can offer up work experience,

work shadowing, industry insight, modern apprenticeship offers to employability providers for clients to access as part of the customer journey to work readiness.

These joined-up systems will present a new and flexible approach for accelerating work growth and upskilling into existing and new jobs.

The integration of knowledge systems will be transformational in capturing joined-up employment pathways for each individual client journey. An additional benefit will be empowering client's as 'data citizens' to have better ownership of their own data journey through school, further and higher education, third sector support and employment. Clients, alongside support staff across all stakeholders and agencies, will be able to spot opportunities and identify and overcome barriers to progression with access to the best support. A focus on active inclusion will provide service users with connection to developments, supporting active participation.

The creation of a shared data set will also bring a new level of digital intelligence. We will create a data framework to pull up data on the new systems, but also to import data from other sources to allow for visualisation of what interventions works best, what can happen when appropriate services are put in place, and what do we need to do more of and less of. It will make all future strategic approaches in employability intelligent and evidence based.

The use of interrogation of data will also support inclusive equalities, adding a further level of accountability to make sure services are engaging with the most disadvantaged communities and offering services that reflect the principles of the Fair Agenda.

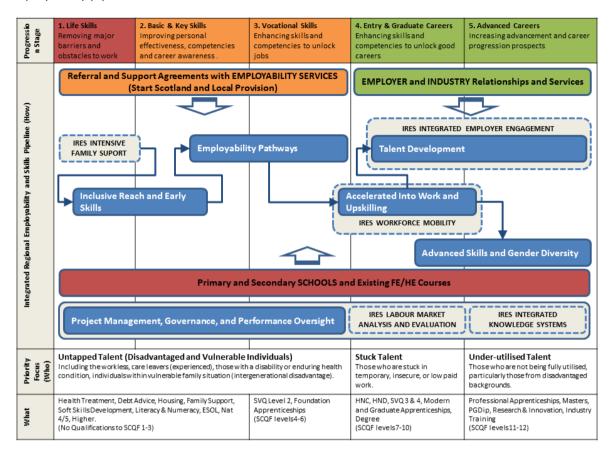
1.4 Project Summary

There are three phases to the Integrated Knowledge system theme. Each phase has elements and subthemes within it, and these are outlined below. Further explanations are also given in the Management Case section and project plan.

1.4.1 Phase one: MIS Development with Talent Bank

The proposition is for a new fit for purpose use of technology to develop a management information system that aligns the six local authority main employability services, with a focus on a better and enhanced client journey. Approximately 90,000 people will have their customer journey recorded on

this system within the first two years, which will be based on delivering to a new enhanced employability pipeline.



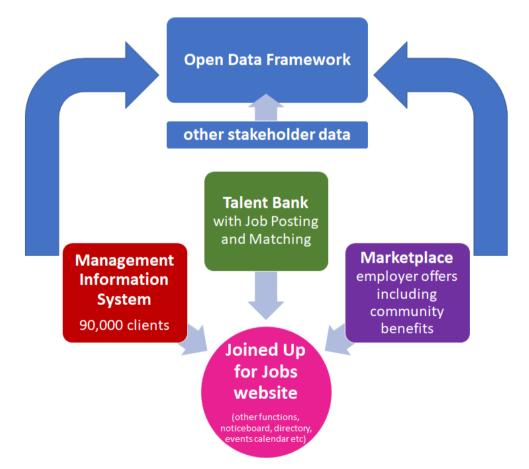
Linking to this system, will be a new Talent Bank. This is where jobs created from the Edinburgh and South East City Region Deal activity, and the corresponding re-shaped local employability partnerships, can be posted, and will link to clients from disadvantaged backgrounds who are deemed work ready after receiving the right interventions and support. The Talent Bank will also provide support on tracking and upskilling, achieving the living wage, and evidencing how the region is helping to tackle in-work poverty.

Under this theme, and with external leverage funding, we will also upskill frontline employability workers on data and digital literacy. As a result, clients will be better able to fully access new opportunities and better manage their own data.

The intention is that Phase 1 will involve significant co-production and co-design will also take place with stakeholders, service providers and service users to create a new way forward, bringing systems and partnership together that is useable and more efficient with investment and peoples time.

This first phase will also take sight of Brexit and the withdrawal from European Social Funding, a major funder of local authority and regional employability services. Given the often-onerous emphasis on data collection, this will afford an opportunity to cleanse systems and reduce data so it is used better, has clear ownership rights, and can be used for analysis under phase three. The focus throughout will be on reducing worklessness and poverty through providing and sharing the appropriate employability interventions, accessible for those living in the SES City Region's most deprived areas. Supporting them to progress into a key growth industry where current and future skills gaps have been identified, which can lead to greater opportunities in higher skilled and higher paid roles.

Awareness will be raised of the support pathways, job opportunities, available training, industry demands and future career profiles. We aim to offer a joined-up service that can be accessed through **one interface**. From one log-in, a service manager/caseworker can manage client's journeys, access job opportunities, match into employer support offers such as business insights and work experience and receive support from the wider network on a regional Joined up for Job model.



Underpinning this will be a review of GDPR to ensure there is consistency of data sharing and tracking, and industry training to achieve service standards and protections.

Integrated Knowledge Systems Project Proposition

Key client groups we will focus on, support and track include;

- Pupils from schools in 20% most deprived SIMD areas
- Young people and school leavers
- Young people with experience of mental health
- Unemployed and those experiencing in-work poverty
- Carers and care experienced
- People with a disability or long-term health conditions
- People with experience of substance abuse, homelessness, and/or trauma
- Supporting carers with childcare responsibilities
- Supporting women into higher paid jobs and planning to return to work
- Veterans
- Ex-offenders
- Vulnerable families
- Ethnic minority groups

1.4.2 Phase two: Marketplace Type and Community Benefits

The next interlinked phase is the alignment and enhancement of MIS platforms to support the developed employability pipeline with the range of employer offers that are generated. This will predominately be through better Community Benefits capture and tracking and building on the Developing Young Workforce Marketplace model approach which has so far focused on offering employer offers (such as work experience, industry insights and so on) to schools and colleges.

Offers from these elements will enable better client journeys, accessing support and experience as and when they need it to move into sustainable employment and/or upskill. It will also facilitate employers having more influence and support over their future workforce, allowing them to promote their business and sectors.

Community Benefits is a readily acknowledged underutilised opportunity in relation to employability. Often there is a lack of support to employers on what offers are wanted, intermittent tracking, and little evaluation of impact. By linking directly with the Integrated Employer Engagement theme, we will align with new system software and work on having non-job employer offers fed into our systems pathway.

1.4.3 Phase Three: Big Data Analysis and Visualisation

Currently, many systems are requesting and collecting over 500 fields of data related to a client's journey into a job. However, even within this context there is very little analysis of this data. Often, we don't know what trends there are, how data sets influence each other, the clear evidence about what is and isn't making the difference to a successful journey. We're also not able to predict upcoming economic changes and make suitable adjustments.

We have also learnt that it is vital data analysts and developers are part of the **phase one** development and fully involved in **phase one** so that **phase three** is successful. Systems tested to date that may serve a good tracking and compliance function have not been designed to facilitate data analysis, with much of the learning lost and untraceable. It is not unusual for current systems to collect data in a way that contradicts itself at other parts. If people involved in big data had been part of the development process this could be avoided. We intend to rectify this and have the support of both The City of Edinburgh Council digital team and Edinburgh University with this.

We will also at phase three look at the impact of visualisation on data we collect to unpick what impact interventions make. Napier University can support this element and have tested out visualisation techniques as curriculum projects with undergraduates using visualisation models akin to the employability pipeline. For example, they were able to conclude due to visualisation tracking of students, that those entering year two of a degree from college were more likely to progress to a third degree unless support interventions were made. They could pinpoint what interventions made the difference best. Similarly, they were able to show over a four-year course how work experience impacts on the degree level obtained and job outcomes achieved after graduating. This helped to inform curriculum adjustments for a better client journey. It is similar insights into the labour market that we are aiming for.

Underpinning all of this is the need for a data framework to draw up data across all our stakeholders and service providers for the 'bigger picture'. The quality of this data just now and how it is collected and set out is variable, with numerous keying from different partners. We need to assess how data is being collected, what changes we can influence and how the data can then be cleaned and formatted to draw up to a master framework. We anticipate the Colleges and Universities playing a critical role at this phase and have built in pilot projects for this.

2 Strategic Case

The IKM project strategic case is set out in two parts;

Part A: The Strategic Case – outlining the alignment of the ILM project proposals with government policy and the partnerships existing assets and strengths and;

Part B: The Case for Change – this area summarises the existing arrangements and the benefits from the proposal and the added value from change management;

2.1 PART A: The Strategic Context

2.1.1 National Context and Strategy Alignment

Scotland's Economic Strategy (Scottish Government, 2015)¹ sets out the Scottish Government's purpose "to create a more successful country, with opportunities for all of Scotland to flourish, through increasing sustainable economic growth" and has two key goals- increasing competitiveness and tackling inequality.

Allied to this the Creating a Fairer Scotland (Employability)² policy seeks to promote greater fairness and equality in employment while also driving continuous service improvement through strong productive partnerships.

No One Left Behind, Next Steps for the Integration and Alignment of Employability Support in Scotland³ outlines the need to incrementally develop an integrated regional employability and skills system that is more

- flexible, tailored, and takes a 'whole person' approach
- straightforward for people to navigate;
- better integrated and aligned or interwoven with other supporting services;
- provides pathways into sustainable and fair work;
- is driven by evidence to supports people into the right job at the right time
- designed, delivered, and improved in partnership
- responsive to those with high needs (e.g. young care leavers, workless, and those in low paid or insecure jobs) who are at major risk of missing out on the benefits of economic growth; and
- minimises skills shortages and gaps or gender imbalances in our key growth sectors, while promoting greater workforce diversity

The Integrated Knowledge Systems proposition reflects these policy positions by creating systems that bring enhanced benefits to the most vulnerable and disadvantaged citizens, enabling access to quality and sustainable jobs that tackle inequality and uplift people out of poverty.

2.1.2 Alignment across the IRES Programme

The IKS will bring added value across the whole of the IRES programme, supporting job growth and addressing skills gaps and workforce shortages through more intelligent pathways and transitions within an enhanced employability pipeline.

An inclusive person-centred approach will guarantee that each client journey is unique and tailored to the individual, making the best use of resources and opportunities. Integrated knowledge systems support the 'No wrong door approach' to ensure that each client gets quick access to the services they need. Better tracking and monitoring with linked referrals and inter-agency approaches will enhance this. It will also provide an accurate bigger picture of a moveable workforce across six regions, capturing precise data sets on skills and availability.

Each theme in the IRES is supported and underpinned by the Integrated Knowledge Systems approach.

• Labour Market Analysis and Evaluation: We would be able to better support Labour Market Analysis with evidence based and verified client data including client profiles around gender and diversity as well as living wage uptake, uptake of jobs and employer sector data, gaps in skills and future sector growth.

• **HCI and DDI Gateways:** We would support the upskilling of digital and construction sector skills, capturing the supply through the talent bank and converting quicker Community Benefit Clauses to real opportunities for advancement. Skilled data citizens would be created by supporting clients to have ownership and understanding of their own data and how it is used.

• Intensive Family Support: The proposed Intensive Family Service will be an early adopter of a new system, showcasing how a more regional service joined up client journey can make a better impact and helping support an evaluation that will contribute to a wider role out and possible mainstreaming of this service area.

• Integrated Employer Engagement: A streamlined 'work readiness' assessment linked to direct job matching would support employer engagement with added value from the Talent Bank of skilled workers. Non-job employer offers would be supported through the 'Marketplace' type system.

• Workforce mobility Better tracking of travel expenditure and workforce mobility support costs would be fully captured to indicate the impact any travel barrier removal or subsidy makes.

In summary, the plan is for a more strategically aligned set of systems across the IRES structure that enhance both data capture and execution; enabling caseworkers to make more informed links, and for job matching to support employer engagement. A standalone talent bank offers an appropriately skilled workforce with emphasis on growing sectors such as digital, retail and construction. A refreshed Marketplace for the employability sector and new Community Benefits model will capture the proposed benefits of much of the wider ESESCRD, turning opportunity into real benefits. Big data analysis and visualisation will provide the longer-term understanding of success and need for further change to inform future investment and strategic drive.

2.2 PART B: The Case for Change

2.2.1 Existing Arrangements, Challenges, and Opportunities

The 2018 Regional Skills Assessment Summary Report for Edinburgh and South-East Scotland City Region⁴ concludes that although the outlook for the local economy is positive there are remaining key inclusive growth challenges.

Despite the current arrangements and ways of working, around only 40% of working age disabled adults are in employment, compared with more than 80% of adults with no disability⁵. Regional partners are committed to supporting disabled people of all ages to progress towards and into work.

Maximising economic opportunities for women to participate fully in the regional economy and recognising the wider social role they provide also remains a priority⁶. Regional partners are focused on promoting the Fair Work agenda and encouraging employers to mitigate the gendered barriers, such as occupational segregation, which prevents the development of a strong, innovative, and inclusive economy.

Almost one in four of Scotland's children are officially recognised as living in poverty⁷. Regional Partners have a clear duty to help and support all our children and young people to give them the best start we can.

To meet the needs of the client journey and ensure we support national and local strategy of a better workplace for all to tackle poverty and inequality, there is a clear need for client data systems linked to support. Most stakeholders have a current system partly fit for this purpose, to track interventions and outcomes. The major gap is around integration and strategic fit for the future.

The creation of integrated, aligned and more intelligent knowledges systems supports the personcentered client journey and strategic interventions to tackle inclusive growth challenges. It supports partners and stakeholders to prepare and plan and be responsive to opportunities with related benefits to accelerate and invest in key skills, enabling us to early identify talent and where upskilling is required. The result is a transformational step change and 'regional inclusive approach'.

Mapping of Existing Systems

A mapping of current information and knowledge systems was undertaken by Capital City Partnership in May 2018. The purpose of this exercise was to give a regional baseline to inform this Business Case.

Overall, six local authorities and nine other stakeholder organisations responded and completed the proforma used for the mapping exercise.

- In total there were 10 different systems being used
- One organisation highlighted they often record on up to six different internal and external systems for the same client, depending on what they were tracking
- Only three systems were being used by more than one organisation.
- One system was used primarily by three local authorities already
- Two further systems each had two partners using them

The survey asked for information on what the databases were used for. From what was returned, six were primarily for client/student journey tracking; recording interventions such as courses, training, and one to one support, what they have achieved and progress made, what their outcomes were, qualifications and so on.

The survey indicated that seven of the systems were primarily delivering an 'opportunities notice board' including jobs. Some of these went a little further to provide some form of job matching but most tended to focus on job opportunities being uploaded to a site where a client could log on and search for them. Three of the systems provided a version of both a client/case management facility which can lead onto job matching.

From the response we were able to differentiate the database functions into three main categories.

• **Firstly**, we have a student record system used by the Universities and Colleges that responded. At the most dynamic end these collate student records from enrolment data through to qualifications achieved. In some instances, the colleges are using the SDS data hub where Foundation Apprenticeships are delivered. Whilst some of the data fields (contact details for example) will be similar to those recorded by employability projects it appeared is less likely that the types of barriers, issues and complex support that are important for employability pathways will be recorded. The SDS hub tracks only until age 25, but there appears scope and willingness to extend this if the platform was a suitable option.

• The **second** group would be those that are used by the Local Authorities and their third sector partners. There are major similarities across the systems as to the type of data collected and what the systems are aiming to monitor. Of the six local authorities, three systems are being used but the major one in place 'Caselink' and used by three local authorities hasn't been updated since 2012. All the systems could provide the 'job matching' type of requirement although this function isn't always fully utilised, or staff resource supported.

• Thirdly, the colleges are delivering job/placement opportunity matching systems. These tend to be available to all students and are separate from any records data base that the college/university will use themselves as outlined before. Similarly, the Developing Young Workforce and Guarantee respondents were running 'posting' systems, informing all those with access about suitable job positions. We could see that all bar one is adding the data manually (or the employer has the facility to do this). Whilst this can be time consuming it can ensure the job opportunities are presented consistently, checked prior to being published and that employer support can be given as a wraparound support where appropriate.

When asked if they had ever commissioned data analysis of the data, generally the response was negative. One organisation did say they generate reports from the data and two organisations said that external agencies had been asked to analyse the data collected but there wasn't comprehensive data analysis. Partly this may be due to the type of data collected. Job boards are less likely to be analysed and able to be interrogated than client record databases.

Working out the approximate cost of systems was challenging as some are based on annual licence fees, while others are part contribution with other arms of the wider organisation contributing. Overall from the data returned we can <u>estimate</u> that approximately £196,000 is being spent each year on client data management systems related to employability. When focused just on Local Authorities and their third sector providers (the main provider of funded employability services in local employability pipelines) there was a collective investment of £93,000 with 28,000 active clients (this figure is substantively larger for archive and inactive clients who may return, with a capacity more circa 90,000). The unit cost per client for these services varied widely due to scale. As expected, smaller local authorities were paying considerably more for their systems to record lower numbers of clients' details compared to larger authorities such as Fife and Edinburgh who operated more to scale.

For organisations such as the colleges and universities the data management system looks at much more than employability and has an obvious wider educational purpose. Overall there are over 160,000 client records on all the student systems for employability purposes that we are aware of. There are differences between the HE and FE sector and the other organisations who provided a return with the large HE institutions obviously recording tens of thousands of client records overall. There was no common data framework to appraise data across the employability sector, or a means to fully track a client journey across different interventions.

While the local authorities collected similar data for funding requirements (such as European Social Funding) there was again no consistency of data collection to reflect the client journey. Often different terms or terminology were used, or different groups. The client journey was regularly broken up between different systems, with little or no inter-connection. The number of agencies that intervened with each client was also not universally collected across different systems. We can reasonably conclude that the full picture isn't being seen.

INITIAL SUMMARY AND CONCULSIONS

- There is significant investment across the region in tracking client data circa £196,000 that we know of
- Local authority investment in job seekers alone is £93,000 for nearly 28,000 active clients and considerably more for inactive archive client records
- There are three distinct groupings/areas we can initially identify the systems under
 - o student, jobseeker, job matching service
- Many of the systems appear to be effective locally but are inconsistent in approach

Integrated Knowledge Systems Project Proposition

- Data cleansing and links to audit and compliance are inconsistent
- Systems are not joined up and don't speak to each other or offer linked client tracking
- Big data analysis is low to nil

INITIAL BENEFITS AND OPPORTUNITIES

- Integration of services would give a better and clearer client journey
- Economies of scale can be made with integration, sharing costs
- GDPR data sharing is resolved across integrated systems
- Data could be recorded to feed into a larger data framework to be more useful
- Clients can be supported to become better data citizens

This first stage mapping indicates the need for a rationalisation of services, better identifying shared vision and opportunities, and to ensure better outcomes for investment.

As part of this paper, we propose that this initial mapping exercise be revisited, escalated and conducted by a technical consultant with a deeper systems analysis and a focus on technical requirements and data sharing protocols. It will also take consideration of other client tracking systems for more vulnerable groups, including tracking through housing, homelessness, health and social care.

We also want to further assess the national proposition of using the SDS Data Hub, recognising there are opportunities for client journey from school to work and beyond, but also hurdles to do with data ownership and the commitment to design a system with significant co-production with service providers and users.

Underpinning this whole proposition is that this is about change management. What will be left at the end is a more efficient, streamlined, better resourced and fit for future system to meet the need of the six regions. It will also result in a better skilled workforce within the employability sector, and also increase in data citizens.

3 Economic Case

To support the creation of a better skilled and moveable workforce across the six-region partnerships, it is essential that we have a modern fit for purpose integrated knowledge system that allows for better client tracking and monitoring of outputs and outcomes.

A cohesive system(s) approach that better captures and shares data, offers linked up employer support through community benefits and other offers, and directly places new jobs for job matching into the system will result in an increase in clients reaching sustainable jobs, better use of resources to aid this success, and have an economic growth impact from better data and intelligence to inform future provision.

3.1 Current Labour Market Context

The IRES programme has been conceived as a whole system (whole person) approach to deliver culture and practice changes that will have significant qualitative benefits for an additional 14,700 people with improved skills and 5,300 moving into employment over the course of the (£25 million) 8-year investment period.

The proposed integrated knowledge system approach will generate significant synergies, cost efficiencies, improved inclusion outcomes, and enhance responsiveness to changing need and opportunity in our regional labour market that will have a lasting benefit for the region and the Scottish Economy.

The 2018 Regional Skills Assessment Summary Report for Edinburgh and South-East Scotland City Region concludes that although the outlook for the local economy is positive there are some key inclusive growth challenges that remain. Despite expected jobs growth across most sectors and occupations providing opportunities for people at all skills levels, a key challenge facing employers in the region will be sourcing people to fill these vacancies, particularly in the context of Brexit and the resultant constraints on the future supply of labour from Europe.

A further challenge is the forecast ageing of the population and associated contraction of the working age population which, although not as pronounced as in other areas, could put further pressure on labour supply in the region.

Although less acute than the Scottish Average, similar trends of disparity remain across the region particularly in measures of job density, skills inequality, gender and age inequalities, low income and low pay.

It is therefore essential that there is a new approach to knowledge systems and how we work with clients to create a better skilled workforce and a deeper understanding of their requirements. Recognising that clients often need multiple agency interaction is part of this, and a more joined up,

robust tracking and referral system across the region will facilitate this and better reflect what is happening in the labour market which doesn't recognise local administrative boundaries. Aligned with the integrated employer theme for new offers and job matching, we are better able to see how we are addressing the skills agenda, what is working, what is not, and what gaps remain.

3.2 Change we want to effect

The change we want to effect is to have a streamlined and more efficient service offer that reaches across multiple stakeholders and brings genuine alignment of an enhanced employability pipeline. We wish to increase person centred client journey progressions through the pipeline, ensuring the correct services are in place to meet skills gap, and that the employability and skills sector is better informed and intelligent.

We want to have systems that are technically future proofed, making better use of digital technology, and how providers and clients use this technology, to make sure all sections of our society are supported to sustainable jobs.

Linking to employer offers is critical. Creating a region wide 'one stop' service that employers can trust will bring much needed opportunities to the most disadvantaged. We also want to bring added value through capturing and tracking community benefits and adopting and learning from the Developing Young Workforce 'Marketplace' employer support matching service. Through this offer, and links to the Integrated Employer Engagement service, we can influence recruitment practices, showing how a talent pool is more effective than relying on self-defeating on-line applications with 'killer questions' to exclude a perfectly capable group of potential employees.

Supporting stakeholders to better respond to the region becoming a larger workforce and more dynamic is also something we aim for. Creating systems and open data frameworks in partnership using co-production principles will allow stakeholders to reflect and modernise and identify areas of cross over and mutual benefit.

In addition, listening to frontline workers and how they interact with clients and record information is essential. Too often systems are created without the end user involved, so ownership and quality inputting of data can be lower than required. Some of the current systems have entry options of over 500 individual fields. We intend to challenge and change this, through extensive engagement for service shaping and design.

Intelligence from a data framework will also enhance our understanding of what works best. Capitalising on the Data and Digital Innovation strand, we also want to support clients to become better data citizens. Enabling clients to understand how their data is captured and used makes them at the centre of their data citizenship, having better access and control but also understanding the bigger contribution to more successful services.

3.3 Identification of Options

As part of this process we have formed a Project Board to support the development of this proposition. The initial group formed 18 months ago have looked at all the major systems, with demonstrations on what a future redesign might offer.

There have been demonstrations client tracking systems from Iconi, PDMS, FORT and PICS. They have also had a demonstration from the national Skills Development Scotland Data-Hub system, recognising there may be added value in how this system could be adapted to incorporate required features. There was also a data visualisation demonstration from Napier University and visit to Edinburgh College to look at their varied system approaches.

The Project Board has grown and extended as new stakeholders materialised, or became better engaged, resulting in a significant understanding of what we are trying to achieve. They have helped to inform and support the way forward and the option analysis. Partners agreed to focus the limited resource investment on a phased approach to achieve a longer-term impact. There was an understanding that more detailed work had to be undertaken on all the system options, including whether it is an actual system or a relationship with a supplier that can be used in the long term that is required.

Options Appraisal Table

Option		Benefits	Cons	Outcome		
1	Status Quo – keep systems as they are	No change required; Less resource required in short term; Focus more on data framework only; Minimum change required;	Disconnected client journey;	1 – Not recommended 1 – Not		
2	Adjustment to Current systems	More likely to get consistent data quickly; More focus on data framework;	up tracked workforce; Disconnected client journey; Keeps investment unnecessarily high; No links to job matching	recommended		
3	Nominated System Commission	Quickest solution for change; New system in place within a year; Builds on systems we have showcased and in existence;	Missed opportunity of understanding of client journey; Not enough technical testing been completed; Cuts out significant service provider and user engagement; Impacts quality of data for a data framework	1 – Not recommended		
4	Data framework only	Minimum disruption to current systems; Quicker intelligence; Focus on strategic information;	Current systems not designed to draw out data;	1 – Not recommended		
5	IKS - Change Management Programme - Three Phases	Co-design with service users and stakeholders Better client journey Increased data citizenship Job matching and employer offers, Fit for purpose data set Future proofing Economies of scale achieved		4 - Recommended		

Integrated Knowledge Systems Project Proposition

3.4 Programme Option Analysis

Impact Criteria	Status	Current	Nominated	Data	Change
0-none, 1-Low, 2-Medium, 3-	Quo	System	System	Framework	Management
High		adjustment		Only	Programme
Positive impact	1	1	2	0	3
for clients/services					
Enhanced client journey	1	1	2	1	3
Better job matching	1	1	3	0	3
Ease of Transition	3	2	3	2	1
Economies of scale	1	1	2	0	3
Improved data sets	1	1	1	2	3
Strategic intelligence gathered	1	1	1	3	3
Sustainable over longer period	0	1	1	1	3
Drives service efficiencies	0	1	2	0	3
Contributes to wider ESESCRD	0	1	1	1	3
TOTAL	9	11	18	10	28

3.5 Preferred Option

The Integrated Knowledge Systems recommendation of option 5 'Change Management Programme -Three Phases' best fits with the aims and objectives of the Edinburgh and South East Scotland City Region Deal Integrated Regional Employability Skills plan.

As outlined in the Programme Option Analysis table, it offers the best outcomes for stakeholders, service providers, and service users. The analysis highlighted that although the preferred option will take longer to implement, it will give a fuller range of integration across all themes, facilitate better engagement with all stakeholders on managing change, and help to make a system that is future proofed with economies of scale.

The Integrated Knowledge System model proposed will be underpinned by a regional partnership consisting of key public, private and third sector stakeholders who will form part of a Project Board who will support and oversee the implementation plan. They will ensure that the principles of the Fair Work agenda underpin the development, creating a new way of working that will support a flow of clients from disadvantaged groups into quality jobs, reduce skill shortages, and increase long term work progressions.

3.6 Impact of implementing the IKS project

The IRES programme has been allocated £25 million over an eight-year period to help facilitate a step change in inclusive growth by stimulating a change in culture and regional approach.

The implementation of the proposed IKS model will reflect this core change management principle, facilitating a change through engagement and co-production, upskilling frontline workers, supporting better data citizens, and giving employers job-matching to an appropriately skilled workforce.

It is proposed that all change is managed and supported through the IKS Project Board, with a checks and balances on each step change and critical testing of ideas.

It is imperative that all stakeholders feel involved in this change process and are consulted and part of the co-production to facilitate change. The frontline workers using the system, and the clients should also be at the forefront of shaping how change manifests.

3.7 Summary of Outcomes, Benefits and KPIs

The Integrated Knowledge Systems is an integral part of the IRES Programme, and it is anticipated that significant inclusive benefits will be generated including;

- Increasing the visibility and unlocking access to good opportunities for those facing disadvantages in the labour market or are under-represented within key industries identified under labour market analysis
- Opening up new talent pools to business and stimulating increased recruitment from underrepresented groups into the good jobs and careers to help address skills shortages
- Evolving, streamlining and integrating career pathways to support and track progression
- Upskilling and improving workforce diversity across the region while also increasing capacity to equip citizens with the skills they need to succeed throughout their working life, including data management
- Increasing regional workforce mobility to align supply and demand better
- Supporting business to make better use of community benefits, and create relationships directly with disadvantage groups to engage in the world of work

Table below summarises the range of outcomes and benefit measures with timelines based on the funding available.

Scrutiny of overall performance management outcomes will also be a strict requirement included in the quarterly dashboard and annual reporting cycle of the IKS Project Group to the IRES Board.

3.8 How will we measure success?

Output	Measurement	Phase 1-3 and Year
Management Information	6 Stakeholder workshops	Phase 1 Year 2
System and Talent Bank shape and	-	
design	production workshops	
	400 frontline workers consulted	
	12 client co-production data	
	workshops	
	600 clients consulted on data	
	citizenship	
	12 Employer workshops	
	60 employers consulted	
	20 client journey profiles mapped	
	out and tested,	
	including coterminous barriers	
	4 Data Analyst MIS workshops	
	MIS and talent bank external	
	mapping and evaluation completed	
	with recommendations	
Procure new MIS and Talent Bank	Procurement framework created	Phase 1 Year 2 & 3
service	Specification issued on Public	
	Contract Scotland	
	Contract agreement for new service	
	development	
	180 organisations in regional	
	employability pipelines register on	
	new system with 600 projects	
	details	
	30% Saving achieved	
	on regional operation systems	
	Legal framework created for	
	stakeholders	
	Stage 1 Evaluation	
	completed including service	
	provider 80% satisfaction survey	
Improved client journey and client	,	Phase 1 Year 2 & 3
experience	30,000 new clients registered	
	20% move into	
	enhanced pipeline journey	
	Yearly client survey – 80% client	
Increased ich matching and saster	satisfaction 4000 live Talent Bank registrations	Dhaca 1 Vaar 2 8 2
Increased job matching and sector	Ũ	Phase 1 Year 2 & 3
focus	1200 new jobs posted per year 80% pipeline match through to	
	sector focused jobs	
	60% Living Wage take up by 2022	
Data Citizenship and Digital Skills		Phase 1 Year 2 & 3
upskilling frontline workers	upskilling programme	
Leverage	800 frontline workers complete	
	Edinburgh College upskilling	
	programme	
	2400 client's complete data	
	citizenship certificate	
Marketplace and Community		Phase 2 Year 3 & 4
Benefit offers shape and design	employability services.	

Data Framework and Analysis plus Visualisation projects	CB: Pilot project 2 – launch with 200 Community Benefits offers tracked onto Marketplace 180 client uptake Stage 2 Evaluation completed including employer 80% satisfaction survey	Phase 3 Year 4, 5 & 6
	200 employers engaged with for shape and design. 400 frontline workers consulted with. 1000 Non-job employer offers made for match through 600 clients take up offers <i>Community Benefit linked to the</i> <i>Integrated Employer Engagement</i> <i>approach as follow on element</i> CB: Pilot project 1 – launch with 200 Community Benefits offers tracked onto Marketplace 180 client uptake	

Note: KPIs and outputs will be continually reviewed and appropriately revised as the project develops

4 Commercial Case and Financial Case

From our previous mapping, we know that there is a significant amount of public service funding already invested in the employability sector across the six regions. Initial mapping has identified at least £160,000 across the college, university and associated employability sector, with £96,000 invested in local authority employability models alone. It is anticipated that this is only part of the picture and client journeys are being captured and partially tracked across other related systems in areas such as housing, criminal justice, health and social care.

Behind the systems there is also the management and maintenance costs of the range of systems, including staff time on operational running of a system, compliance and auditing and duplication of caseworkers keying the same data across different platforms. There is an over-supply of staff support with an underuse of the skills.

There is also little strategic analysis of all the data being collected, and how this could be used to inform future activity around better use of commissioning and service interventions. We have the support of Edinburgh Informatics and Edinburgh University as a critical friend to support the development of any new system to ensure that it can collect data in a way that can produce big data analysis. We also have Napier University for visualisation of data to understand the client journey impact.

The Integration Knowledge Systems will bring about economies of scale through investment in fit for purpose technology on a 'spend to save' model. It will also reduce overheads in staff maintenance and operational costs and make better use of frontline case-workers time.

Streamlining of systems and resources will produce better client journeys, a skilled workforce and through a data framework will help direct future investment intelligently into areas that produce proven results.

Developing an integrated community benefits system to run alongside the Integrated Employer Engagement theme will also increase better commercial use of this often-under-utilised commercialised opportunity.

A new successful model can also be commercially 'sold' to other investment areas as a client tracking and case management solution, establishing this as the 'go to' model. There is a clear commercial opportunity to develop a system to respond to the new Scottish Government and Local authority framework for the double devolution of future employability funding across all 32 local authorities on a regional lots model. Initial meetings have taken place with Employability in the Scottish Government to start these conversations.

The intention is also to use the ESES IRES funding as a starting point to attract in other leverage, including developing funding applications to the new National Lottery Digital programme and UFI Charitable Voch-Tech programme. This can support regional staff upskilling and additional software technology as opportunities arise. We are proposing a minimum 20% leverage target. All procurement will be completed to the local authority standard, using an open and transparent

process and utilising the Public Contract Scotland portal.

Integrated Knowledge Systems Project Proposition

5 Financial Projections

Table below shows the planned activities, spend plans and time lines for the full projected seven-year

period. Spend profile relates specifically to the three-phase approach around

- Phase one: Management Information System and Talent Bank
- Phase Two: Marketplace and Community Benefits
- Phase Three: Big Data Analysis and Visualisation

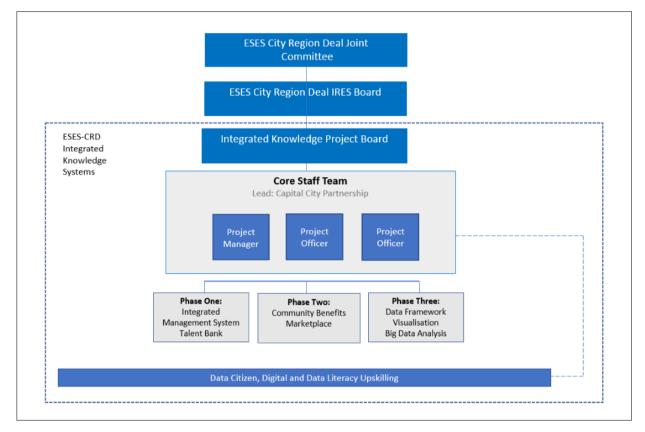
This proposal will result in long term savings and better use of data to inform strategic interventions and capturing of best practice.

Table below should be read in conjunction with Tables in the Management Case timeline activity.

Integrated Knowledge System	Integrated Knowledge System PHASE 1 - 2019 to 2021			SE 2 - 2021	to 2024	PHASE 3 - 2024 to 2026			
Activity vs CRD Spend Timeline	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	Total	
PROJECT MANAGEMENT AND DEVELOPMENT	PROJECT M	ANAGEMENT	PRO	JECT MANAG	EMENT	PROJ	ECT MANAGI	MENT	
Project Manager full costs Grade 8	54,000.0	55,000.0	58,000.0	61,000.0	63,000.0	65,000.0		356,000.0	
Project Officer full costs Grade 7	45,000.0	47,000.0	47,000.0	49,000.0	51,000.0	55,000.0		294,000.0	
Project Officer f/t then p/t costs Grade 7	43,000.0	45,000.0	27,000.0	29,000.0	31,000.0			175,000.0	
Operational delivery overheads	30,000.0	25,000.0	25,000.0	25,000.0	25,000.0	20,000.0	10,000.0	160,000.0	
MIS DEVELOPMENT WITH TALENT BANK	MIS DEVE	LOPMENT	M	IS DEVELOPN	NENT	MI	5 DEVELOPN	IENT	
Consultant mapping and system analysis	40,000.0							40,000.0	
Specificaiton with product tools	8,000.0							8,000.0	
Development of Management Information System and Talent Bank system	50,000.0	80,000.0						130,000.0	
Legal data sharing protocols agreements start	5,000.0							5,000.0	
Test of system with user group and adjustments		3,000.0						3,000.0	
Staff Engagement and third sector upskilling	4,000.0							4,000.0	
Phase One pilot - Edinburgh, East Lothian and MidLothian transition underwrite + archive	8,000.0	10,000.0						18,000.0	
Phase Two pilot - Fife, West Lothian, Borders transition underwrite + archive	8,000.0	10,000.0						18,000.0	
Full Review and evaluation - embedding phase with support and training to secure change			80,000.0					80,000.0	
Mainstream contract put in place, legal sign off			5,000.0					5,000.0	
MARKETPLACE + COMMUNITY BENEFITS			MARKET	MARKETPLACE + COMMUNITY BEN			MARKETPLACE + COMMUNITY BEN		
Consultant mapping and system analysis, including benchmarking of all elements			5,000.0		5,000.0			10,000.0	
Marketplace commission and roll out			38,000.0					38,000.0	
Community Benefit system pilot				9,000.0				9,000.0	
Community Benefit system roll out				20,000.0	10,000.0			30,000.0	
Embed phase and mainstream								0.0	
BIG DATA ANALYSIS AND VISUALISATION			BIG DATA ANALYSIS & VISUALISATION		ISUALISATION	BIG DATA ANALYSIS& V		ISUALISATION	
Data framework creation				10,000.0	10,000.0	30,000.0		50,000.0	
Data sharing legal protocol agreements				2,000.0	5,000.0			7,000.0	
University Project final visualisation project						15,000.0		15,000.0	
University Project final visualisation project						15,000.0		15,000.0	
Final evaluation and mainstream							30,000.0	30,000.0	
Sub-total	295,000.0	275,000.0	285,000.0	205,000.0	200,000.0	200,000.0	40,000.0	1,500,000.0	
ESES-CRD BUDGET	295,000.0	275,000.0	285,000.0	205,000.0	200,000.0	200,000.0	40,000.0	1,500,000.0	
Integrated Knowledge System	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26		
	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8		

6 Management Case

The Integrated Knowledge Systems proposition will be overseen by an IKS Project Board. Sub-groups for specific focus work will be drawn up as expertise areas arise and additional intensive work identified.



Membership of this board is extensive across the regions but given the range of this work and the long development lead, every member has asked to still be involved to play an active part. To accommodate this, and make best use of members expertise and time, we anticipate the full board will meet only two times in the year, with sub-groups clustered around milestones and taking on more specific support and development.

The board is comprised from Edinburgh, Fife, West Lothian, Midlothian, East Lothian and Borders Local Authorities; Skills Development Scotland; Edinburgh, Fife and Borders Colleges; Developing Young Workforce Fife and West Lothian, Borders, and Edinburgh, Mid and East; Edinburgh University representing all four universities; Napier University for additional visualisation support.

The City of Edinburgh Council Digital Team and Edinburgh Informatics with Edinburgh University are also members for technical support.

Integrated Knowledge Systems Project Proposition

Role	Organisation or Group	No.
Chair/Vice-Chair	Capital City Partnership	1
Local Authority Representatives	Representatives from each Local Authority Area, with the capacity to link to own education, social work and employability providers	
Public Skills Bodies & Innovation	Skills Development Scotland, Department of Work and Pensions, Developing Young Workforce (Fife, West Lothian, Edinburgh, Mid and East, Borders)	
Education bodies	Edinburgh University (representing all universities), Borders College, Fife College, Edinburgh College, Napier University	5
Support and Advisory Positions	City of Edinburgh Council Digital Team Edinburgh Informatics CCP Business Intelligence Manager	3
РМО	IKS Manager	1

Note: lead members from other IRES themes would attend the delivery group as and when necessary to ensure compatibility across IRES objectives and engage with specific aspects and sub-themes

6.1 Project Management Structure

The Project Management Structure reflects the levels of accountability and support we will work within to ensure the success of the project. It is a simple structure to ensure ease of accountability and that progress can be made quickly and efficiently. Regular reports will be produced and submitted to the IRES board as defined in their terms of reference.

The proposed staff are in place only to support system change, and the staff will stand down from this project once the aims and objectives are achieved.

Staff functions are as follows:

Project Manager: The PMO will be responsible for the overall day to day delivery of the Integrated Knowledge System proposal as set out in this paper. They will lead a small staff of two project officers in the execution of the timeline and milestones. This includes the delivery of all three phases as already outlined and working with the Chief Executive of Capital City Partnership and the IKS Board on other funding leverage opportunities to add value to all aspects of this proposal. An emphasis on co-production and co-design will be at the centre of this work, bringing genuine partnership to facilitate change. A focus on active inclusion will provide service users with connection to developments, supporting active participation. The Project Manager will also be responsible for supporting the Chief

Executive of Capital City Partnership in developing funding applications to attract external leverage and manage these projects elements as well.

Project Officer x 2: Two Project Officers will support the PMO in the first two years with the practical delivery and successful execution of the Integrated Knowledge System proposition. This will include all milestones within the three-phase approach. As this is a regional approach, significant travel and work across the six regions is fundamental and anticipated. Both Project Officers will be full-time for the first phase, reducing to one part-time post for phases two and three – although it is anticipated the additional leverage funding will supplement this.

In-Kind Support Senior Supervisory Management support and Administration support will be drawn from Capital City Partnership as in-kind when required at no additional cost to the project proposal. Support from the experienced CCP Business Intelligence Manager will also be made available as an in-kind contribution.

We expect to add additional posts to the structure dependent on leverage funding for additional activity around frontline worker upskilling and creating better data citizens.

6.2 Phased Approach

As outlined, this will be a phased approach to allow each section to develop to a stage where other phases can then commence through to full development and complement what has gone before. There will be critical blending points between phases and exit milestones with regional contractual arrangements to ensure there is sustainability. There will be an overarching Gantt chart which will be used to track the activity through a timeline with milestones and to ensure all progress is on track. As each phase is developed, proposition papers giving updates will be developed and submitted to the IKS Project Board for consideration. Given the need for technical understanding of any system development, a risk register will run underneath to ensure those making decisions have full confidence in what is being proposed.

6.3 Project Plan

Phase 1 - Management Information System and Talent Bank

The plan for this stage is to concentrate on how we make a new and improved client journey around an enhanced skills pipeline and then shape a system that can best serve this need. This work will take place in the first two years, with a new system in place for 2021.

Phase 2 & 3 – Community Benefits and Marketplace and Big Data Analysis and Visualisation

It is anticipated system adaptations and support will continue through phases two and three for the new integrated management information system to ensure systems are fully embedded. The focus on Phase 2 is around employer engagement offers, linking to the Integrated Employer Engagement theme to get best value from Community Benefits and creation of a marketplace offer to support better employability interventions.

Project Plan

Phase 1 - Management Information System and Talent Bank

The plan for this stage is to concentrate on how we make a new and improved client journey around an enhanced skills pipeline and then shape a system that can best serve this need. This work will take place in the first two years, with a new system in place for 2021.

Integrated Knowledge Systems	PHASE 1 - 2019 to 2021									
		9/20			2020/21					
Activity vs CRD Spend Timeline	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
PROJECT MANAGEMENT AND DEVELOPMENT			P ROJE	T MANAGEM	ENTAND DE VE	LOPMENT				
Project Manager appointed	PMO			Review				Review		
Project Officer appointed	PO			Review				Review		
Project Officer appointed	PO			Review				Review		
Steering Group formed	1/4 mtg	1/4 mtg	1/4 mtg	1/4 mtg	1/4 mtg	1/4 mtg	1/4 mtg	1/4 mtg		
MIS DEVELOPMENT WITH TALENT BANK		-,		VELOPMEN	T WITH TAL	ENT BANK	-,			
Consultant mapping and system analysis										
Recommendations with specificaiton relationship										
development for PCS										
Development of Service Protocols and client profile										
testing with Intensive Family Service										
Management Information System and Talent Bank										
system design										
Data sharing protocols agreements start										
Test of system with user group and adjustments										
Staff Training and third sector upskilling										
Phase One pilot - Edinburgh, East Lothian and										
MidLothian and adjustments										
Phase Two pilot - Fife, West Lothian, Borders										
Full Review and evaluation - embedding phase with										
support and training to secure change										
Final evaluation. Mainstream contract and exit										
MARKETPLACE + COMMUNITY BENEFITS			MARKE	TPLACE + C	OMMUNITY	BENEFITS				
Consultant mapping and system analysis, including										
benchmarking of all elements										
Marketplace commission and roll out										
Community Benefit system pilot 1										
Community Benefit system pilot 2										
Embed phase and mainstream										
BIG DATA ANALYSIS AND VISUALISATION			BIG DAT	A ANALYSI	s and visu	ALISATION				
Mapping and analysis										
Data framework creation										
Data sharing protocol agreements										
University Project visualisation pilot 1										
University Project visualisation pilot 2										
Embed phase and mainstream										
Integrated Knowledge Systems		201	9/20		2020/21					
integrated knowledge bystems	01 02 03 04			01 02 03 04						

Phase 2 & 3 – Community Benefits and Marketplace and Big Data Analysis and Visualisation

It is anticipated system adaptations and support will continue through phases two and three for the new integrated management information system to ensure systems are fully embedded. The focus on Phase 2 is around employer engagement offers, linking to the Integrated Employer Engagement theme to get best value from Community Benefits and creation of a marketplace offer to support better employability interventions.

7 Sustainability

The Integrated Knowledge Systems programme is to bring about change in how we work regionally by integrating systems and resources, making a better client journey where access to support and jobs is seamless and evidenced based. The economies of scale that can be made through this will leave a fit for purpose way of working at the end that increases job outcomes while costing less. This is a standalone project with staff team who are there solely to facilitate change. The project itself will not continue after change has been achieved. Legal contract milestones have been built into the timeline to agree contractual relationships going forward for each exit phase, allowing each stakeholder to plan and make best use of this opportunity. Evaluation points are placed along the timeline to capture learning and facilitate next steps. As mentioned before, we will also explore the commercial opportunity to use the new system as an income generator with other areas in Scotland and for other stakeholders and partners.

Integrated Knowledge Systems		021 to 2	PHASE 3 - 2024 to 2026							
	202	1/22	202	2/23	202	3/24	202	4/25	20	025/26
Activity vs CRD Spend Timeline	Q1/Q2	Q3/Q4	Q1/Q2	Q3/Q4	Q1/Q2	Q3/Q4	Q1/Q2	Q3/Q4	Q1/Q2	Q3/Q4
PROJECT MANAGEMENT AND DEVELOPMENT		PROJECTIN	ANAGEMEN	NT AND DEV	ELOPMENT		PROJE	CT MANAGE	MENTAND	EVELOPMENT
Project Manager appointed		Review				Review		Review		End
Project Officer appointed		Review				Review		Review		End
Project Officer appointed		Review				Review		Review		End
Steering Group formed	1/4 mtg	1/4 mtg	1/4 mtg	1/4 mtg	1/4 mtg	1/4 mtg	1/4 mtg	1/4 mtg	1/4 mtg	End
MIS DEVELOPMENT WITH TALENT BANK		VIS DEVEL								ALENT BANK
Consultant mapping and system analysis										
Recommendations with specificaiton relationship										
development for PCS										
Development of Service Protocols and client profile										
testing with Intensive Family Service										
Management Information System and Talent Bank										
system design										
Data sharing protocols agreements start										
Test of system with user group and adjustments										
Staff Training and third sector upskilling										
Phase One pilot - Edinburgh, East Lothian and										
MidLothian and adjustments										
Phase Two pilot - Fife, West Lothian, Borders										
Full Review and evaluation - embedding phase with										
support and training to secure change										
Final evaluation. Mainstream contract and exit				End		stream			ainstream	
MARKETPLACE + COMMUNITY BENEFITS	P	MARKETP	ACE + CO	MMUNIT	Y BENEFIT	S	MARKE	TPLACE +	COMMUN	ITY BENEFITS
Consultant mapping and system analysis, including										
benchmarking of all elements										
Marketplace commission and roll out										
Community Benefit system pilot 1										
Community Benefit system pilot 2										
Embed phase and mainstream						End		M	ainstream	
BIG DATA ANALYSIS AND VISUALISATION	В	IG DATA	ANALYSIS	AND VISU	JALISATIC)N	BIG DA	TA ANALY	SIS AND V	SUALISATION
Mapping and analysis										
Data framework creation										
Data sharing protocol agreements										
University Project visualisation pilot 1										
University Project visual isation pilot 2										
Embed phase and mainstream									End	Mainstream
Integrated Knowledge Systems	202	1/22	20.2	2/23	20.2	3/24	202	4/25)25/26
integrated knowledge systems		<u> </u>		<u>.</u>						
	Q1/Q2	Q3/Q4	01/02	Q3/Q4	Q1/Q2	Q3/Q4	Q1/Q2	Q3/Q4	Q1/Q2	Q3/Q4

8 Risk Mitigation Plan

Risk management is an integral feature of the Integrated Knowledge Systems and the project risk register below will be regularly updated. All risks at project level will be identified and mitigation measures put in place and monitored as part of the quarterly progress monitoring and annual review processes required by the IRES Programme Board. The Integrated Knowledge Systems Board and ultimately the IRES board will regularly review project progress with decisions made on continuation, adjustment or withdrawal of funding.

IKS Risk Matrix

Risk	Mitigation Measures
Technical requirements underestimated and/or misunderstood, and system and data framework procured aren't fit for purpose	Have technical expertise advisor(s) on the IKS Board as critical friends. Conduct technical mapping using industry expertise on recommendations and costs
GDPR sharing protocols not adequately considered and factored in for data sharing	Ensure we have access to GDPR expertise at local authority and national level with SDS. Cost in legal expertise
Service Users not 'buying in' to the system	Co-production with service users to ensure they shape and design the system they will be using
National system (or equivalent) introduced	Keep conversation with Scottish Government flowing throughout the process with regular meetings and updates
Lack of regional agreement with recommendations of process; unable to make an agreed decision. Links to Project Board too big to agree on specific areas.	
New systems end up costing more than the current offer	There are milestones and check-points built into the project plan to provide safeguards before next step developments take place
Brexit and impact of European Funding remaining, and system needs to reflect this for audit and compliance purposes	The project plan has taken account of this with the timeline and milestones so adaptations can be made
Need for further and continuous development after mainstream and exit reached	Development fund to be written into legal agreements going forward to future proof
All risks not identified as this is a completely new proposition with complex technical requirements	Phased approach gives opportunity to pause and reflect and consult for next steps. Flexibility to change direction if required.
Staff resource to maintain a new approach and range of systems	Staff costs will be factored into exit and mainstream stages for IKS Project Board approval
Unable to secure leverage to upskill frontline workers and disadvantaged client groups	Looking to DDI theme to support this plus possible National Lottery Digital application