Housing Construction & Infrastructure (HCI) Skills Gateway

Project Proposition - FINAL

Approved by ESESCR Deal Joint Committee: 1 March 2019

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ACCELERATING GROWTH

EDINBURGH AND SOUTH EAST SCOTLAND
CITY REGION DEAL

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1   Introduction

1.1   About this Document

This Project proposition sets out a detailed case for investment in a targeted Housing Construction & Infrastructure (HCI) Skills Gateway as part of the Integrated Regional Employability and Skills (IRES) programme and should be considered in conjunction with the IRES Programme Business Case.
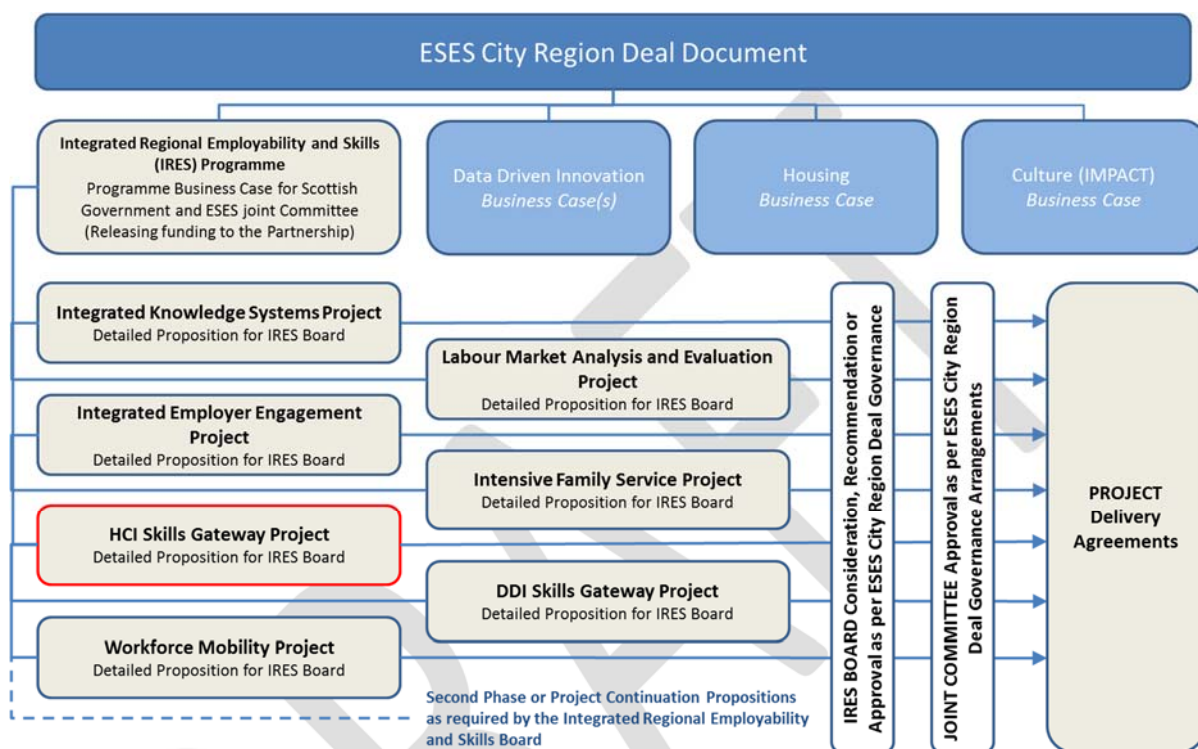
Figure 1: Suite of IRES programme documents

1.2   Project Vision

The HCI Skills Gateway will bring together stakeholders to provide clear, integrated and inclusive progression routes into **construction careers for new housing, infrastructure and refurbishment** encompassing basic/key skills in schools through to advanced postgraduate training and enterprise roles for business that help drive high value and inclusive growth.

The Skills Gateway programme will ensure the SES region have the necessary workforce skill base to power growth, and more particularly that individuals facing disadvantages in the labour market are targeted and equipped with the necessary skills that they need **to enable inclusive growth.**

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

1.3   Overview of the HCI Skills Gateway Project

The HCI Skills Gateway will bring about much needed alignment of supply and demand in the housing construction sector. Change funds will be used to corral all relevant stakeholders with a common purpose to achieve inclusive growth through an improved employability pipeline specifically tailored to better support local individuals. Greater numbers of local people will be more able and better equipped to access the wealth of opportunities the sector provides.

The focus will be on reducing worklessness and poverty through providing dedicated training 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.

Key client groups for the HCI Skills Gateway include:

- **Schools in most deprived SIMD 20% areas** – working closely with the schools and teachers to target and support young people and those in their senior phase. Awareness will be raised of the job opportunities, available training, industry demands and future career profiles through the career pathway programme. The proposal is to utilise and link to the existing Design, Engineer Construct (DEC) education programme. This involves HE/FE partnerships with schools and industry. Several schools in the region have trialled this recently with regional HE providers. Evidence shows this can have positive results and the key objective is to increase the number of young people progressing into jobs in the sector. The HCI DEC 400 project will have a specific focus on young people in the most deprived 20% SIMD areas.

- **Unemployed and those experiencing in-work poverty** - Working with LA employability teams and Fair Start Scotland providers to utilise training workshops and increase the number of training opportunities to meet with industry demand

- **Veterans / ex-offenders** – engaging with LA departments and creating links between LA training workshops and local prisons. The HCI Skills platform will create a streamlined pathway reducing the number of stop-go points, or delays for veterans / ex-offenders to receive the relevant training and support.

- **Carers and care experienced** – approximately 1 – 2% of young carers carry on to FE or HE sectors. Recent projects by Napier University have shown how using a targeted joined up approach can make a significant difference to their progression. Through the ESESCRD HCI Skills Gateway we will widen this approach across the region and delivery group partners.

- **Supporting women** into higher paid jobs and planning to return to work – is a key focus for the industry and government wishes to see significant improvement. Women will be targeted for advanced skills/training with greater engagement with employers in the region to raise awareness and develop support for this target group.

The HCI Skills Gateway will be transformational in terms of delivering better job outcomes for local people across the region. The current approach is disjointed, either for National programmes, or through single companies approaching Colleges or LA's for provision. The HCI Skills Gateway will drive

a more proactive regional and sectoral specific approach to early skills, new skills development and increased job outcomes. The Skills Gateway will provide the platform for companies to come together and engage with their key industry sector partners to provide training and support for local people to progress in and onto employment with the key skills that industry needs. More people will be able to access and gain employment in the sector as a result.

1.3.1 Targeting resources

The current strength of the construction sector along with additional proposals for increased housing building and retrofitting through City Deal investment is creating significant and increasing skills gaps and workforce shortages, for new housing, infrastructure and repair and maintenance sectors. This provides a unique opportunity support the inclusive growth agenda and fill these with local people from our most disadvantaged areas.

The HCI Skills Gateway's inclusive growth approach has four key aims for the SES city region:

- Offering specific targeted support for; those living in the most deprived SIMD areas, schools and school leavers to access new job opportunities within the construction, infrastructure and housing sectors.
- To pilot new skills projects (identified by industry demand) and enhance productivity within the existing workforce to support economic growth through 'shorter or accelerated' training to job opportunities.
- To provide inclusive employment pathways which will include upskilling and career progression, promoting equality in higher quality jobs with an emphasis on closing the gender gap in earnings throughout the industry.
- To address significant skills shortages by linking education and training providers to key growth areas and future innovations for the sector.

Change is urgently required to deliver greater efforts to tackle deprivation, to increase female participation and to provide greater flexibility in the workplace and to provide more opportunities for young people to both enter the industry and to progress into higher skilled and higher paid roles. To accomplish this, there will be greater involvement in schools, ensuring greater engagement and participation with DYW activity to raise awareness and profile the opportunities presented by the sector, upskilling our current workforce and retaining our talent across the region.

The five key sub-themes and targeted supports of the HCI Skills Gateway are:

- **Inclusive Reach and Early Skills**
- **Employability Pathways**
- **Accelerated Into Work and Upskilling (Trades – Early On-site and Offsite Skills)**
- **Advanced Skills and Gender Diversity**
- **Talent Development**

These sub-themes are integrated through the reach, skills demands, community outreach and opportunities that ESESCRD provides and serves. All aspects from curriculum and course design through to individual project delivery will be holistically managed to deliver a fully integrated programme approach.

Figure 2 over illustrates how the five key sub-themes and targeted support will accelerate progression through the strategic skills pipeline and the Economic Case outlines the anticipated project outcomes in further detail.

Progression Stage	1. Life Skills Removing major barriers and obstacles to work	2. Basic & Key Skills Improving personal effectiveness, competencies and career awareness.	3. Vocational Skills Enhancing skills and competencies to unlock jobs	4. Entry & Graduate Careers Enhancing skills and competencies to unlock good careers	5. Advanced Careers Increasing advancement and career progression prospects
Priority Focus (Who)	Untapped Talent (Disadvantaged and Vulnerable Individuals) Including the workless, care leavers (experienced), those with a disability or enduring health condition, individuals within vulnerable family situation (intergenerational disadvantage).			Stuck Talent Those who are stuck in temporary, insecure, or low paid work.	Under-utilised Talent Those who are not being fully utilised, particularly those from disadvantaged backgrounds.
What	Health Treatment, Debt Advice, Housing, Family Support, Soft Skills Development, Literacy & Numeracy, ESOL, Nat 4/5, Higher. (No Qualifications to SCQF 1-3)		SVQ Level 2, Foundation Apprenticeships (SCQF levels 4-6)	HNC, HND, SVQ 3 & 4, Modern and Graduate Apprenticeships, Degree (SCQF levels 7-10)	Professional Apprenticeships, Masters, PGDip, Research & Innovation, Industry Training (SCQF levels 11-12)

Figure 2 HCI Skills Gateway integrated and aligned with Strategic Skills Pipeline

1.4   Project Summary

The five key HCI sub-themes and targeted supports are summarised below with full detailed arrangements included later in the management case. It is worth noting that Developing the Young Workforce (DYW) is an inherent function already established in the formal HCI Delivery and IRES Programme Board. Also that the Stage & Gate and quality assurance and performance management functions as detailed later in the management case will ensure any risks to project success are identified and mitigated at an early stage.

1.4.1   Inclusive Reach & Early Skills

The HCI Skills Gateway will facilitate increased capacity for the sector to engage those under-represented in the industry through the establishment of a network of DEC Ambassadors across the SES City Region. DEC Ambassadors will work across schools, colleges and universities and build the necessary capacity to bring about the necessary cultural change that will increase employment in the sector.

A key focus of the DEC Ambassadors will be to support 400 school children, from regional SIMD areas to engage in construction. Identifying real career paths, into good quality, sustainable employment through focused mentoring and support.

Enhanced engagement with employers has already brought about improved gender balance in the sector. The industry sector is 11% female in higher job professions and given proactive action by Edinburgh Napier University including a series of outreach events and significantly altered marketing material, this has resulted in a shift from 14% enrolled on courses in 2015 to 18% female applicants in 2017-18. Also for Graduate Apprenticeship programmes, the 2018-19 percentages have increased to 23% and 28% female for both engineering and construction related courses.

The intention through the HCI project is to widen this proactive approach across the region, working more with employers to target other key disadvantaged groups with focused support and ensure greater numbers into the sector.

1.4.2   Employability Pathways

The HCI Skills Gateway will put industry aligned jobs at the start to improve transition from skills gaps to into work ratios. Greater prioritisation from the industry to target disadvantaged groups and especially those living in SIMD 20 areas. A range of new training processes and projects to improve employability via acceleration into work and upskilling would be developed including multi-skills, Pre-Apprenticeship Support, Front end PDA and CATS are also planned. The introduction of greater pre apprenticeship support will ensure that greater numbers of clients will be supported to achieve the minimum entry criteria for MA's and CITB tests etc.

1.4.3   Accelerating Into Work and Upskilling (Trades - Early On-site and Offsite Skills)

Given the regional key skills gaps for Joiners, Bricklayers, Plumbers, Electricians and Building Information Modellers (BIM)[1], it is important there is movement and progression in the HCI Skills Pipeline to accelerate specific onsite skills for housing, BIM skills and new offsite skills within the region and businesses. HCI skills would assist in piloting a future 'bricklaying for housebuilding' course, which would be a contributing part of a future progression to the full SQA craft skill for bricklaying. From recent discussions with industry such shorter length courses have industry backing and would provide an accelerator route to local training and employment and support new housing delivery. Post completion of the initial course future progression to higher SQA Levels would link to current or future SDS MA additional funded places.

Also to bolster the approach to Fair Work, employers who partner in the ESESCRD would be informed at the start that jobs and skills development aligned with ESESCRD must not involve exploitative contracts such as zero hours contracts. All projects involved with ESESCRD must have 'real living wage' salaries or higher. Marketing straplines being developed include - 'ESESCRD - Working with Fair Work Employers' and to be included in all contractual obligations. Refer to management case for further detail on Accelerating Into Work and Upskilling delivery.

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[1] Future construction skills requirements for south east Scotland. Presentation by Professor Sean Smith, Edinburgh Napier University to IRES Board, 2017.

1.4.4   Advanced Skills & Gender Diversity

Current advanced and more senior roles in the HCI industry sector are 89% male[2]. A review of progression of females to higher qualifications (advanced levels) within south east Scotland identified this to be key barrier to progression of women in more senior industry roles[3]. Increasing female role models at senior levels has been cited as a key factor that could improve gender imbalance and attract more women into construction[4]. In order to deliver the forthcoming infrastructure and housing requirements further specialisations and upskilling for the existing workforce is needed. To address this imbalance an advanced skills programme would be developed to provide support and education/training for MSc/CPD specialisations and with a stronger focus on women (60%) into advanced levels. Such courses will comply with this level of gender specific participation as a minimum with places strictly ring-fenced for women/people with disabilities as appropriate.

1.4.5   Talent Development

There are many highly talented individuals, students and employees across the SES City Region who could be sector leaders of tomorrow and it is important that such skilled people are supported and given the opportunity to develop their skills and education further, so these skills are retained within the region. Edinburgh Napier University's award-winning Built Environment Exchange (BeX) has supported high performing graduate students through their specialised Masters courses. Talent Accelerator will **s**upport adult learners and school leavers into work and delivering investment targeted into the FE sector.

Further detail on all five HCI Skills Gateway sub themes is included in the Management Case.

2   Strategic Case

The HCI project strategic case is set out in two parts:

> **Part A: The Strategic Context** – indicating the alignment of the HCI project proposals with government policy and the partnerships existing assets and strengths; and,

> **Part B: The Case for Change** – which summarises the objectives to be addressed by the project, existing arrangements and identified investment needs and operational risks, constraints and dependencies.

2.1   PART A: The Strategic Context

2.1.1   National Context and Strategy Alignment

Scotland's Economic Strategy (Scottish Government, 2015)[5] sets out the Scottish Government's purpose "to create a more successful country, with opportunities for all of Scotland to flourish,

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[2] Addressing the skills shortage through diversity and inclusion. Construction Matters, UK Construction Week. April, 2017.

[3] SEBE, Edinburgh Napier University. External feedback review. Athena Swan, 2016.

[4] Women in Construction: The Race to Gender Equality. Ranstad, 2018

[5] Scotland's Economic Strategy, Scottish Government, 2015, https://beta.gov.scot/publications/scotlands-economic-strategy/

through increasing sustainable economic growth" and has two key goals- increasing competitiveness and tackling inequality.

Allied to this the Creating a Fairer Scotland (Employability)[6] 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 Scotland[7] urges 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 HCI project seeks to align with these policy aims by focusing attention on strengthening and streamlining the progression pathways into work for disadvantaged individuals, while it also establishes the much-needed collaboration across all regional partners to deliver better impact from existing (public, private and third sector) investments that will support accelerated progress towards a more inclusive economy

2.1.2   Alignment across the IRES Programme

The current strength of the construction sector later detailed in the Economic Case, along with additional proposals for increased housing building and retrofitting through City Deal investment will bring significant and increasing skills gaps and workforce shortages in both new building and repair and maintenance sectors.

The HCI Skills Gateway along with other IRES projects will help open up new sources of labour market supply and achieve more inclusive growth outcomes. The HCI Skills Gateway is a sector based skills and support pipeline providing opportunities for all sections of society within the region to progress into higher skilled and higher paid employment. An inclusive person-centred approach will ensure that even those, who for whatever reason feel excluded, are helped to sustain and still succeed in employment. There are imperative links particularly across the HCI Skills Gateway and the Integrated Employer Engagement and Disadvantaged Families IRES project themes.

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[6] Creating a Fairer Scotland: A New Future for Employability Support in Scotland, Scottish Government, https://beta.gov.scot/publications/creating-fairer-scotland-new-future-employability-support-scotland/

[7] No One Left Behind - Next Steps for the Integration and Alignment of Employability Support in Scotland, Scottish Government, https://www.gov.scot/Publications/2018/03/5358/downloads

The overall plan is for a much improved and focussed Skills Gateway Pipeline specific to industry needs with heightened focus on increasing throughput of numbers into employment in the sector. The Skills Gateway Delivery Group and IRES Board will ensure robust monitoring and reporting of progress towards targets as outlined in the Management Case.

2.2 Part B: The Case for Change

2.2.1 Existing Arrangements, Challenges & Business Needs

The 2018 Regional Skills Assessment Summary Report for Edinburgh and South-East Scotland City Region[8] concludes that although the outlook for the local economy is positive there are some key inclusive growth challenges that still remain.

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 disability[9]. 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 priority[10]. 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 poverty[11]. Regional Partners have a clear duty to help and support all our children and young people to give them the best start we can.

There are also related opportunities beyond the jobs created by the construction phase to associated opportunities in the low carbon field, where innovation in housing products and construction techniques can open up additional high-quality employment opportunities in the regional supply chain. The City Region Deal and the supporting HCI project provides an opportunity to accelerate and invest in key skills, develop new training opportunities resulting in a transformational step change and 'regional inclusive approach'.

According to CITB regional figures, South East Scotland has a current on site skills trade supply deficit of 3,500[12] and a shortfall of 300 bricklayers. It is forecast by CITB that Scotland will need 10,400 new entrants to the sector over the next 4 years (2018-2022)[13]. South East Scotland would require 3,000 additional entrants[14] with key skills sets for on-site trades and new skills for offsite. Given the existing

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[8] Regional Skills Assessment Edinburgh & South East Scotland City Region: Summary Report, Skills Development Scotland, https://www.skillsdevelopmentscotland.co.uk/media/44990/rsa-edinburgh-and-south-east-scotland-city-deal-region.pdf

[9] Job support for disabled people (Policy), Scottish Government 2018, https://beta.gov.scot/policies/disabled-people/job-support-disabled-people/

[10] Scotland's Economic Strategy, Scottish Government 2015, https://beta.gov.scot/publications/scotlands-economic-strategy/pages/5/
[11] Poverty and Income Inequality in Scotland: 2014-17, Scottish Government, https://www.gov.scot/Publications/2018/03/3017/downloads
[12] CITB Report. Local Construction Skills Needs for Scotland. CITB Analysis, CITB. 2018
[13] CITB Forecasts: Housing boost growth for Scottish construction. February 2018.

[14] Future construction skills requirements for south east Scotland. Presentation by Professor Sean Smith, Edinburgh Napier University to IRES Board, 2017.

gap in skills supply in SE Scotland and the forthcoming skills demands the region has an opportunity to have high job demands aligned and informing its inclusive growth approach.

Figure 3 below illustrates how the HCI Skills Gateway focus builds on existing structures to enable increased levels of upskilling across the Scottish Credit and Qualifications Framework (SCQF). A larger focus on pre-entry activity, LA/ FE taster sessions, short courses and accelerated learning all leading ultimately to more jobs and a greater upskilled workforce at all levels.
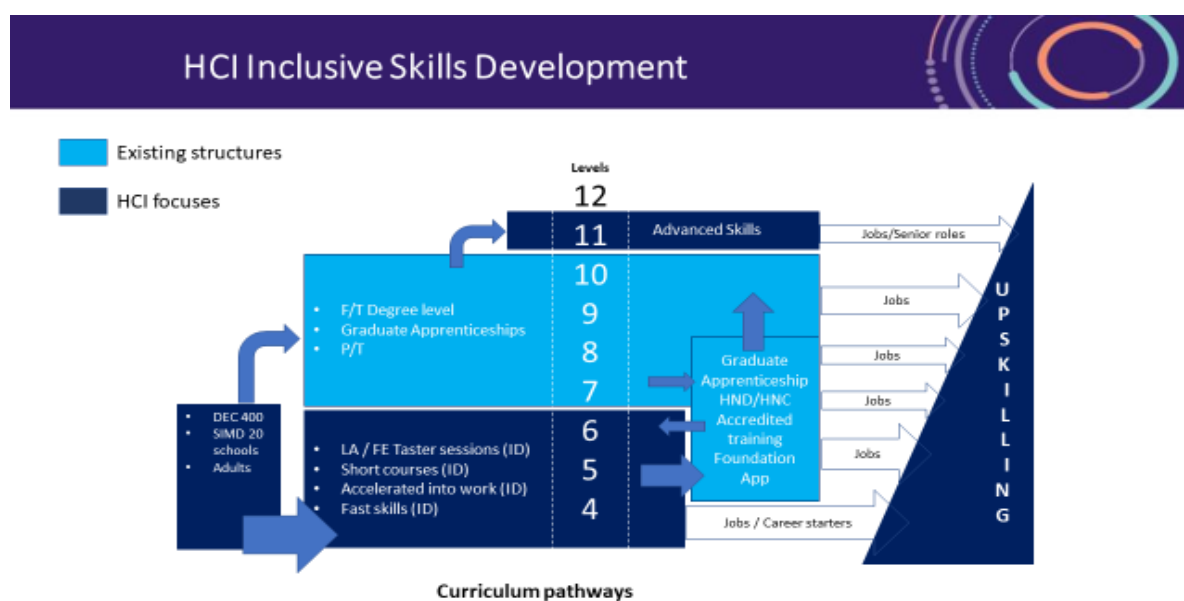

Figure 3: HCI Inclusive Skills Development

2.2.2   Objectives and Benefits

Supporting all sections of society to acquire the knowledge and skills and secure the complementary supports they need (throughout their working lives) to develop and progress will be critical to maximising the talents of our citizens and unlocking the full potential of our economy.

The partnership propose to introduce and develop improved routeways (using a blend of existing and new resources) into the Housing, Construction and Infrastructure sector to exploit the significant opportunities that are anticipated to be generated. They will also test methodologies for developing collaborative, cohesive and impactful service pipelines that spread the benefits of growth into disadvantaged and under-represented populations which can be rolled out to other key sectors.

Areas being developed by the HCI Skills Gateway include;

- Linking education (in association with DDI knowledge sharing schools and existing DEC ambassador network) and employability providers with sectoral opportunities to unlock opportunities for all our citizens and help **reduce sectoral skills shortages and gaps**.
- Piloting **new approaches to enhance productivity** and support inclusive economic growth
- Develop inclusive HCI employment pathways which will include enhanced outreach to disadvantaged and under-represented populations with upskilling and career progression opportunities and **targeted actions to reduce inequalities.**

- Engagement with Housing, Construction and Infrastructure employers to **promote an inclusive (Fair work) practice and culture** including the creation of placements opportunities, developing inclusive recruitment and working environments, and embedded talent development programmes.

Key to success is Fair Work and the enablement of key entry points for developing skills and career pathways across the HCI spectrum. Close collaboration already exists across and with the four existing Developing Young Workforce Regional Boards. Also with schools, both primary and secondary to promote the HCI Skills industry as a career pathway. The HCI Skills Gateway will provide a unique pipeline significantly aligned to inclusive growth, that will attract and upskill new entrants and provide progression routes for those currently employed within the sector.
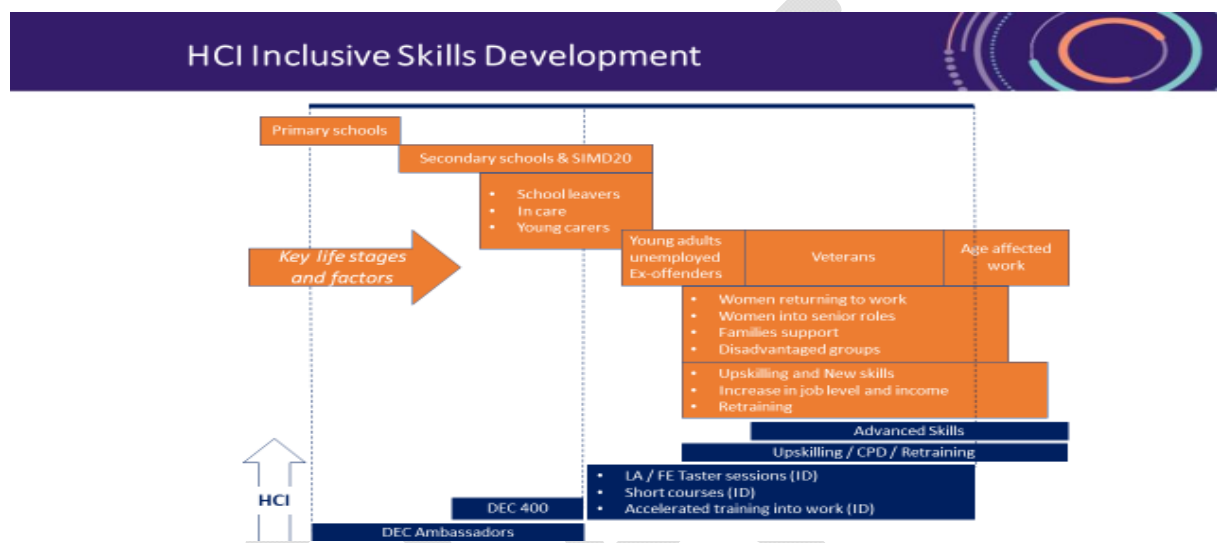
Figure 4. HCI Inclusive Skills Development

The HCI Skills Gateway approach to inclusive growth will deliver a legacy portfolio of key construction skills and will bring benefit to the Edinburgh & South-East City Region and for Scotland.

Early projects identified during the last 12 months to provide a 'kick start' to the IRES HCI Skills Gateway in year 1 include:

- Industry Partnerships with local colleges to establish the first pilot in 'bricklaying for housebuilding' delivering shorter training times, industry demand jobs, industry partnerships and accelerated employability.
- Granton Offsite delivery proposal involving Offsite Solutions Scotland (consortia of Scotland's leading offsite providers) to partner in training and inclusive growth with potential two phase approach to developing a regional skills-housing partnership.
- Commitment from SME companies and partnerships to develop joint college-company training to increase jobs and skills in the region for innovative housing design and build.

Key impacts and benefits of implementing the HCI project are also detailed in the Economic Case.

2.2.3   Operational Risks, Constraints and Dependencies

Current construction and engineering related apprenticeship completion rates are 80-84% dependent on the training and the job[15]. In the case of the HCI, with specific focus on Inclusive Growth and disadvantaged groups there is likely to be more challenges for the people being supported. The aim is to achieve similar ranges of completion and job outcomes across the range of HCI sub-themes and by working much more closely with companies and education providers the partnership is confident in its ability to increase ratios of positive job outcomes. If a specific job/training route is difficult for the individual we would try through the HCI career pathways to find alternative job opportunities. In essence 'no-one is left behind' and routes and alternatives can be provided and signposted.

2.2.4   Monitoring and tracking

It is absolutely essential that all employability characteristics for HCI participants are closely tracked and monitored, most particularly, job outcomes and sustained outcomes and robust client monitoring and tracking systems are already in place across each of the local authority areas. Work is also ongoing to further refine and develop these systems through the IRES Integrated Knowledge Systems Project involving each of the local authorities, Education Departments, Department for Work and Pensions, Skills Development Scotland and Developing the Young Workforce.

Those enrolling on training, short courses and taster session courses will be tracked in FE sector with courses having a specifc code to identify the ESESCRD enrolments and support. This will then be able to cross check with admissions and applicant details thus being able to identify backgrounds, disadvantaged groups and post codes (SIMD 20).

For HE sector key details will be taken at the application stage to gather the required data. This will also identify existing skills levels and change in new skills and jobs which the person is aiming for. A follow up will be taken with all persons who have attended set courses and skills training to ascertain career developments and impacts of the support. HCI will work closely with Employer Engagement team and employers to support the focus on diversity and inclusion.

Outcome measures to be topic of ongoing assessment and review to satisfy and adhere to the regular performance evaluation and scrutiny processes undertaken by the HCI delivery group. Scrutiny of overall performance management outcomes will also be a strict requirement included in the quarterly dashboard and annual reporting cycle of the HCI Delivery Group to the IRES Board

Every applicant will require to enrol within the relative sub theme area of support to enable capture of the baseline data. During the skills development phase towards the aligned jobs the applicant will be supported and mentored via the training provider and the outcomes of completions regularly tracked with employers.

Each sub-theme will be led by an HE, FE or LA partner and the sub theme lead will be responsible for that area. Outcomes which are ultimately jobs which are real living age or higher, or upskilling leading

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[15] Skills Development Scotland: Achievement rates by occupational group. SDS Statistics. 2017

to higher income levels through higher level jobs will be tracked through employer engagement teams to identify, monitor and evidence progression.

2.2.5   Risk Management

Risk management is an integral feature of the HCI Skills Gateway and the Stage and Gate approach as outlined in the Management Case will ensure robust management and mitigation of any potential or identified risks. The HCI Skills Gateway Delivery Group and ultimately the IRES board will regularly review project progress with decisions made on continuation, adjustment or withdrawal of funding.

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 HCI project risk register outlined in the management case will be regularly updated accordingly.

3   Economic Case

To deliver the impacts and address key needs for the sector is it critically important that investment starts early for key skills gaps, new training courses and pilot projects. Investing in regional inclusive skills approach via the HCI Skills Gateway provides an opportunity to catalyse early for this economic development pipeline.

The HCI project will provide enriched training and employment opportunities across the region for disadvantaged groups, accelerated new 'into work' training and upskilling of the regions workforce both private and public sector.

3.1   Labour Market Context and Gap Analysis

According to recent CITB statistics and analysis the SES region has key shortages in many construction skill areas[16]. To deliver the regional and Scottish government's housing delivery plans requires a step change in delivery and supply of skills at all levels. The City Region Deal provides a unique opportunity to accelerate and support the housing developments for SES and parallel innovation infrastructure needs. The integration of all education and training providers working together through the ESESCRD provides a platform to enable a regional inclusive growth approach and a strong highly skilled regional workforce.

According to the Office for National Statistics and Scottish Government reports the south east of Scotland is the fastest growing region of Scotland for population and 5th fastest in the UK[17]. Indeed the National Records for Scotland [18] highlight the top three local authorities with the greatest percentage increase (2016-2026) in population are in SES such as Midlothian (13.3%), East Lothian (8.6%) and City of Edinburgh (7.7%). The Scottish average increase is 3.2% and the top four of Scotland's LAs to have the greatest increase in working age population are in the SES. Also comparing

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[16] CITB Report. Local Construction Skills Needs for Scotland. CITB Analysis, CITB. 2018

[17] Foresight Report: People in Cities – The Numbers. Population projections for 63 cities (2011-2036). UK Government Office for Science. 2014.

[18] https://www.nrscotland.gov.uk/files/statistics/population-projections/sub-national-pp-16/pop-proj-principal-2016-tab-publication.pdf

major cities for working age population Edinburgh's increase is forecast to be 8% versus Glasgow at 4%.

This will require housing output to increase by 40% above previous supply levels. Almost one third of all Scottish housing output will be in this region 2019-2039, focused within 6 of Scotland's 32 local authorities. The pipeline of private housing, public housing, infrastructure and demand will require over £34 Billion of new housing and infrastructure assets to be delivered over the next 20 years[19].

This investment enables skills and employment growth for the region and for people within the region. The economic loss to the region if such inclusive skills investments are not undertaken would result in imported infrastructure, imported construction housing systems and a 'transient' non-regional workforce.

The ESES City Region is forecast to experience significant and sustained growth in demand for Housing and Construction related skills due to significant increases in population, households and commercial and infrastructure developments.

The current supply of labour and skills in the region, whilst increased over recent years, is still not sufficient to meet future needs in term of volume or key current and future skills. Over the next 20 years it is estimated the region will have to construct approximately 145,000 new homes which is 40% more than in the 20-year period prior to the 2008 recession. This represents circa 35% of all new housebuilding activity in Scotland over the coming decades. Analysis[18] predicts a gap of 3,000 in skill supply chain over the coming years, highest of any region in Scotland, and this excludes the additional demand stimulated by City Region Deal Investments and "Brexit" effects.

Such estimates are based on ONS and National Register of Scotland forecasts for the SES region 2017 to 2037, recently revised with minimum number of households increase to be 122,000[20]. 43,000 applicants are also on housing waiting lists across the SES[21]. In addition, four of the six SES LAs have housing stock which is above average for critical disrepair. This also places pressure on replacement by new homes supply and regeneration requirements when not financially viable or sustainable to retrofit. In 2015 the Housing Need Demand Assessment 2015-2025 for City of Edinburgh[22] alone stated a requirement of between 38,000 to 46,000. Taking all of the aforementioned into account, the forecasted new housing need to 2038 for SES was between 133,000 and 157,000 new homes or an average of 145,000 as estimated.

The skills shortages have been described by businesses and industry bodies as "unprecedented" in terms of key site skills for bricklaying, joinery and some other key trades.

Additionally, the nature of skills demand is changing with new construction techniques, offsite construction, and digital technologies driving a change in the skills demand for new entrants and the

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[19] Future Housing Needs for SE Scotland. Presentation to City Region Deal Housing Group. Professor Sean Smith. Edinburgh Napier University. 2016.
[20] https://www.nrscotland.gov.uk/files/statistics/household-projections/16/household-proj-16-pub.pdf

[21] http://www2.gov.scot/Topics/Statistics/Browse/Housing-Regeneration/HSfS/HousingLists?wb48617274=477B6596

[22] http://www.edinburgh.gov.uk/downloads/file/8631/strategic_housing_investment_plan_ship_201718-_202122

existing workforce. This means we must innovate our learning offer to better meet the needs of tomorrow's world and provide a gateway to support inclusive growth to enable pathways into employment.

3.1.1 Reducing inequalities

Currently, access for HCI Skills related activity is fragmented, sporadic and often late reactive to industry needs. The HCI Skills Gateway as proposed however puts industry aligned jobs at the start – better sighting of industry need, more proactive and better equipped to improve transition from skills gaps to 'into work' ratios. Currently there is little prioritisation from the industry to target disadvantaged groups and especially those living in SIMD 20 areas.

The diversity and gender profile of the industry does not compare well against the region's population profile indicating that the industry is not attractive to many sections of society impacting on its ability to reduce skills gaps and shortages or effectively innovate. 12% of construction sector are women of which 90% are in non-site based roles. Currently less than 2% of 'Construction and related Modern Apprenticeships' are female.[23]

89% of higher level roles are undertaken by men and recent analysis in the south east region identified a lack of progression by females into higher qualifications (advanced skills). This reduces the ability for female career progression and limits the 'role model' capabilities to encourage future female generations entering the sector.

Youth unemployment across the region continues to be a concern. More needs to be done by the sector to target and support our schools and specifically those in SIMD 20 areas. More needs to be done to support unemployed, better joint working across Local Authority employment and training workshops to increase training supply and linkages with industry demand. Increased targeting of veterans, ex-offenders, carers and supporting women into higher paid jobs and helping those planning to return to work.

3.1.2 Evidence Base of Demand

As each project comes forward as a proposal whether for short training for new jobs, advanced careers, upskilling to higher pay and roles an evidence base would be required. In the case of the current initial pilot for bricklaying for house building Borders College have received interest from Hart Builders to train 16 in the first two cohorts. Hart Builders had heard via the Scottish Government Skills Group which they serve on that such a pilot might take place.

At the Homes for Scotland (HfS) board meeting in September 2018 all house builders present stated they would take on trainees through this new pilot programme if started. HfS have surveyed their member companies operating in SE Scotland and have received notes of interest for 30 trainees from these companies. Training on such pilot programmes would be based both in the company and colleges. This helps with job security and ensuring mentoring and support is provided throughout their training for these jobs.

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[23] Skills Development Scotland, Modern Apprenticeship Statistics Q2, 2018-19. (page 21)
https://www.skillsdevelopmentscotland.co.uk/media/45100/modern-apprenticeship-statistics-quarter-2-2018-19.pdf

The SES region hosts some of the leading UK construction systems for offsite and product manufacturers including Donaldson Timber Engineering (Fife), BSW Timber (East Lothian), Oregon Timber Frame (Borders), SIPSEco (Fife), ITW-Cullen (Fife), Walker Timber (West Lothian) and Grant Westfield (Edinburgh). In addition, adjacent local authorities host key growth companies such as Superglass, Norboard, Glenalmond Timber and many others. Supporting housing and construction skills growth in SES would also positively impact these companies and others across Scotland. Importantly, a region with an indigenous skilled workforce for construction is also attractive to future inward investment.

Further evidence of demand is included in ANNEX - Inclusion and Demand Challenges for Regional Housing & Construction Sector

3.1.3   Forward Planning for Skills

In 2017 a study was undertaken by Napier University on the current delivery of construction skills in the region involving the four colleges and the three universities. This was then mapped against the current industry supply of skills in the region using the CITB figures and also the expected reductions in workforce for retirement etc as predicted by CITB and industry partners.

Given the planned infrastructure and housing build programs for the region over the coming decade and the step change in requirements due to this increase some of the key skills that would be required are summarised in Table 1 over.   In addition, those skills and jobs which could migrate into offsite construction routes for future jobs and planning were also identified.

PROJECTED SKILLS GAP for South East Scotland (Site skills) for new build housing only

Trades / Skills	SE Scotland — South East Scotland Colleges - Current most recent year co-hort in training - entering industry in a single year (ALL - including FT/PT/Block release etc..)	SE Scotland — Potential FE trained supply ANNUALLY entering New House Building estimated at 60%	SE Scotland — 4 years supply from FE located in SE Scotland for New Build Housing	Scotland — Skills Loss to sector by 2020/21 (retirement, able, moving away from region/oversea s)	SE Scotland. — Skill Loss to SES by 2020/21 (retirement, able, moving away from region/oversea s)	SE Scotland — Current Net FE Supply for New Build Housing till 2020/21 (FE Supply minus skills losses to sector)	SE Scotland (2021 - Scottish Government and SE Scotland NEW Housing targets - skills required) going forward	SDS figures of in training in SES (taking 60%) entering New Build housing	SE Scotland — GAP Supply required over NEXT 4 Years for annual NEW housebuilding	Potential for Offsite Manufacture (OSM) to reduce requirement in this area (diff skills)	COMMENTS
Construction project managers	44	26	106	200	67	39	133		94		
Trades supervisors	0	0	0	310	103	-103	207		310	OSM	Also Key Area for retrofit and RPP3
Joinery Carpentry Interior Fit Out	261	157	626	1860	620	6	1022		1016	OSM	Also Key Area for retrofit and RPP3
Bricklayers	111	67	266	480	160	106	267		160		
Painters & decorators	223	134	535	1030	343	192	556		364		Also Key Area for retrofit and RPP3
Plasterers	48	29	115	350	117	-1	178		179		Also Key Area for retrofit and RPP3
Roofers	105	63	252	350	117	135	178		42	OSM	Also Key Area for retrofit and RPP3
Glaziers	21	13	50	190	63	-13	104		117	OSM	Also Key Area for retrofit and RPP3
Plant mechanics / fitters	38	23	91	20	7	85	80		-5		
Construction NPA Programmes / Construction Operatives/Labourers/Semi Skilled	232	139	557	640	213	343	222		222	OSM	Also a key area of need for retrofit and RPP3
Electrical trades	89	53	214	1570	523	-310	933	340	903		Essential for Utility Companies, Site set up, 2nd Fix, Renewables and Low carbon RPP3 future technologies and LC Heat
Plumbing / HVAC	75	45	180	490	163	17	271	208	46		
Civil Eng operatives	16	10	38	70	23	15	140	228	-103	SEE NOTE	BUT WILL be required for infrastructure of sites for future housing and UTILITY companies. SO there is NOT an oversupply
SDS "Construction" tech / Specialist / apprentice / other								1344	-1344		
Totals	1247	758	3031	-7560	-2520	511	4291	2120	2003		
			3789	-9450	-3150	639	5364	2650	2504		

OSM = capabilities of future growth in Off-site Manufacture which alleviates part of the pressure on new build housing

Potential future gaps also for LOGISTICS training, OFFSITE assembly (CSIC could supply this) and gaps for new NEW LC TECHNOLOGIES

Table 1 Projected HCI Skills Gaps

Analysis of industry data, discussions with regional employers and news releases by industry trade bodies identify that there are key skill shortages. The South East of Scotland has a significant skills supply gap unlike any other Scottish region. There is a 2500 shortfall in the supply of key skills to meet the oncoming jobs demand. The introduction of specific site skills, shorter courses, quick entry to work

and upskilling are likely to be the fastest way to meet the oncoming demand. These jobs and shorter training periods are likely to be more helpful to disadvantaged groups. In addition those in the sector at lower level trades, site operatives and lower incomes would benefit from a structured supportive career pathways which HCI and companies could provide in order to access higher paid jobs.

3.2   The change we want to effect

Any future employability and skills programme must enhance and help to future proof the regional economy by combining and augmenting existing resources. It must increase the employment rate and close the opportunity gap between different sections of society. It also must increase productivity and earnings and help reduce the gap between the lowest and highest earners.

3.2.1   Identification of Options

Given alignment to the wider ESES City Region Deal proposals and opportunities available for ensuring inclusive growth, reducing poverty and widening equality, partners agreed to focus limited resource investment initially on HCI and Data Driven Innovation (DDI) Skills Gateway proposals. In the case of HCI, the most effective, efficient means of delivering the Skills Gateway was then considered and the following best options were selected for appraisal:

- Status Quo (Business as Usual) - Continuous improvement actions within individual organisations, but no integration or alignment between organisations
- Public Sector Unitary Skills Supply Provider - Increase resources for existing local training activity, but no integration or alignment between organisations
- Private Sector Industry Skills Supply Provider - Increase resources for existing local training activity, but no integration or alignment between organisations
- Third Sector Regional Skills Supply Provider - Introducing new regional employability and skills services to augment current activity
- Integrated Regional Skills Supply Provider - Integrated and aligned activity from community level to authority and regional scale as part of an inclusive, multi-agency, whole system, and whole person progression approach to services.

3.2.2   Appraisals Approach

Pros and cons of each option were assessed against impact criteria linked to the identified goals for an improved future Employability & Skills programme.

Status Quo (Business as Usual)
Continuous improvement actions within individual organisations, but no integration of alignment between organisations

Pros	Cons
Minimal disruption to service	Duplication and progression bottlenecks
Ease of transition for participants	Limited option to shared capacity across partners
Promotes Diversity	Limited opportunity to achieve economy of scale
	Service capacity will reduce over time due to financial constraints
	Current system for improving employability and delivering skills training has led to disparities and inequalities within the region.
	Continuing the status quo this trend is likely to continue, resulting in a widening of the skills and productivity gap

Public Sector Unitary HCI Skills Supply Provider - Increase resources for existing local training activity, but no integration or alignment between organisations

Pros	Cons
Alignment with key growth sectors Aligned with wider city region deal activity Promotes Diversity	Public Sector expenditure unlikely to increase Conflict with combined service offer Lack Regional coherence and alignment with wider city region deal Difficult to sustain due to affordability Not Industry recognised Lack of capacity for the sector to respond

Private Sector Industry Unitary HCI Skills Supply Provider - Increase resources for existing local training activity, but no integration or alignment between organisations

Pros	Cons
Alignment with key growth sectors Aligned with wider city region deal activity Promotes Diversity	Significant disruption to services and beneficiaries Loss of best practice and expertise during transition Risk of disconnect from local priorities Lack of capacity for the sector to respond

Third Sector Regional HCI Skills Gateway Provider - Introducing new regional employability and skills services to augment current activity

Pros	Cons
Alignment with key growth sectors Aligned with wider city region deal activity Promotes Diversity	Add to complexity and fragmentation Significant disruption to services and beneficiaries Lack of capacity for the sector to respond

Integrated Regional HCI Skills Gateway Provider - Integrated and aligned activity from community level to authority and regional scale as part of an inclusive, multi-agency, whole system, and whole person progression approach to services.

Pros	Cons
Adds additional capacity Minimal disruption Aligned with wider city region deal activity Reduced fragmentation over time Promotes Diversity	Requires cultural change and strong buy in from all partners Coordination and sequencing is challenging Requires investment in collaboration infrastructure (e.g. management systems)

3.2.3   Programme Option Analysis

Figure 5 below summarises assessment of each of the options in terms of set impact criteria.

Impact Criteria (0-None, 1-Low, 2-Medium, 3-High)	Status Quo	Public Sector HCI	Private Sector Industry	Third Sector Regional	Integrated HCI
Positive impact for service beneficiaries	2	2	2	2	3
Ease of Transition	3	1	1	1	2
Builds on established good practice	2	1	1	1	3
Targeting progression of disadvantaged groups	2	2	2	2	3
Increases value for money achieved	1	1	1	1	2
Aligned with key growth sectors	2	2	2	2	3
Promotes Regional collaboration	2	2	2	2	3
Contributes to City Region Deal commitments	2	2	2	2	3
Drives service streamlining and agility	2	2	2	2	3
Promoting Diversity	3	3	3	3	3
Affordable and sustainable	2	1	1	1	2
COMBINED (# out of 30):	23	19	19	19	30

Figure 5: Programme Options Appraisal

3.2.4   Preferred Option

The Integrated Regional HCI Skills Gateway - integrated and aligned activity from community level to authority and regional scale as part of an inclusive, multi-agency, whole system, and whole person progression approach to services compared to the as-is position and other alternatives considered is the preferred option for best delivery approach moving forwards.

Analysis highlighted that although the model is more difficult to introduce than to maintain the status quo both options outweighed the others considered. Impacts for service beneficiaries, building on established practice, better targeting of disadvantaged groups, value for money, affordability and sustainability were all key determinants.

The HCI project will help increase the employment rate and close the opportunity gap between different sections of society, while also helping to increase productivity and earnings and help reduce the gap between the lowest and highest earners.

3.2.5   Why the *Integrated Regional HCI Skills Supply Provider model* is preferred

The Integrated HCI project will be underpinned by a "regional skills partnership" consisting of the key public, private and third sector stakeholders that will pro-actively shape the regional skills offer to meet the current and future needs of the Edinburgh and South-East Scotland's labour market.

The HCI project is an evidence based, citizen and employer-centric, and outcome-focused approach that will make an impact by:

- Maximising the social impact of wider Edinburgh and South-East Scotland City Region Deal capital investments

- Focusing on Fair Work and increasing the flow of talent from disadvantaged groups and communities into the healthy, sustainable career opportunities

- Reducing skills shortage and gaps in our key sectors

3.3 Impact of implementing the HCI 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. This combined with the development of new skills content, enablers, and pilot activity will ensure our economy continues to generate good opportunities and that these are open and accessible by all sections of society.

We know the upcoming current and projected future construction program for the ESES City region and have assessed the number of people that would require to be trained and supported and to meet this demand. The HCI Skills Gateway will bring about the much needed focus on reducing worklessness and poverty through better alignment and the introduction of additional short flexible courses specific to industry needs and more appealing to disadvantaged individuals and families. It is anticipated that more local people will be engaged in the opportunities available. An improved business as usual approach will open up and provide direct linkage to new job gateways with industry where there are current skills gaps, future skills gaps and where new skills are demanded.

3.3.1 Summary of Outcomes Benefits, and KPI's

The HCI Skills Gateway 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 the industry
- Opening up new talent pools to business and stimulating increased recruitment from under-represented groups into the good jobs and careers to help address skills shortages
- Evolving, streamlining and integrating HCI Skills career pathways to support progression
- Upskilling and improving workforce diversity across the region while also increasing capacity to equipped citizens with the skills they need to succeed throughout their working life

Table 2 below summarises the range of outcomes and benefit measures with timelines based on the funding available, experience of throughput from previous type employability programmes and the relative size of the industry in the region.

Note outcome measures to be topic of ongoing assessment and review to satisfy and adhere to the regular performance evaluation and scrutiny processes undertaken by the HCI delivery group. Scrutiny of overall performance management outcomes will also be a strict requirement included in the quarterly dashboard and annual reporting cycle of the HCI Delivery Group to the IRES Board.

Outputs	Measure (s) Outcomes & Benefits - Jobs / Upskill	Years 1-3	Years 4-8	Total
INCLUSIVE REACH & EARLY SKILLS				
'Into work' short courses for those facing disadvantages in the labour market or are under-represented within the industry. • Residents of region's bottom 20% SIMD areas • Care experienced individuals • Individuals with a disability • Women (Gender balance across roles) • Veterans and ex-offenders	Increased participation in sector or sector related training leading to min 60-80% going into jobs	300	500	**800**
Mentor and support school children from ESES City Region's bottom 20% SIMD areas **to enable sustained positive destinations and encourage entry into Housing and Construction sector careers**	Number supported into work min 70% target of total	100	300	**400**
To support "access to learning" such as training from home - online training animations developed for key skills and future new skills	Animations developed	45	95	**140**
ACCELERATING INTO WORK AND UPSKILLING				
Additional Industry-led training and skills improvements undertaken through short training courses designed to unlock opportunities for above target groups (60% minimum) – including on-site civils short courses, pop up factory training	Numbers attending and accredited with training.	1800	3200	**5,000**
Additional Modern Apprenticeships in areas of shortage and gap, **(SDS funded)**		300	600	**900**
EMPLOYABILITY (New Trades & short courses)				
Support for entry to new short skill courses addressing regional key skill gaps (Note: 80% of Years 4-8 will be embedded in future mainstreamed programmes)	Numbers Supported going into work min 70% of target	135	225	**360**
ADVANCED SKILLS & GENDER DIVERSITY				
Additional training and skills improvements in higher specialist qualifications, with a focus the **above target groups (60% minimum)**	Numbers completing min 80% of target	60	140	**200**
Revised programmes and specialist online courses to increase upskilling across the region	Numbers completing and moving into new skill/job	100	200	**300**

Outputs	Measure (s) Outcomes & Benefits - Jobs / Upskill	Years 1-3	Years 4-8	Total
	roles 60% of target (limited by HCI programme length as some may benefit later)			
Use of new online digital training	Numbers Accessing / using online min 70% of target	700	1400	**2100**
TALENT DEVELOPMENT & Industry Liaison				
FE Talent Accelerator	Number receiving support leading to new jobs min 70% of target	60	100	**160**
BeX Talent Accelerator	Number receiving support going into work 80% of target	30	50	**80**
Employers (private and public sector) making additional investment in the HCI Gateway	Direct (indirect) financial support to HCI gateway			£1.7 million plus in kind leverage

Table 2 – Outcomes, benefits, measures and timelines.

Numbers shown are the numbers to be trained and receive support. It is anticipated that the range of success to jobs, upskilling into other roles is aimed at between 60% to 80% of the total supported.

This variation is dependent on industry timing on job starts, completion rates, change in plan by individuals, personal circumstances and industry changes.

4 Commercial Case

We know that public sector investment in employability and skills provision spanning schools, colleges, universities, National Training Programmes etc. is substantial. It is therefore vital moving forwards that outcomes are maximised and delivered by the most effective and efficient means.

Critical to making progress towards an inclusive labour market will be the creation of the right leadership and collaboration environment to stimulate whole system thinking and a shared commitment to improving the quality and quantity of collective outcomes.

The HCI Skills Gateway Delivery Group will have operational management responsibility for the HCI Skills Gateway project.   All procurement will uphold the overarching principle to achieve best value and the management Case to follow details further the role of the HCI Skills Gateway Delivery Group.

5   Financial Case

Table 3 over shows the planned activities, spend plans and time lines for the period 2018-2026. Spend profiles relate specifically to the range of activities required to successfully deliver the five key sub-themes of the HCI Skills Gateway.

Note the HCI project will not be utilising funds towards Modern Apprenticeships (MAs). Given the current and future skills demand in the region, HCI would work with SDS and others (e.g. CITB) to encourage employers to engage with future MA increases as the region grows. It is however estimated that the region would require an increase in MA provision to support the future workforce needs.

Housing, Construction and Infrastructure Skills Gateway (V3.5)

HCI SKILLS GATEWAY Activity vs CRD Spend Timeline (£,000)	2018/19 (£,000)	2019/20 (£,000)	2020/21 (£,000)	2021/22 (£,000)	2022/23 (£,000)	2023/24 (£,000)	2024/25 (£,000)	2025/26 (£,000)	TOTAL (£,000)	External (£,000) e.g. from Industry / FE / HE / Other
PROJECT MANAGEMENT AND DEVELOPMENT										
HCI Project Manager (staff)	25.0	40.0	40.0	40.0	30.0	22.0	22.0	22.0	**241.0**	
HCI Digital Animator - Regional support (staff)	12.0	23.0	24.0	25.0	20.0	20.0	15.0	15.0	**154.0**	
HCI Administrator	3.0	30.0	30.0	30.0	26.0	24.0	24.0	30.0	**197.0**	
Sub-TOTAL:	40.0	93.0	94.0	95.0	76.0	66.0	61.0	67.0	592.0	
ESES City Region Deal Contribution:	40.0	93.0	94.0	95.0	76.0	66.0	61.0	67.0	592.0	
INCLUSIVE REACH & EARLY SKILLS										
DEC Ambassadors (FE) - mentoring DEC 400		60.0	60.0	80.0	60.0	60.0	50.0	40.0	**410.0**	In-kind contribution
DEC Ambassadors (HE) - mentoring DEC 400		18.0	18.0	20.0	20.0	20.0	15.0	9.0	**120.0**	In-kind contribution
HCI "Into Work" Short Courses (Adult learning, pre-apprenticeship support) - LA training workshops		80.0	80.0	80.0	85.0	80.0	90.0	90.0	**585.0**	
Equality & Diversity Officer (Staff - Combined 50% DDI)	10.0	23.0	24.0	24.5	26.0	27.0	28.0	28.0	**190.5**	
Events and Exhibitions		10.0	20.0	30.0	30.0	30.0	20.0	10.0	**150.0**	90
DEC funding into Schools (Ambassador workshops)		20.0	40.0	45.0	45.0	40.0	40.0	30.0	**260.0**	135
HCI Online Training Animations support from industry		40.0	50.0	40.0	30.0	20.0	10.0	10.0	**200.0**	230
Sub-TOTAL:	10.0	251.0	292.0	319.5	296.0	277.0	253.0	217.0	1,915.5	455
ESES City Region Deal Contribution:	10.0	196.0	212.0	242.0	228.5	222.0	213.0	187.0	1,510.5	
ACCELERATING INTO WORK and UPSKILLING										
HCI Pilot Projects (Multiskills, Pre-Apprenticeship Support, FrontEnd PDA, CATS)	5.0	90.0	120.0	120.0	120.0	120.0	110.0	100.0	**785.0**	In-kind Contribution
Joint CPD and Upskilling with Industry	0.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	**490.0**	270
Regional Inclusive Career Pathway Developments	4.0	12.0	8.0	8.0	8.0				**40.0**	In-kind contribution
Sub-TOTAL:	9.0	172.0	198.0	198.0	198.0	190.0	180.0	170.0	1,315.0	270.00
ESES City Region Deal Contribution:	9.0	137.0	163.0	163.0	163.0	155.0	145.0	135.0	1,070.0	
EMPLOYABILITY PATHWAYS & New TRADES Short courses										
New HCI short courses addressing "entry to" regional key skills gaps (bricklaying for housebuilding, BIM, Sensors/Fibre/Offsite/LEV) 30, 45, 60, 45 places in first 4 years - including training at CSIC		100.0	120.0	130.0	130.0	130.0	130.0	130.0	**870.0**	In-kind Industry contribution
Additional MA places (integrated into future SDS funding plans)		*220.0*	*450.0*	*590.0*	*450.0*	*400.0*	*400.0*	*300.0*	***2,810.0***	SDS
FE Staff Upskilling		20.0	20.0	20.0	20.0	20.0			**100.0**	
Industry investment in training facilities		30.0	40.0	30.0	20.0	20.0	20.0	10.0	**170.0**	170
Sub-TOTAL:	0.0	370.0	630.0	770.0	620.0	570.0	550.0	440.0	3,950.0	170
ESES City Region Deal Contribution:	0.0	120.0	140.0	150.0	150.0	150.0	130.0	130.0	970.0	
ADVANCED SKILLS and GENDER DIVERSITY										
New MSc / CPD courses for industry needs, return to work & Upskilling		70.0	80.0	80.0	100.0	85.0	80.0	80.0	**575.0**	
Industry investment in MSc/CPD courses and upskilling		40.0	40.0	40.0	45.0	40.0	40.0	40.0	**285.0**	205
Revised programmes / short courses to increase skills supply for key industry needs		35.0	45.0	60.0	60.0	60.0	60.0	60.0	**380.0**	
Others investment in short courses, staff, materials, events		45.0	90.0	90.0	80.0	70.0	60.0		**435.0**	435
Sub-TOTAL:	0.0	190.0	255.0	270.0	285.0	255.0	240.0	180.0	1,675.0	640
ESES City Region Deal Contribution:	0.0	105.0	125.0	140.0	160.0	145.0	140.0	140.0	955.0	
TALENT DEVELOPMENT & Industry Liason										
Talent accelerator and industry liaison (staff)		28.0	28.0	22.0	20.0	20.0	22.0	24.0	**164.0**	
ESESCRD Talent Accelerator (FE) program		15.0	40.0	40.0	50.0	50.0	50.0	50.0	**295.0**	
ESESCRD BeX Accelerator (HE) program		40.0	45.0	45.0	45.0	50.0	50.0	55.0	**330.0**	
Industry investment in accelerator programs		40.0	50.0	50.0	50.0	45.0	35.0	30.0	**300.0**	300
Sub-TOTAL:		123.0	163.0	157.0	165.0	165.0	157.0	159.0	1,089.0	300
ESES City Region Deal Contribution:		83.0	113.0	107.0	115.0	120.0	122.0	129.0	789.0	
TOTAL:	59.0	1,199.0	1,632.0	1,809.5	1,640.0	1,523.0	1,441.0	1,233.0	10,536.5	1,835.0
ESES City Region Deal Contribution TOTAL:	59.0	734.0	847.0	897.0	892.5	858.0	811.0	788.0	5,886.5	
	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26		

Table 3. HCI planned activities, spend plans and time lines for the period 2018-2026.

Table 3 should be read in conjunction with Tables 4 and 5 in the Management Case detailing Phase 1 and Phase 2 of the HCI Skills Gateway project plan activity. Note an inflation rate of 1.5% has been included in the calculations.

6   Management Case

At the core of the project will be the **HCI Skills Gateway Delivery Group** that will oversee progress towards project objectives and work with the IRES Board and other project leads to support the delivery of the wider IRES programme goals.

6.1   *Project Management and Theme Support*

The delivery of gateway activities will be undertaken by the Project Management and Development team, as illustrated
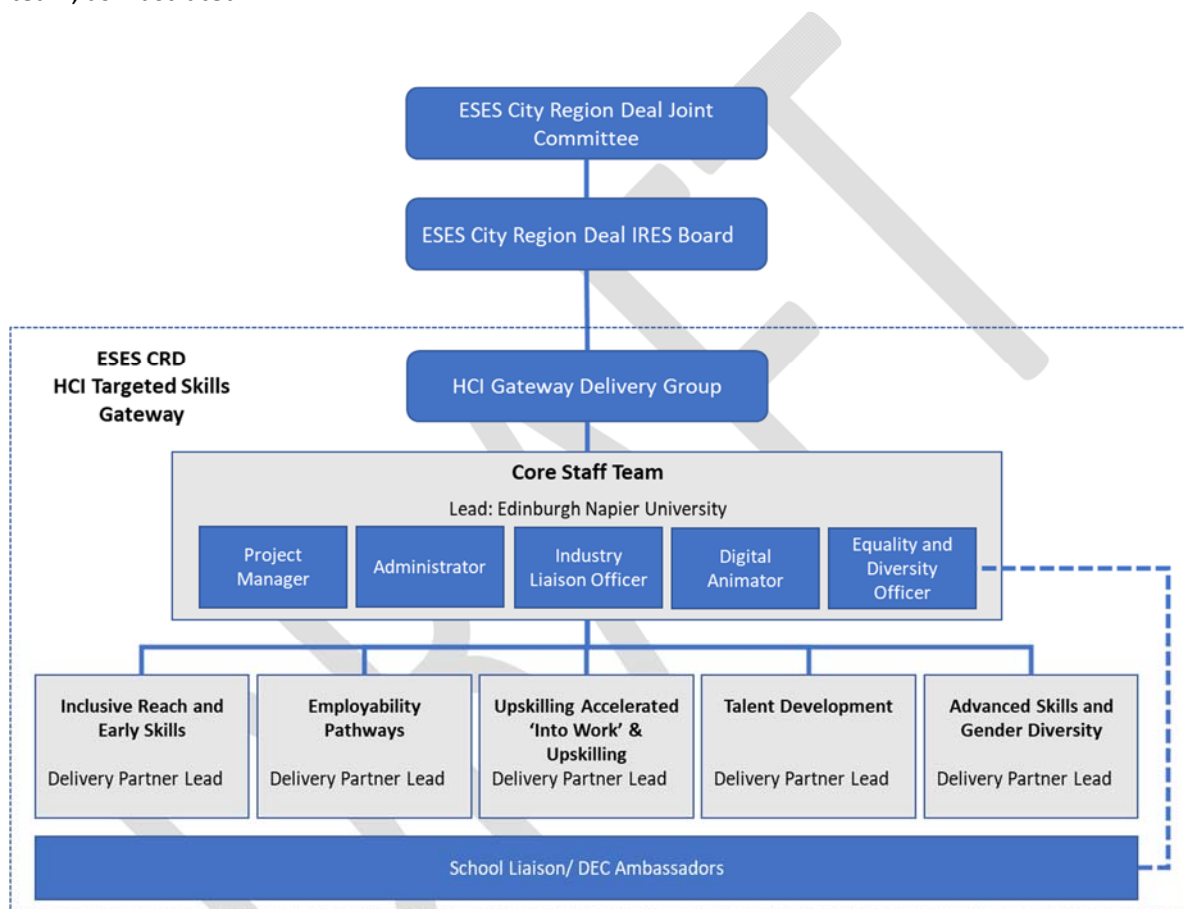

Figure 6: Proposed governance structure.

Each of the HCI Skills Gateway subthemes would be led by a Local Authority, Further Education or Higher Education partner – providing direction and responsibility to progress and track the training and partnership. Each subtheme would involve a series of partners to set up, deliver and report on progress. As each subtheme comes forward for funding support – there would be a specific business plan, timelines, impacts and outcomes measure associated with the subtheme prior to commencement.

Core Staff roles and functions are as follows:

- **Project Manager (PM)** who will be responsible for the co-ordination and initial set up of the project. As the gateway progresses and activity is delivered more as business as usual by

regional delivery partners it is planned that the role of the PM will reduce proportionately. This is reflected in the project budget. PM is responsible for setting up monitoring and tracking arrangements, all financial management systems and use of IRES funding and reporting progress and future development recommendations to the IRES Board. Working with delivery partners on streamlining delivery, integrating and mainstreaming activities into business as usual.

- **Equality & Diversity Officer**, in a joint role, shared with the DDI Gateway, to promote the focus on equality throughout the skills development teams and to engage with the construction sector (private and public). Developing relationships mechanisms and supports to ensure target disadvantaged clients sustain and progress into good work. Working with employability e.g. Intensive Family Support and community engagement teams to promote opportunities and flexible routes into HCI careers. Facilitating focus groups with disadvantaged client groups to inform development.

- **Industry Liaison Officer**, to support industry linkages, talent engagement and administration of the gateway. This role will also feed in to the Integrated Employer Engagement activity as part of the wider IRES. Developing relationships, mechanisms and supports to unlock jobs/opportunities for all individuals progressing through pipeline, promoting workforce development/diversity and the benefits of fair work. Working with Employers, Employer engagement teams (e.g. IEE) and DYW to promote opportunities and flexible routes into HCI Skills careers. Facilitating focus groups with employers to inform development.

- **Regional Skills Online Training Animator,** to develop digital regional training animations, for use of all FE/HE and LA Training Workshop providers, which can support accelerated training. As new products, systems, innovations and processes are developed by the region's construction businesses it will be important to embed new training to support their deployment. The development of CPD materials and digital online training content will enhance the ability for people who are often unable to regularly attend education and training campuses to learn at home eg. young carers, women returners, disabled and veterans adjusting to new employment opportunities.
Responsible for pulling together the content and keeping up to date, compelling, cutting edge curricular material, all accessible to disadvantaged groups. Managing relationships with delivery organisations in education, public and third sectors to ensure consistency of use. Facilitate sessions with training providers on promotion and use of materials.
The animations would be a supplementary learning resource for those who may have difficulty getting to college or LA training facilities. They would also be utilised by all four colleges to help mainstream some key new skills leading to greater accessibility for anyone in the region .

- **HCI Skills project administrator,** to support the above staff, themes, events and meetings.

Delivering the twin ambitions of inclusive growth and innovation through the Housing and Construction Sector requires strong alignment between local, regional and national ambitions, policies and resources. As the project becomes embedded, resource requirement for most of the above roles will be mainstreamed business as usual after year 3 with the exception of the Equality & Diversity Officer.

The **HCI Skills Gateway Delivery Group** will be responsible for planning, implementing, reviewing, and refining the HCI Skills Gateway activity to ensure it delivers the change and inclusive growth ambitions for the ESES City Region Deal.   Membership of this group will be as follows and it is proposed that the group would be chaired by an industry or communities representative supported by a vice chair with a background in inclusion.

Role	Organisation or Group	No.
Chair/Vice-Chair	Independent representative	1
Delivery Partners	**Edinburgh Napier University (Lead and Project Accountable Body),** Borders College, Edinburgh College, Fife College, Heriot-Watt University, West Lothian College, University of Edinburgh	7
Inclusion Representatives	EQUATE, Local Authorities, Third Sector,	3
Industry Representatives (1)	Homes for Scotland, Scottish Builders Federation, Federation of Master Builders, Offsite Construction Representative	4
Public Skills Bodies & Innovation	Skills Development Scotland, Construction Scotland Innovation Centre, Energy Skills Partnership	4
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*		

This multi-stakeholder project management arrangement is supported by IRES PMO staff and will report to the IRES Board as previously indicated in Figure 6. Any variations to the programme will be in accordance with the agreement chain outlined below in Figure 7.
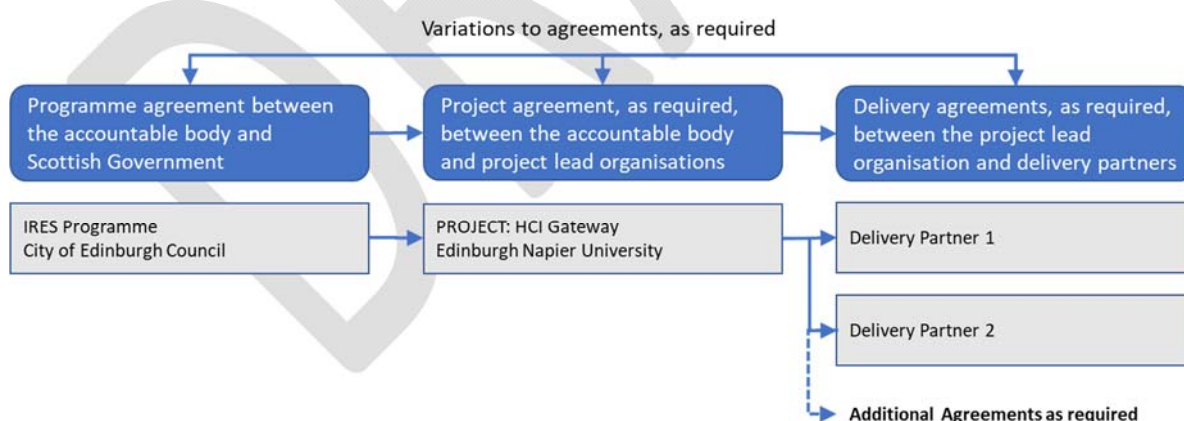

Figure 7: Agreement Chain

The Construction Scotland Innovation Centre has several potential roles in relation to supporting upskilling, industry outreach and networks. Championing new innovations and future required job training by companies or FE partners, inspiring the future workforce, promoting the sector's attraction and technological changes. Also an outreach role for attracting women back or into the sector and awareness of key shifts in the sector which helps inform future employment and career pathways.

Outreach engagement with the region's industry will be undertaken for each sub theme area to ensure it has local industry support. This will be done by the HE/FE and LA partners and ensure ongoing monitoring of volumes, timelines and key skills uptake.

Governance and management arrangements as set out are aim to empower the key delivery partners to:

- operate strategically and operationally with their partners to fully realise the inclusive growth potential of the sector and the economic assets that are created
- respond to issues critical for the sector and its positive impact on wellbeing in the region
- align project and programme resources to maximise the impact of public and partner skills investments in the Housing, Construction and Infrastructure Sectors.

The accountable body for delivery of the HCI Skills Project will be Edinburgh Napier University through a delivery agreement with the ESES City Region Deal Lead Accountable Body (City of Edinburgh Council) with strict monitoring of HCI Skills Project progress within an approved agreement framework.

6.2   Stage and Gate Approach

A Stage & Gate Approach will be used to ensure HCI Skills Gateway funding is meeting it's target objectives. Early enquiries have already been received from companies who are looking at the future growth of Edinburgh for housing, construction and infrastructure. The HCI resource will target companies where there are industry needs in their skills portfolio and where there are jobs. As proposals are developed by FE/HE or LA employment teams, each will require to evidence the planned industry uptake and interest. All pilot programmes will require to demonstrate industry take up and jobs prior to being funded.

6.3   Project Plan

The HCI Skills Gateway is a change programme with the intention that any new activity introduced, will, throughout the project lifecycle become the norm. Following this principle, as the new mainstream activity takes over and translates into these skills sets, pathways and support structures, management costs at the 'core' can ultimately be reduced as a consequence.   The embedded HCI Skills Gateway Delivery Group will still however continue its role to lead, monitor and ensure satisfactory progress as intended.   The HCI Skills Gateway will be delivered in two phases as outlined in Tables 4 and 5 over.

Table 4: Phase 1 HCI Skills Activities (Years 1 to 3)

HCI Skills Gateway / Activity vs CRD Spend Timeline	PHASE 1 - 2018 to 2021 *(Setting up, start of pilots, into work programmes, new short courses, gender & diversity)*										
	2018/19		**2019/20**				**2020/21**				**2021/22**	
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
PROJECT MANAGEMENT AND DEVELOPMENT	PROJECT MANAGEMENT AND DEVELOPMENT											
HCI Project Manager (staff)	PM							Review				
HCI Digital Animator - Regional support (staff)		DA						Review				
HCI administrator	Admin							Review				
INCLUSIVE REACH & EARLY SKILLS	INCLUSIVE REACH & EARLY SKILLS											
DEC Ambassadors (FE) - mentoring DEC 400		FE	roll out	Pilot								
DEC Ambassadors (HE) - mentoring DEC 400		HE	roll out	Pilot								
HCI "Into Work" Short Courses (Adult learning, pre-apprenticeship support) - LA training workshops		LA	roll out	Pilot								
Equality & Diversity Officer (Staff - Combined 50% DDI)		EDO						Review				
Events and Exhibitions		Industry		Schools		Industry		Schools		Industry		Schools
DEC funding into Schools (Ambassador workshops, Teacher Training / Career Officers CPD)		Set up		roll out				Review				Review
Online Training Animations support from industry		Set up		roll out				Review				Review
ACCELERATING INTO WORK and UPSKILLING	ACCELERATING INTO WORK and UPSKILLING											
HCI Pilot Projects (Multiskills, Pre-Apprenticeship Support, FrontEnd PDA, CATS)		Set up				Pilot						
Joint CPD and Upskilling with Industry	Set up		roll out	Pilots and Partnership CPD Programmes								
Regional Inclusive Career Pathway Developments		Set up			roll out	Pilot outreach and track				End	Mainstream	
EMPLOYABILITY PATHWAYS & New TRADES Short courses	EMPLOYABILITY PATHWAYS & New TRADES Short courses											
New HCI short courses addressing "entry to" regional key skills gaps (bricklaying for housebuilding, BIM, Sensors/Fibre/Offsite/LEV) 30, 45, 60, 45 places in first 4 years - including training at CSIC	Set up - Series of projects and start 1st Pilot Project Q3 2018/19						Multi-Pilot Projects					
FE Staff Upskilling		Set up and track (with annual review)								End	Embedded	
Industry investment in training facilities			Continuous engagement with industry									
ADVANCED SKILLS and GENDER DIVERSITY	ADVANCED SKILLS and GENDER DIVERSITY											
New MSc / CPD courses for Industry needs; Return to work; & Upskilling		Set up		Multiple pilots								
Industry investment in MSc/CPD courses and upskilling			Ongoing									
Revised programmes / short courses to increase skills supply for key industry needs			Ongoing			Review	Ongoing			Review		
Others investment in short courses, staff, materials, events			Ongoing			Review	Ongoing			Review		
TALENT DEVELOPMENT & Industry Liason	TALENT DEVELOPMENT & Industry Liason											
Talent Accelerator and industry liaison (staff)		TA										
ESESCRD Talent Accelerator (FE) program				Set up		Roll out	Pilots					
ESESCRD BeX Accelerator (HE) program		Set up			Roll out							
Industry investment in accelerator programs			Continuous engagement with industry									
SUB THEME REVIEWS					Review				Review			
HCI SKILLS GATEWAY	**2018/19**		**2019/20**				**2020/21**				**2021/22**	
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2

Table 4: Phase 1 HCI Skills Activities (Years 1 to 3)

HCI Skills Gateway / Activity vs CRD Spend Timeline	2021/22 Q3/Q4	2022/23 Q1/Q2	2022/23 Q3/Q4	2023/24 Q1/Q2	2023/24 Q3/Q4	2024/25 Q1/Q2	2024/25 Q3/Q4	2025/26 Q1/Q2	2025/26 Q3/Q4	2026/27 Q1/Q2
PHASE 2 - 2021 to 2026 (Mainstreaming and Conversion to Mainstream)										
PROJECT MANAGEMENT AND DEVELOPMENT										
HCI Project Manager (staff)		Review				Review				End
HCI Digital Animator - Regional support (staff)		Review				Review				End
HCI administrator		Review				Review				End
INCLUSIVE REACH & EARLY SKILLS										
DEC Ambassadors (FE) - mentoring DEC 400	Shift to Mainstream									End
DEC Ambassadors (HE) - mentoring DEC 400	Shift to Mainstream									End
HCI "Into Work" Short Courses (Adult learning, pre-apprenticeship support) - LA training workshops	Shift to Mainstream									End
Equality & Diversity Officer (Staff - Combined 50% DDI)		Review				Review				End
Events and Exhibitions	Industry	Schools	Industry	Schools	Industry	Schools	Industry	Schools	Industry	End
DEC funding into Schools (Ambassador workshops, Teacher Training / Career Officers CPD)				Review			Review			End
Online Training Animations support from industry				Review			Review			End
ACCELERATING INTO WORK and UPSKILLING										
HCI Pilot Projects (Multiskills, Pre-Apprenticeship Support, FrontEnd PDA, CATS)	Review	End	Mainstream							
Joint CPD and Upskilling with Industry	Partnership programmes			Shift to Mainstream						
Regional Inclusive Career Pathway Developments	Mainstream									
EMPLOYABILITY PATHWAYS & New TRADES Short courses										
New HCI short courses addressing "entry to" regional key skills gaps (bricklaying for housebuilding, BIM, Sensors/Fibre/Offsite/LEV) 30, 45, 60, 45 places in first 4 years - including training at CSIC	Review		End	Mainstream						
FE Staff Upskilling	Embedded in mainstream activity									
Industry investment in training facilities										
ADVANCED SKILLS and GENDER DIVERSITY										
New MSc / CPD courses for Industry needs; Return to work; & Upskilling	Review	End	Mainstream into GA routes							
Industry investment in MSc/CPD courses and upskilling	Review	End	Mainstream into GA routes							
Revised programmes / short courses to increase skills supply for key industry needs	Ongoing			End	Mainstream into key programmes					
Others investment in short courses, staff, materials, events	Ongoing			End	Mainstream					
TALENT DEVELOPMENT & Industry Liason										
Talent Accelerator and industry liaison (staff)	Mainstream into normal support									
ESESCRD Talent Accelerator (FE) program	Review			Mainstream into new MA route						
ESESCRD BeX Accelerator (HE) program	Mainstream into potential GA Innovation & Entrepreneurship route									
Industry investment in accelerator programs	Mainstream into new GA/MA routes									
SUB THEME REVIEWS	Major 3 Year Review				Review			Review		End report

Table 5: Phase 2 HCI Skills Activities (Years 4 to 8)

6.3.1   Phase 1 (Years 1 to 3)

Table 4 outlines current plans for years 1-3. During the first phase there will be focus on:

- Setting up project delivery group

- Establishment of key leads for sub-themes (from LA, FE and HE)
- Stage 1 and 2 pilot programs set up and rolled out in Years 1-3
- Partnership programmes established with industry trade bodies
- Establishment of DEC Ambassadors
- Establish and track the pathways of the first cohort of the DEC 400 pupils
- Career pathways mapping
- Outreach events
- Training of teachers, DEC ambassadors and career officers in schools
- First cohorts of Advanced Skills launched
- Equality and diversity programs with industry and public sector employers for DEC
- Offsite awareness skills development with CSIC
- Establishment of talent development frameworks
- Regional BeX program
- Key reviews of progress, monitoring, outputs and lessons learnt

6.3.2   Phase 2 (Years 4 to 8)

Phase 2 would continue with many of the above but also take on learning from initial phase and will be highly dependent on outcomes and progress achieved. A strong focus within Phase 2 will be to take previous Phase 1 pilot projects and the associated support to convert these into mainstream approach a key legacy outcome of the ESESCRD IRES objectives. Tables 4 and 5 outline the proposed HCI Skills activities, planning and timelines.

6.3.3   Inclusive Reach and Early Skills

The HCI Skills Gateway will facilitate increased capacity for the sector to engage those under-represented in the industry through the establishment of a network of DEC Ambassadors across the SES City Region. DEC Ambassadors will work across schools, colleges and universities and build the necessary capacity to bring about the necessary cultural change that will increase employment in the sector.

DEC Ambassadors will:

- Target activity for young people in the most deprived SIMD areas to engage in the HCI industry
- Engage with local training providers and key target schools with the highest concentrations of pupils in deprivation
- Provide mentoring and support to DEC 400 pupils
- Engage with Construction Scotland Innovation Centre and Scottish Enterprise to support offsite awareness, introductions to the sector, industry innovations, future career routes, opportunities and innovative training such including virtual training systems
- Link directly with the four Regional Developing Young Workforce (DYW) Boards to ensure that employers have a consistent joined up message and engage more young people

- Increase activity of inspiring speakers, industry workshops and work placement opportunities for schools to access
- Support 'into work' adult-learning construction courses, pre-apprenticeship support and deliver upskilling for those with existing experience via the East Lothian and Midlothian training workshops
- Promote a strong 'into work' ethos

Focused CPD training sessions will be given to school teachers, DEC Ambassadors in schools and school careers officers by the FE/HE DEC Ambassadors and industry partners within the region to enable:

- Better understanding of the range of skills and opportunities for young people entering the sector
- The future program of new job opportunities
- The career pathways which ESECRD across the region can develop and support
- Key contacts in LA training workshops, FE and HE
- Alignment to additional support available through widening access programs

There is already some good practice evident across the current schools system to support vulnerable young people into construction however this is not consistent across the region. The HCI Skills Gateway project will ensure those facing disadvantage in the labour market will be identified and specifically targeted. Industry and FE both recognise that more pre-apprenticeship support is needed. Closer liaison with schools in the most deprived 20% SIMD areas, with teachers and career guidance staff will help integrate the career pathways with the new jobs and skills the industry requires.

DEC Ambassadors will link closely with local authority employability teams to ensure additional support and encouragement is extended and made available for young people and particularly those entering vocational learning, Foundation Apprenticeships and those on Activity Agreements.

Likewise, for adults, support is not consistently targeted, or sector defined across the region. The HCI Skills Gateway will change this with DEC Ambassadors more closely aligned and integrated with local employability teams and training providers. Closer working relationships with Fair Start Scotland providers on a sectoral basis will guarantee hands on work experience and confidence building for unemployed people wanting to gain employment in the sector.

The focus is to support and train all those living and working in the region. It is recognised however there may be some companies who work in the region that employ people living outside the region. Upskilling opportunities would be available to companies working in the region and the people they employ, regardless of where they live. Arrangements would be administered in close conjunction with the relevant industry trade bodies who have 'local chapters' and 'regional CPD meetings'. New training, "into work" courses and short courses for job entry would however only be available to those living in the SES region. This policy will be kept under constant review by the HCI Gateway Delivery Group to ensure maximum impact for the region and it residents, particularly those with significant disadvantages in securing good careers.

In the first two years, new short courses for site skills such as housing bricklaying and joinery will be prioritised to accelerate and support the SES City Region housebuilding programme. All training will

be relevant to current and future construction industry needs and will ensure that new entrants are work ready and fully prepared for the challenges they will face in the workplace

An estimated £1.7 million in kind contribution is forecast through joint working and access to key training experts from industry with new courses and accelerated learning opportunities provided. Industry-Led CPD will support the work of DEC Ambassadors in promoting the industry and attracting new talent, but also to ensure that those at work in the HCI Skills industry, gain access to ongoing training, upskilling and progression into higher paid and higher skilled roles.

Partnership Example (Hart Builders)

Hart Builders Launches Employability Programme

https://www.buildscotland.co.uk/construction-news/231440/hart-builders-launches-employability-programme helps demonstrate this.

6.3.3.1   Building Partnership Capacity

The Equality and Diversity (ED) Officer will work in conjunction with DEC Ambassadors and industry to ensure strong focus on addressing gender inequalities, encouraging more woman to enter the sector and enabling increased opportunity for career progression.   The ED Officer will also engage with employers to improve diversity and equality knowledge across the region and link closely to EQUATE to ensure alignment with the latest training to grow a more robust regional approach for HCI skills roles for women.

The ED officer will link with the IRES Integrated Employer Engagement team to increase the number of people with disabilities employed in the sector. Engagement with SES construction industry and public sector employers will help identify available and appropriate job entry points and with new technology, design software and building information modelling, there is a widening skills reach and increased opportunities available

In addition to the work of the DEC Ambassadors the HCI Skills Gateway will introduce a series of outreach events and exhibitions to further engage communities, schools and businesses throughout the SES City Region.

This outreach activity is designed to be accessible to a wide range of vulnerable group, many who may have limited access to computers. It is for this reason that many of the industry designed learning materials (e.g. Digital Animations) that will be developed will be usable by the more accessible mobile phone technology, which does not require any additional software or user training.

Not all training will be done via this technology but it will assist where care needs, travel issues (e.g. costs), or low incomes could hinder sustained participation and progression. Where specific learning needs are identified and defined then additional supports and reasonable adjustments will be put in place to help provide consistency in approach, and quality of learning.

6.3.4   Employability Pathways

The HCI Skills Gateway will establish a range of new training processes and projects to improve employability via acceleration into work. Further Upskilling will be developed including multi-skills, Pre- Apprenticeship Support, Front end PDA and CATS are also planned.

The new courses are accelerated learning or demand specific skills that industry has identified as a gap or where current MAs or other provision does not align. The upskilling HCI components provide an opportunity to improve the opportunity for higher wages and higher-level roles and jobs. This is particularly significant to aid the progression of those from disadvantaged areas or those on flexible/temporary contracts to access higher skilled, more stable employment:

- They provide a gateway into work more quickly which is attractive for disadvantaged groups rather than long spells of training.
- New short courses and provision would only be put forward where industry can demonstrate demand, uptake and jobs.
- These courses include, for example "multi-skills" (outlined below) where companies in the region have identified a demand for this type of provision. This also provides a great opportunity for those who complete the training and enter employment to then decide which element they wish to focus on for a future MA (funded by others) or other skills development.

- **Multi-skills** – Supporting more local people and enabling more vulnerable people to become industry desirable. House builders and contractors have identified a growing need to have employees with multi-skills. A multi-skills training platform for housing will therefore be developed by FE partners with industry to support those with existing skills in a single trade discipline to learn essential aspects of others; such as bricklaying, joinery and plumbing. Partners have engaged with companies in the region who wish to employ multi-skilled operatives, and these are likely to fall into two specific categories:

  1. Additional skills and upskilling, that industry requires, for current operatives to develop for other job roles on existing sites. For example, this may include training in specific site equipment, insulation installation, render coat applications, installers for floors, bathrooms, alarms or kitchens.

  2. For offsite construction. Several companies within the Offsite Solutions Scotland co-operative and other regional companies have stated their interest in such skills needs and future jobs. When setting up the pilot project, the skills content of the program that the companies are seeking would be compiled in a multi-skill route and a proposal would be put forward to the IRES Board for approval.

  HCI would engage with industry future job pipelines to adapt and introduce such training for early and quick upskilling leading to greater job security, potentially higher wages and career pathways.

- **Pre-Apprenticeship Support/ PDA's and Work** – Partners have identified through their STEM strategies that pre-apprenticeship support for pupils studying technologies and maths would help to enhance completion rates for those undertaking a future apprenticeship. It is therefore planned to pilot such support in areas of deprivation, particularly where drop-out rates are high and to roll out across the region.

We would propose that the PDA approach is linked to companies and specific employment opportunities – particularly on fast / quick training skills / specific to companies taking on new employees. The Pre-Apprenticeship support would specifically help those from disadvantaged backgrounds who more often struggle in the first early stages of apprenticeships.

- **Front End PDA** – many SME and particular micro companies express concern with apprentices being away from work for extended time periods to undertake PDA development and impacting on productivity. Learning outcomes from previous attempts in England suggest a front-end PDA route would allow apprentices to engage with employers for longer sustained time periods. This approach is supported by industry in Scotland where the industry partner is established from the outset. HCI Skills Gateway would support such an approach by linking with the IRES Integrated Employer Engagement team.

- **CATS design and plans** – current FE training facilities are quite old or their use is restricted due to construction assembly elements (such as bricklaying drying times). This proposal will examine whether some of the learning from international skills facilities, could be applied into future CATS (Construction Adaptable Training Spaces), using multi-function training spaces to be utilised and adopted in the SES region. Such resource may provide a higher productivity training environment and better throughput of skilled training in key disciplines.

- **Pop-Up construction assembly factories** – future offsite developments may incorporate a pop-up factory process in or adjacent to construction sites in order to support local manufacturing and employment of local workforce. This would deliver new housing and construction programmes linked to the wider SES City Region Deal's building programme. The HCI Skills Gateway will partner with key stakeholders and businesses to identify and map out future skills for such facilities through a pilot project with industry partners, Offsite Solution Scotland, CSIC and public sector.

- **Machinery, Plant Operation, Refurbishment and Fitters (quick entry route to jobs)**
  As part of the *training to jobs* support an area which would provide quick entry, is the future jobs in machinery, plant operation, refurbishment and fitting. This is also part of the accelerated platform of quick entries to work.

  Once HCI commences delivery the project team will meet with the regional contractors and sub-contractors to obtain information on specific skills gaps and future growth areas. This will provide a 'cohort' approach to delivery and also partnership with specific plant and machinery companies for such specialised training. At present three key skills sets have been identified for quick entry into work in the above areas with direct interest from companies. These proposed areas would be submitted to the HCI Skills Gateway for funding requests and to the to the IRES Board for approval utilising the stage and gate approach and care would be required to ensure there is not overlap with existing provision. Where there is existing provision the companies enquiring after these skill sets would be directed to that provider in the first instance.

  Some of the above are specific "product/process led" training only to that machine or system. The pre-apprenticeship support would help individuals enter into such roles or run in parallel raising employability factors.

To facilitate upskilling of existing workforce, joint CPD events will be delivered with industry bodies and public-sector organisations. The HCI Skills Gateway will develop new CPD materials, which will be embedded into the regular CPD sessions carried out by professional organisations. The HCI Skills Gateway will shape and influence the delivery of key skills and new knowledge across the region. This new partnership approach will improve the timetabling of events and significantly reduce duplication and associated costs.

6.3.5   Accelerating Into Work and Upskilling (Trades – Early On-site and Offsite Skills)

Given the regional key skills gaps for Joiners, Bricklayers, Plumbers, Electricians and Building Information Modellers (BIM), it is important there is movement and progression in the HCI Skills Gateway to accelerate specific onsite skills for housing, BIM skills and new offsite skills within the region and businesses. HCI skills would assist in piloting a future 'bricklaying for housebuilding' course, which would be a contributing part of a future progression to the full SQA craft skill for bricklaying.

It is already clear from initial discussions that there is industry demand for the 1st pilot course:

- Despite not having started the HCI programme nor the development of the training proposal with industry we have already received enquiries from companies (who have heard by word of mouth this may be coming).
- Borders builder wishes to have 8 trainees. National builder operating in SES has stated interest in 14 trainees.
- At a recent meeting of the major building companies all companies stated they would wish to see this program started and would employ.
- During the set up phase – FE partners and the pilot project manager would engage with companies to identify, who, numbers, timing and plans before each program would commence
- It is expected that the above course will have high take up by industry and jobs, but an assessment of jobs and industry uptake will be undertaken on each sub theme project request before committing a proposal to the IRES board.

Further short training courses would also be developed in other areas to support accelerated employment or advancing existing lower income employees to progress to higher levels, these could include:

- Basic and higher level BIM training which aligns strongly with Scottish Government priorities for BIM skills embedded across HCI careers,
- New fibre/sensor installation training programmes which aligns with future growth of smart buildings, communities and cities integration,
- LEV charging installations given the future increase in charging point installations both for new homes and buildings and existing buildings / infrastructure,
- Specific training on new and future offsite housing construction systems with regional businesses with training provision across the region,
- Pop-Up civils and groundworks training facilities – recent projects in Scotland and England have shown the benefits for 'localised' civils and groundworks skills training and employment opportunities through pop-up training facilities adjacent to major construction sites. HCI Skills Gateway would partner with training providers for such

> facilities linking FE and local authority training providers and this could be instrumental to support localised inclusive growth and skills across the region.

Greater opportunities are required for existing trades workforce to be upskilled and to also have additional new skill sets. Maintaining employment is more resilient when employees have more than one skill set. The above courses and other new courses developed would also support advancement into higher paid roles with greater responsibilities in the sector, such as site managers and will also encourage and make way for new entrants to progress in the sector.

6.3.6   Advanced Skills and Gender Diversity

Current advanced and more senior roles in the HCI industry are 89% male. A recent study on the progression of females to higher qualifications (advanced levels) within south east Scotland identified this to be key barrier to the progression of women in more senior industry roles. To address this imbalance an advanced skills program would be developed to provide support and education/training for MSc/CPD specialisations and with a stronger focus on women (60%) into advanced levels.

Career Advancement Programmes will:

- **Offer wider opportunities within the sector**, to attract a more diverse field of talent for those wanting to progress in the sector to address the gender imbalance at senior levels
- **Reduce barriers to higher level upskilling**, by providing new pathways for those in the HCI Skills industry and ensuring better recognition of existing skills and attainments
- **Provide opportunities to upskill those currently not in work**, who have previously worked in the HCI Skills sector who wish to return and specialise and improve future employment opportunities
- **Be open to regional industry and public-sector employees** in the HCI Skills fields to widen their skill sets and education those creating a regional transformational upskill approach.

Investment in Career Advancement from the SES City Region allocation will consolidate the change programme. It will support the initial development and the first cohorts to access career advancement programmes. It will also support more of the existing female workforce to progress into senior roles and enable a greater range of female mentors and role models that would work with DEC Ambassadors to encourage more women to enter the HCI Skills sector at all occupation levels.

Work is already ongoing with SDS to promote these programmes and opportunity exists for some career advancement programmes to be matched 50:50 with allocation leveraged in from employers and individuals within the HCI Skills industry sector. Investment in career pathways will ensure that everyone is able to maximise their full potential a key factor of inclusive growth policy.

6.3.7   Talent Development

There are many highly talented individuals, students and employees across the SES City Region who could be sector leaders of tomorrow. Talent Development programmes such as Built Environment Exchange (BeX) and Talent Accelerator will drive progression within the industry. Edinburgh Napier University's award winning BeX programme has supported high performing graduate students through their specialised Masters courses. The first phase of BeX had a strong timber industry focus across Scotland where students were embedded in Scottish companies. These arrangements are

jointly funded with industry and provide an intense period for students to work in industry combined with high level education and supported by entrepreneurial and innovation skilled mentors.

BeX is aligned with Saltire fellowships and scholarships and given the very positive evaluation feedback from companies and graduates involved, it is proposed that these are developed to provide a regional BeX programme across the SES City region's HE providers, companies and local authorities for all HCI Skills career pathways. The HCI Skills Gateway project would contribute to supporting this initiative and leveraging industry funding to inject a regional BeX talent approach.

Talent Accelerator will support adult learners and school leavers into work and delivering investment targeted into the FE sector and local authority skills training workshops is critical. Talent Accelerator will link closely with the IRES' programme for disadvantaged families and provide CSCS qualifications for those entering sites and 4-10 week short training courses for construction skills to offer better opportunity for those most disadvantaged to gain the relevant skills and qualifications to access employment in a growing sector. Both BeX and Talent Development will also support gender and diversity through a higher focus of support for women entering or already in the sector

6.4   Linkages from HCI Skills Delivery Group to Client Sectors
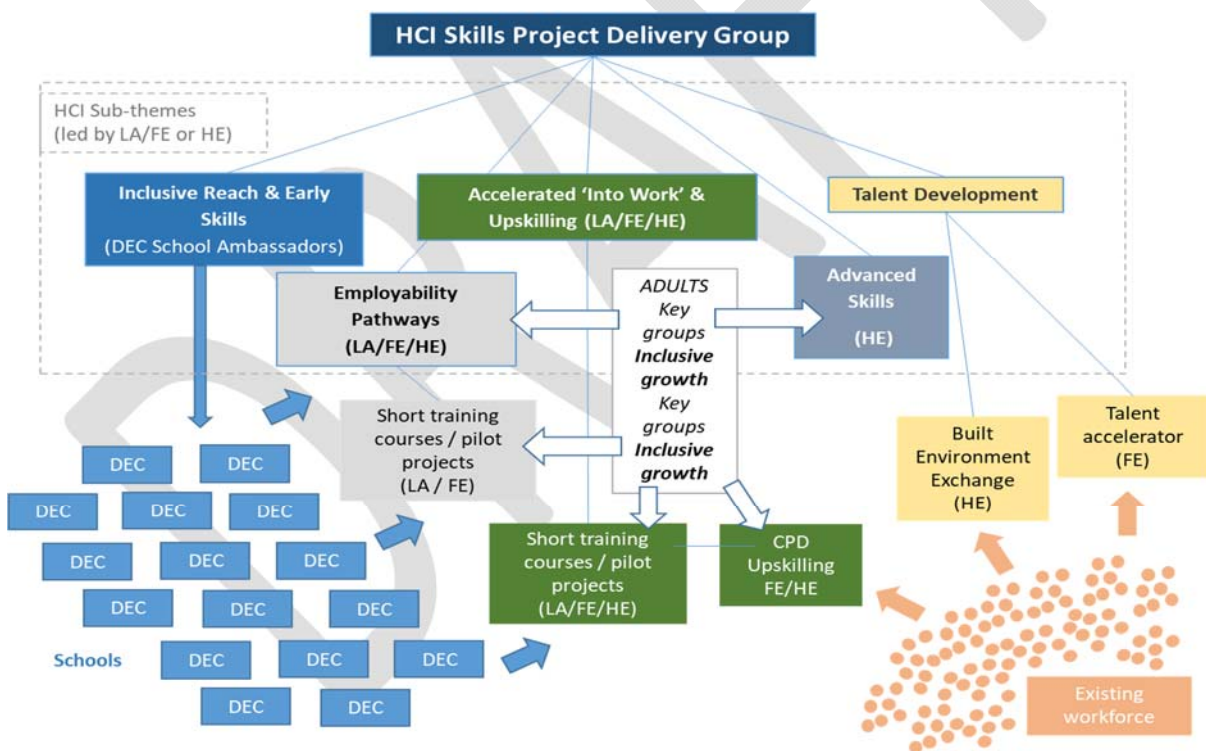
The above diagram summarises the links between the HCI Skills sub-themes, (key leads) and inclusive growth beneficiaries involving schools, adult disadvantaged groups and existing workforce. The previous sections, 6.1 to 6.3, detail the key functions and activities of the HCI proposal in operational management terms.

6.5   Community Benefits

The IRES and City Region Deal infrastructure partners are currently developing a regional approach for the ESECRD programme to link-in community benefits on projects. This mechanism linked via

procurement routes would also link with the Integrated Employer Support to align training, jobs and apprenticeship routes with both DDI and HCI Skills Gateways.

This signposting and linkages across the region with two large skills gateways (HCI and DDI) is a first. By working as a regional group this will create a consistent approach towards interlinking with community benefits and also align to specific aspects across the region which are increasingly required. The HCI Skills Gateway will provide a much needed reportable and tangible direction to focus companies in the HCI Skills arena.

Community benefits is a prominent theme within the IRES Integrated Employer Engagement Project and HSC Gateway Delivery Group will be a key element informing future strategy for construction sites and community benefits.

The newly developed governance and management arrangement for the HCI Skills Gateway empowers the key delivery partners to operate better strategically and operationally with their partners to fully realise the inclusive growth potential of the sector and the economic assets that are created. Also to respond to issues critical for the sector and its positive impact on wellbeing in the region, aligning project and programme resources to maximise the impact of public and partner skills investments in the Housing, Construction and Infrastructure Sectors.

The strong linkages between the local authority partners within ESESCRD and the key objectives of IRES will help to align with future community benefits and outcomes and making more effective connections with employers and supply chain sub-contractors etc. The HCI Skills Gateway will provide an additional forum for Local Authorities and partners to negotiate and align community benefits to ensure such benefits and ensure resource is targeted to achieve inclusive growth outcomes.

6.6   Risk Mitigation Plan

Risk management is an integral feature of the HCI Skills Gateway and the project risk register ANNEX is 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 HCI Skills Gateway Delivery Group and ultimately the IRES board will regularly review project progress with decisions made on continuation, adjustment or withdrawal of funding.

ANNEX A: Inclusion and Demand Challenges for Regional Housing & Construction Sector

The SES region is the **fastest growing region** of Scotland for population and the **5th fastest** growing region in the UK[1]. Required to increase housing **output by 40%** [2] above previous supply levels almost **one third of all Scottish housing** [2] output will be in this region 2019-2039, focused within 6 of Scotland's 32 local authorities. The pipeline of private housing, public housing, infrastructure and demand will require over **£34 Billion** of new housing and infrastructure assets to be delivered.

Delivering sustained growth of the region is highly dependent on the supply of a skilled workforce to deliver the infrastructure and housing. **The economic growth of the region to be fully effective has to be inclusive**, providing fair work, career opportunities and regionally accessible skills training, education and knowledge platforms for all.
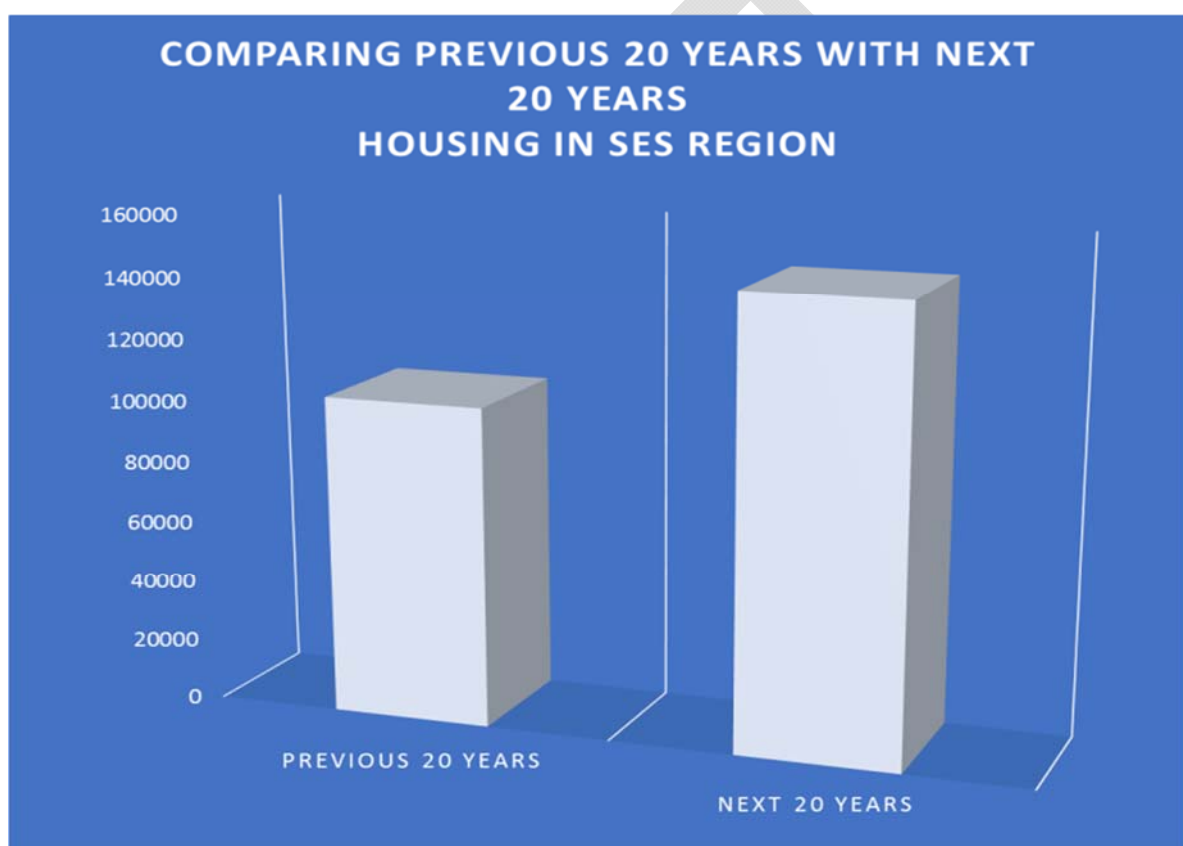

Figure 8. Forecasted growth of SES housing demand 2018- 2038 versus previous two decades.

ANNEX B: Risk Matrix (Nov 2018)

Risk	Mitigation Measures
Project fit and impact **Developments in the economy, operational environment, performance factors, or good practice developments mean projects within the programme (or existing services) are no longer required in their current format or there is evidence of under/over provision**	Impact measures will be regularly reviewed by project team and reported to the IRES Board to ensure target objectives are being met. The partnership will conduct a mid-programme evaluation in 2021 to check the direction of travel is still right.
Programme and project management capacity **Inadequate programme or project management results in failure to deliver agreed outcomes**	As above with options considered to review, increase or decrease any aspect of service delivery at any time
Disadvantaged citizens and low-income families benefit from the change **There is a risk that disadvantaged citizens and families (or under-represented client groups) do not see tangible long-term benefits from the HCI Skills Gateway project**	Building capacity of DEC Ambassador networks from early stage of project inception will result in wider community engagement. Links with local authority employability teams and Fair Start providers locally will enhance provision. A Stage & Gate Approach as outlined in the management case will be used to ensure HCI Skills Gateway funding is meeting the target objectives.
Private sector investment and support for inclusion **There is a risk that the private sector buy-in and investment cannot be achieved reducing future impact and sustainability of interventions**	Homes for Scotland, Scottish Builders Federation, Federation of Master Builders and Offsite Construction all represented on HCI Skills Gateway Delivery Group
Mainstreaming of Activity **There is a danger that the successful activities or practice changes initiated by the HCI Skills Gateway are not mainstreamed reducing the impact of ESES City Region Deal funding**	Key intention of the project is to bring about cultural change for the sector. Phasing of project deliverables weighted across years 1-3 with resource input reducing years 4-8 to accommodate mainstream shift. Progress regularly reviewed by HCI Skills Gateway Delivery Group and IRES Board to ensure the close alignment and linkages between National and Local policy provision initiatives.
Bursaries / Financial Support **Ensuring people and communities most disadvantaged are able to and best supported to access opportunities.**	Employability Partners, Local Authorities, Colleges, Universities and DWP are actively considering and exploring new and innovative approaches as to how best to support HCI participants financially and particularly those in receipt of Universal Credit benefits. Local Partnership pilot activity has already

Risk	Mitigation Measures
	provided good insight and opportunity exists to build on this to align and augment individual partner supports and contributions more effectively. Workforce mobility, concessionary travel and the use of digital animations for home based learning are also being considered as means of additional support.

ANNEX C: Advanced Skills (Courses)

The following advanced skills areas have been identified by industry and universities to assist in upskilling and supporting the future regional infrastructure and housing and **where there will be future regional employment opportunities.** There would be a strong focus on gender and diversity (60% for key groups) with a key focus via such qualifications to support women to reach more senior industry career levels in SES through specialised advanced courses. These future HCI Skills route pathways for private and public sector employers would also have significance at regional, national and UK level. The ESESCRD universities have some of the leading UK and international experts in these fields and with many courses including low carbon knowledge platforms:

Timber Architectural Design & Technologies (ENU Routes: PGCert, PGDip or MSc)

Aligned to the **SES region's future growth in housing** will have a significant proportion of timber construction systems using CLT, SIPS, Hybrid, DLT, offsite closed panels and modular construction and future timber technologies.

Architectural Technology (ENU Routes: CPD, PGCert, PG DIP, MSc)

ENU hosts the UK CIAT Centre for Excellence in Architectural Technology (AT). Recent discussions with employment agencies indicate that more jobs are being demanded in this area by industry. This AT course includes modules in offsite construction, technical specifications, sustainable design and alignment with building regulations.

Building Acoustics and Environmental Noise (ENU Routes: CPD, PGCert and embedding in existing course programs)

The course materials developed would cover recent regulations changes, forthcoming ISO standards and support upskilling for the future 145 south east Scotland construction sites identified. Both new skills and upskilling of industry and public sector will be required for new ISO impacts.

Fire Engineering for Buildings (UoE Routes: CPD, MSc)

Following the Grenfell tragedy there are likely to be changes in building regulations for housing, product certification, testing and design. With SES delivering over 30% of all future housing in Scotland, with many major sites and flatted developments, it will be imperative to upskill the sector.

Digital Infrastructure & Sensors (Combined HE delivery)

To support the future growth in digital technologies, smart buildings and infrastructure for south east Scotland.

Advanced Structural Engineers (Route: HWU/ENU)

Scotland and SES have a shortage of advanced structural engineers – this could negatively impact on the delivery of future infrastructure and major sites if not addressed.

Building Services Engineering & Renewable Energy Systems for Buildings & Communities (Route: HWU / ENU / UoE)

With the future CHP (community and district heating systems) and increasing use of **renewables and energy generation within future buildings in south east Scotland** there is a need to augment the number of building services and renewable energy for buildings expertise.