



ANNEX C – OUTLINE BUSINESS CASE TEMPLATE

CHESHIRE AND WARRINGTON LOCAL ENTERPRISE PARTNERSHIP

LOCAL GROWTH FUND BUSINESS CASE TEMPLATE

The Local Growth Fund is awarded on a competitive basis and as such the LEP has to ensure that it is presenting a compelling case to Government and that the projects it submits show a clear rationale and well defined benefits. Further guidance on the Local Growth Fund is available at: -

<https://www.gov.uk/government/publications/growth-deals-initial-guidance-for-local-enterprise-partnerships>

In order for the LEP Executive and others to appraise proposals, all Promoting Organisations are required to complete this Local Growth Fund Business Case Template. In addition to headline project details, the form comprises six sections: -

- B: Strategic Case
- C: Economic Case
- D: Financial Case
- E: Management Case – Delivery
- F: Commercial Case
- G: Evidence and Supporting Information

Please complete the form as fully as possible ensuring that all information requested is included. If there are elements that you are not yet in a position to complete please indicate clearly when this information will be available.

Where additional information is requested, such as location maps or Gantt charts, please supply these as separate documents or files, rather than attempting to embed them within this form.

Please note that questions B6 and C3 are only applicable to Transport Schemes.

Additional information may be requested for projects seeking funding from specific streams of LGF (e.g. FE Skills Capital).

Note that all project proposals must align to the priorities identified within the LEP's Strategic Economic Plan.

On completion, please return the form to Rachel Brosnahan at Rachel.brosnahan@871candwep.co.uk

Section A: Scheme Details

This section asks you for basic information on your scheme, including a brief description, type of scheme, scheme location and contact details for further information.

A1: Scheme Name	Centre for Sustainable Agriculture and Food Production
A2: Promoting Organisation	REASEHEATH COLLEGE
A3. Accountable Body	<i>Please provide details of the project's Accountable Body (if different from the Promoting Organisation)</i> REASEHEATH COLLEGE
A4: Main Point of Contact	<i>Please provide full contact details of the person who should we contact for further information on your scheme?</i> Marcus Clinton 01270 613 198 marcus.clinton@reaseheath.ac.uk College Principal Simon Burgess 07816 306 697 simon.burgess@reaseheath.ac.uk Head of Projects Research and Innovation Reaseheath College Nantwich Cheshire CW5 6DF
A5: Type of Scheme	<i>Please indicate the type of scheme being submitted</i> <input type="checkbox"/> Transport infrastructure <input type="checkbox"/> Regeneration <input checked="" type="checkbox"/> Enabler Other (please specify):

<p>A6: Scheme Description</p>	<p><i>Please give a brief description of your scheme (in no more than 100 words)</i></p> <p>Reaseheath College is a specialist land-based College and one of the UK’s leading providers of Education, Training and Skills Development for sustainable agricultural and innovation around land and the environment. We are currently developing a number of projects (Appendix 1). The Centre for Sustainable Agriculture and Food Production concentrates on:</p> <ul style="list-style-type: none"> - A new automatic milking dairy unit to provide training, upskilling/reskilling and education in the emerging areas of digitalisation, robotics and data-driven dairy management. A key part of this is the creation of a Centre for Dairy Automation and Robotic Milking. - A facility to innovate and develop precision horticulture through controlled environment food production. <u>The Controlled Environment Food Production Centre</u> will support advances in innovative growing techniques in protected environments (including vertical farming), using data management and new technologies such as LED lighting, hydroponic/aeroponic growing systems, robotics, automated environmental and nutrient control, and biosecurity will allow improvements in food production efficiency and sustainable use of natural resources. <p>To support the <u>Centre for Dairy Automation and Robotic Milking</u> and the <u>Controlled Environment Food Production Centre</u>, laboratory facilities and equipment will be required in the <u>Soil and Water Testing Centre</u>. The Centre for Sustainable Agriculture and Food Production will enable us to lead on agricultural innovation around commercial livestock management and food growing techniques to support the government’s Agri-Tech Strategy.</p>
<p>A7: Total Project Cost</p>	<p><i>Please indicate the total capital cost of your project</i></p> <p>£996,000</p>
<p>A8: LGF Requested</p>	<p><i>Please confirm the total amount of LGF requested</i></p> <p>£996,000</p> <p>79% of total project costs</p>

<p>A9: Geographical Area</p>	<p><i>Please provide a short description of area covered by the Scheme (in no more than 100 words)</i></p> <p>The scheme covers Cheshire and Warrington, and has direct relevance to North Wales and other LEP areas including The Marches, Stoke & Staffordshire and Worcestershire. The scheme will also be relevant to the UK as a whole.</p> <p>Cheshire remains, in many places, a rural area with agriculture and land-based industries, a network of generally affluent and prosperous villages, mid-sized market towns and the historic city of Chester. These serve as important service and functional centres. Warrington is the largest urban centre in the LEP area.</p> <p>The rural areas are increasingly becoming home to a wide range of non-land-based businesses.</p> <p><i>Please supply a location map and where possible a map showing the site boundary (and Map info Table(s) where available). If possible please highlight existing transport infrastructure and other points of particular interest to the bid e.g. development sites, areas of existing employment, constraints etc.</i></p> <p>A location map is presented in Appendix 4</p>
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<p>A10: Alignment to Strategic Economic Plan and National Policies</p>	<p><i>Please select which strategic priorities the scheme aims to support. Please select all categories that apply.</i></p>
	<p> <input type="checkbox"/> Constellation Partnership <input type="checkbox"/> Cheshire Science Corridor <input type="checkbox"/> Crewe High Growth City <input type="checkbox"/> Warrington New City <input type="checkbox"/> Mersey Dee Economic Alliance <input checked="" type="checkbox"/> Other(s), Please specify – </p> <p>The scheme is an enabler and will support several the strategic priorities:</p> <p><u>Constellation Partnership</u> – HS2 may well be built by 2027 on land that is currently being used to grow crops for food. This scheme will support the loss of this land with alternative methods for food production.</p> <p><u>Cheshire Science Corridor</u> – The scheme will provide skills opportunities for businesses based in and around the Cheshire Science Corridor. We work with many of the businesses in this area. We work with University of Chester on several projects supporting businesses in all sectors – Business Growth Programme.</p> <p><u>Crewe High Growth City</u> – With the development of HS2, the population in Crewe is expected to double. Our scheme will provide a skilled workforce to satisfy the new employment opportunities required by the growing population.</p> <p><u>Warrington New City</u> – Warrington is strategically located to meet distribution & logistics demands. The College will actively engage with food production and distribution businesses in the town.</p> <p><u>Mersey Dee Economic Alliance</u> – The college has links with North Wales, and provides education and training for students that want to study, for example, engineering but do not have the opportunity to attend University, or would like a more practical, applied approach.</p> <p>The college wants to capitalise on the unique strengths and opportunities that our sub-region has on offer. The growth potential has been identified for the Agri-Tech and Digital sectors. This scheme enables us to combine the two.</p> <p><u>Refreshed Strategic Economic Plan (SEP)</u> The SEP recognises the need for detailed plans for skills and education, science and innovation, energy and digital priorities. The specialist equipment will help address the mis-match between the skills employers need and the skills the sector does not currently have.</p> <p>We can help meet the SEP requirements by working with local businesses, FE and HE providers, Innovate UK and the Department for Business, Energy and Industrial Strategy and other sources of funding (see Appendix 19).</p> <p>The SEP recognises that Reaseheath College is one of the leading specialist land-based colleges in the UK with almost 4,000 students in Further Education, Higher Education, Apprenticeships and work-based learning. The College’s facilities include:</p> <ul style="list-style-type: none"> - An industry-backed Food Innovation Centre - National Centre for Horticulture, the Environment and Sustainable Technology

- An Advanced Agricultural Engineering Academy that is one of the most sophisticated education centres of its type in the UK.

The College's partners in these initiatives include CLAAS, Case-New Holland, JCB, Amazon, Kuhn, APS Group, Muller, Arla, Makita, Philips, Cambridge HOK and Priva. Many have donated advanced engineering machinery and equipment. These companies provide work placements for our students and Reaseheath is their key training provider.

The specialist facilities will enable Reaseheath to deliver Agri-Tech training in the latest crop production systems, precision farming, agronomy and data mapping. The robotics and digital equipment will support the next stage of development and be of interest to more major employers.

The scheme will support "Business to Grow". By understanding the needs of local businesses and listening to the businesses the College works with, we can support the LEP to "introduce new services to fill gaps and help businesses start-up, scale-up, invest in research and development and trade" and also "connect local businesses with high quality assistance from local professional service businesses and strategic partners including local government, Chambers of Commerce and academia".

The SEP's plans for working with businesses and skills providers to make sure that the workforce has the skills needed to remain productive and connected to opportunities are reflected within the College's Five Year Strategic Plan.

We encourage employers to work with young people to inspire them about career opportunities, so they understand what skills and qualifications they need to progress in the careers they choose. We must retain graduates and increase the take up of STEM and digital skills, especially in Agri-Tech, and help individuals who want to get into work or to start a business.

Reaseheath has a strong track record in progressing students from College courses (FE and HE) into full-time employment and/or higher-level education/training. Figures are above national averages. 96% of all students at Reaseheath move into employment, apprenticeship or go on to study at degree level. This figure rises to 99% in agriculture. All courses are career focused. Every full-time student completes a work placement.

Local Industrial Strategy supports the high demand for STEM and digital skills in C&W's key sectors – manufacturing, energy and environment and life sciences (Innovate UK defines Health & Life Sciences as including Agriculture & Food). The SMART Specialisation Chart shows a shortage of research in Agriculture in Cheshire & Warrington. Apprenticeships in Agriculture, Horticulture and Animal care are mid-range showing that interest exists but can be improved.

Cheshire and Warrington Skills Plan puts employers at the heart of inspiring and informing residents about career and progression opportunities and making curricula fit for purpose. Reaseheath will continue to work with agricultural and food production businesses to develop a curriculum that ensures they have the skills they need to grow, and individuals have the skills they need to progress. We will continue to build on good practice and promote a more innovative approach to the future of Agri-Tech that engages employers and learners with technology and digitalisation.

The Pledge

The proposal will also support The Pledge model by helping to ensure individuals seeking work or progression in work. Reaseheath College will take the opportunity to encourage and support young people, and support work experience and apprenticeships through the curriculum.

The Agri-Tech curriculum being developed supports the **Local Digital Skills Partnership** as we are including digital skills in our agricultural courses and the use of artificial intelligence in our dairy herd and plant-based food production. For example, we can demonstrate that the routine use of intelligent ear tags with built-in sensors by the livestock sector will allow earlier warning of potential health issues as well as real-time monitoring of weight and fertility.

Published research highlights how digital sensors may also be used to remotely manage grazing and act like virtual electric fences to reduce overgrazing of certain areas or avoid sensitive soils and watercourses.

Quality of Place Strategy

Cheshire and Warrington is one of the best places in the UK to 'live, work, invest and relax'. We have created a great environment for business to locate and grow, especially in the Agri-Tech sector. We are a sub-region with a track record of outstanding economic performance, coupled with an outstanding array of urban, semi-urban and rural communities and natural resources which can support our agricultural business base.

Reaseheath College can support the LEP, and the Cheshire and Warrington Local Nature Partnership, to review the implications of the Government's new 25-year Environment Plan for the sub-region and our scheme will contribute to developing proposals for establishing a **Natural Capital Plan** for the sub-region.

The LEP has engaged with a number of other LEPs and key stakeholders to develop 'Agri-Tech West' as a vehicle for promoting and supporting Agri-Tech and Agri-Food industries and the LEP will continue to support the development and roll out of Agri-Tech West.

Please provide evidence of how your proposal also aligns with and supports relevant National policies or initiatives.

The context in which Reaseheath operates is informed by, and aligned with, the economic development goals, policies and drivers of Cheshire & Warrington LEP Strategic Economic Plan and other relevant strategies as above.

These are derived and developed from the Government's Industrial Strategy and other initiatives such as the Government's Agri-Tech Strategy as well as sector specific initiatives such as the promoted by the NFU.

National Policies / Initiatives supported by our proposal include:

Industrial Strategy White Paper

Our proposal aligns with, and supports delivery of, the Industrial Strategy as it responds to three of the four 'Grand Challenges'.

AI & Data Economy – by training people to use technology in Agri-Tech to capture and analyse data in such ways to increase productivity in the agricultural sector.

Clean Growth – by making businesses aware of growth opportunities and people aware of cross sectoral career opportunities in sustainability.

Ageing Society – by upskilling the current workforce and encouraging new entrants by making people aware of opportunities e.g. digitalisation and programming of technology to support a traditional sector.

The scheme we are building aligns with four of the five foundations for a transformed national economy:

- **Ideas: The world's most innovative economy** – we can support the Agri-Tech sector by applying research to everyday issues to come up with solutions, using new technology.
- **People: good jobs and greater earning power for all** – we can provide skilled people to enable the growth of higher skilled jobs in the agricultural sector.
- **Business environment: the best place to start and grow a business** – we know Cheshire is a mix of urban and rural communities and can be a great place to start an Agri-Tech business. We want to provide the skills to do this.
- **Places: prosperous communities across the UK** – we can support Cheshire to become more prosperous by introducing new ways of working in simple traditional rural based businesses.

Agri-Tech Strategy 2013

Our proposal aligns with and supports the Agri-Tech Strategy (see Appendix 5).

- We will continue to bring together the science base and food and farming industry to identify and develop opportunities for the Agri-tech sector. We require more investment in our skills and training to keep up with agricultural science and technology. It is rapidly becoming one of the world's fastest growing markets.
- We will support agricultural technology, innovation and sustainability and exploit opportunities to develop new training packages which will demonstrate to businesses how they can increase their productivity; and contribute to our food security and development.
- Agri-Tech is a well-established and important UK sector. Reaseheath College can support the growth of the sector. We have innovative and dynamic farmers, food producers and retailers and we are well positioned to make an impact on markets through improving training in science and farming practices.

To be able to do this we need to continue to improve our infrastructure to support industry, training and development, in applying science and technology to help modern farming and food production.

The rate of productivity growth of UK has slowed. Aspects of the current skills gaps further hinder the UK in developing and using innovation and new technologies.

- We want to address these skills gaps and meet the potential to attract more investment into the Cheshire and open up new markets for Agri-Tech innovation.

The UK Strategy for Agricultural Technologies sets out a range of actions for industry, government and the science base to deliver their vision for the sector. This project supports those actions to:

1. increase support to upskill, develop, adopt and exploit new technologies and processes
2. help exploit the potential of big data and informatics
3. build a stronger skills base through industry-led actions to attract and retain a workforce

4. to use our expertise and that of other sectors to develop and apply technologies from the laboratory to the farm – the main skills gap in the sector
5. improve the translation of research into practice.

The potential rewards are:

- Increased productivity
- Reduced costs
- Sector growth
- New investment
- New jobs
- Tackling the challenges of sustainable intensification
- Food security

We want to support increased investment in equipment and training by Cheshire farmers, across a range of disciplines, some of which are:

- Crop and livestock genomics
- Agri-engineering (sensors, autonomous vehicles, robotics, precision agriculture)
- Research into nutrition, food science and plant breeding
- Environmental sciences
- Clean technologies
- Energy generation from agricultural/horticultural/food wastes

There is high quality and useful research taking place in universities. However, the Agri-Tech strategy states that this is fragmented, and not enough research is commercialised. Our aim is to bridge the gap between lab-based research and commercial exploitation through applied innovation, testing, trialling, validation and demonstration.

Farmers and food producers / manufacturers are risk averse and reluctant to take advantage of the opportunities and productivity improvements that new technology and innovation provides. The Agri-Tech Leadership Council has identified skills needed to support the Agri-Tech research base and Reaseheath is able to support this.

- We will work with the Agri-Tech Catalyst and our partners and suppliers to support development of near-market agricultural innovations, the transfer of technology and new products and sustainable intensification.
- We will encourage more private sector investment, encourage the use of big data and informatics and train people in the use of metrics and performance indicators needed at field, farm and landscape level, to improve productivity and ensure a balance between efficiency and resource impact.

The Agri-Tech sector in Cheshire ranges from large research and development intensive multinational companies, such as Muller, to small innovative SMEs, retailers and family farm enterprises such as Hockenhull.

- We will support the Agri-Tech sector by providing more skilled people to enter the sector; clearer, more prioritised investment in skills; better co-ordination and proliferation of best practice and knowledge transfer.

- We will support the Agri-Skills Forum, LANTRA (the UK sector skills council for agriculture) and the Agriculture and Horticulture Development Board to:

1. improve clarity and communication of available training and advice
2. continually revisit and communicate the skills needs for the sector
3. participate in the design of courses and vocational training.

The specialist equipment and facilities we invest in needs to ensure best practice and opportunities for knowledge transfer are maximised across the food and farming supply chain by increasing coordination and integration of college and on-farm demonstrations and knowledge sharing.

DEFRA 25 Year Environment Plan

The plan includes, inter alia, support to:

- Reduce the risks of harm from environmental hazards
- Use resources from nature more sustainably and efficiently
- Mitigating and adapting to climate change
- Enhancing biosecurity.

In light of the DEFRA report (**Appendix 6**) our scheme will support the improvement of these statistics by demonstrating alternative methods for growing our food. Growing crops in controlled environments negates the bigger problems related to climate change.

Northern Independent Economic Review - Although relatively small in overall GVA and employment terms, Agri-Tech and Food have been identified, through the NIER, as having growth potential for Cheshire. The area has well-developed Agriculture, Dairy and Food Production sectors.

Companies such as Fayrefield Foods (Crewe), Meadow Foods (Chester) and County Milk Products (Wilmslow) are amongst the largest independent dairy companies in the UK. Glambia Cheese based in Northwich is Europe's largest manufacturer of mozzarella cheese and NWF Group, with a turnover of £465m (2015) is a leading national supplier of ruminant animal feed and has grown to be the third largest fuel distributor in the UK. APS Group, based in Alderly Edge, is the UK's leading grower and supplier of tomatoes.

National Farmers Union - FUTURE OF FOOD 2040 (NFU Report)

"Over the next 20 years, the UK farming industry will undergo significant changes in policy, markets and consumer demand, the likes of which have not been seen since the introduction of the 1947 Agriculture Act. It is a time of challenge but also a time of great potential opportunity."

Agriculture and Horticulture Development Board

AHDB supports innovation in agriculture and horticulture particularly through their SmartHort and Farm Excellence Schemes. Reaseheath is a member of AHDB and work closely with bodies, hosting steering and technical committee meetings.

B: Strategic Case

This section should set out in more detail the rationale for making the investment and evidence on the strategic fit of the Scheme.

B1: Current LEP Challenges / Market Failures / Opportunities Addressed by Scheme	<p><i>What are the current problems or market failures to be addressed by your Scheme? (Describe any economic, transport, skills, environmental, social problems or opportunities which will be addressed by the scheme). Please provide quantitative examples of how the problems will be addressed by your Scheme.</i></p> <p>(Limit: 1 side of A4).</p> <p>Appendix 7</p>
B2: Future LEP Challenges / Opportunities Addressed by Scheme	<p><i>Are there any problems you have identified that will occur in the future that your Scheme is intended to address? (e.g. congestion, road safety, access to services and opportunities etc.).</i></p> <p>(limit: 1 side of A4)</p> <p>Appendix 8</p>
B3: Wider Geographic Impact	<p><i>Please provide information on any potential impacts the project may have outside of Cheshire and Warrington, for instance does it involve partnership working with another LEP or organisation. You should indicate those areas that will directly benefit, areas that will indirectly benefit and those areas that will be impacted adversely.</i> Please provide as Map info layer if possible.</p> <p>There will be significant potential impacts the scheme will have outside of Cheshire and Warrington.</p> <p>We already work in partnership with a wide range of Further and Higher Education Institutes, Public Sector Bodies, Local Authorities and Private sector businesses. These are presented in Appendix 2.</p> <p>The specialist equipment and facilities that will be developed at Reaseheath will have the potential to enhance production efficiency across the UK food production supply chain.</p> <p>We do not foresee any areas that will be impacted adversely as the intention is to work and share information with all partners and businesses alike.</p> <p>By having this equipment and the matching capabilities we will be able to access large and small businesses in other sectors, due to the cross-over of the technology and engineering aspects related to the technology. As well as an aging workforce and limited new entrants rural areas are disadvantaged in other ways; the younger generation are being forced to take up careers outside the region. We are supporting the need to expand the Agri-Tech sector and encourage innovation in the areas of robotics, digital technology and data management, in order to keep this talent in the area.</p>

B4: Alternative Options

Please describe what alternative options and funding sources have been considered and why these have been rejected. Include information on the likely implications of the intervention not happening. How have you prioritised the options considered in order to reach an optimal solution?

The following funding options have been considered but are not considered appropriate/suitable for the specialist equipment proposed.

ERDF would be restricted to businesses using the specialist equipment and facilities machinery. Individual learners would not be permitted to use the new facilities.

ESF could support the training element for specific groups but the capital costs of the specialist equipment would not be eligible for support. (hence the link to the Skills for Growth Project.)

Almost all of the £123 million of European Structural Investment Funds allocated to Cheshire and Warrington has been committed or provisionally allocated, delivering a range of projects aimed at supporting SMEs, encouraging innovation, helping the development and adoption of low carbon technologies, and providing support for residents to enhance their skills and work readiness. This project was not at the appropriate stage of development to bid for this funding. The College is a delivery partner in some of these projects, e.g. Business Growth Programme.

Innovate UK – There is a new funding stream “Transforming the Future of Food Production”. At the present time, the funding has not been released and, although the funding will support some capital and revenue costs associated with R&D, it is not expected to support the creation of a specialist training and education facilities.

Loan Funding – the College has made substantial investments in infrastructure and facilities in recent years, with significant support from Cheshire and Warrington LEP. At the present time the capital expenditure proposed for the specialist equipment is not within the College’s current capital expenditure plan.

Implications of not proceeding

If the College does not install and demonstrate robotic milking systems it will continue to milk our entire herd with the existing system. However, the deployment of new robotic systems in the UK will be constrained owing to the limited number of skilled and trained staff available to dairy operators. The potential benefits and advantages of robotic systems can have important benefits for milk yields, production efficiency, product quality, provenance, cow health, environmental performance and costs.

Precision horticulture and hydroponic growing will continue within the existing glass house facility but this provides more limited opportunities to develop skills and competence in a range of growing systems and does not reflect industry developments in advanced controlled protected environments. The College will be less well-placed to support industry in providing training and education in much needed skills development and consequently new business opportunities and diversification will be more limited. A post BREXIT world is likely to include a reduction in the supply of fresh produce and a lack of skills in the design, operation and maintenance of new technology will restrict the UK

	<p>horticulture industry's ability to respond to increased demand for locally grown fresh produce.</p>
<p>B5: Contingency Planning</p>	<p><i>If Local Growth Fund monies are not available for your Scheme, do you have a contingency plan for this Scheme? If your answer is 'no' please comment on the potential impacts of this scheme not being implemented. Include both qualitative and quantitative information on the potential negative impacts likely to occur.</i></p> <p>If LGF money is not available for this scheme the contingency plan is to continue to approach other funders and sources as and when they are identified. The College nor the ESFA have sufficient own capital funds available at the present time to deliver the proposed specialist equipment. The potential impact of this is delay to the implementation of the scheme.</p> <p>The College / LEP sub region will be at a disadvantage in delivering digital and STEM skills and in developing a workforce with practical experience of advanced food production systems.</p> <p>This will have a number of potentially negative impacts:</p> <ol style="list-style-type: none"> 1. The reputation of Reaseheath as one of the UK's leading specialist land-based training and education providers may decline. 2. Other land-based colleges are facing significant issues maintaining student numbers and financial stability. 3. The region's agriculture and horticulture businesses will miss out on opportunities to access high quality infrastructure and facilities 4. The development of a skilled workforce, with digital and STEM capabilities, may need to seek employment away from the rural areas of Cheshire and Warrington. 5. The region may miss out on attracting new market entrants to the rapidly expanding sector of controlled environment food production.

<p>B6: Policy Fit with LTB Policy Objectives</p> <p>(Transport Schemes Only)</p>	<p>For transport schemes please provide a description for how your Scheme will meet the LTB objectives (in no more than 100 words against each objective):</p> <ul style="list-style-type: none">• Reduce congestion and improve the efficiency of the network to support economic growth and regeneration• Reduce the impact of traffic on the environment, reduce carbon emissions and take steps to adapt the transport network to the effects of climate change;• Maintain large transport structures;• Contribute to safe and secure transport and promote types of transport that are beneficial to health;• Improve accessibility to jobs and key services, particularly for disadvantaged communities or groups. <p>The scheme is not a transport scheme.</p>
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C: Economic Case

This section should set out the case for the Scheme in supporting and accelerating the economic growth of Cheshire & Warrington. It is important that the benefits provided by the proposed project take account of issues including deadweight and displacement and as such benefits and outputs should be shown as net.

C1: Job and Wealth Creation and Impact on Skills Across Cheshire & Warrington

Please indicate (where possible) the scale of direct and indirect employment opportunities being created as a result of implementing this Scheme.

The College will recruit 2-4 full-time equivalent members of staff to manage and operate the specialist equipment, and provide training and upskilling courses, workshops etc.

There are estimated to be 700+ production horticulture businesses in the northwest, employing over 6,000 workers. Drivers of change to employment include: labour supply resulting from difficulties in recruiting and an ageing workforce. Although migrant workers have provided a temporary solution to this, BREXIT is likely to reduce the availability of these workers. The sector is moving away from systems providing production subsidies to more market-based approaches. Businesses that are able to engage a skilled workforce to provide fresh produce all year round (as controlled environment systems allow), will become more successful.

The potential employment opportunities within the northwest may be as high as 700 digital and STEM skilled workers over a five-year period.

Installing the specialist equipment and developing the facilities will help Reaseheath College engage with our existing partners and allow us to access large and small businesses in other sectors, due to the cross-over of the technology and engineering aspects related to the technology.

As well as an aging workforce and limited new entrants the rural areas are disadvantaged in other ways; the younger generation are being forced to take up other careers and leaving the area to pursue these.

We are supporting the need to expand the Agri-Tech sector and encourage innovation in order to keep this talent in the area. Not only in traditional farming but in newer areas of robotics, digital technology and data management.

This aligns with the requirement for high level STEM skills (See Appendix 16)

<p>C2: Growth in GVA</p>	<p><i>Please provide an estimate of the impact of your Scheme in growth of Gross Value Added. Indicate how this estimate has been arrived at including details of any impact assessment model that you have used.</i></p> <p>The GVA of the agriculture sector in the north west is estimated to be around £756 million (2017) with a GVA per employee of £30,000 (Cheshire only).</p> <p>Assuming 700 new digital and STEM skilled workers are trained and employed over a five-year period, the efficiency and productivity gains, and food sovereignty, the growth in GVA will be around £4.2million/year across the north west.</p> <p>Data on relevant regional GVA is presented in Appendix 17 and Appendix 18.</p>
<p>C3: Productivity Benefits to Business</p>	<p><i>Please describe how the Scheme will improve travel times, accessibility changes to business, unlocking land for development etc.</i></p> <p>Reaseheath is located just outside Nantwich in Cheshire and within easy access of major road, rail and air transport links.</p> <p>The specialist equipment and facilities will be available to Further and Higher Education students and apprentices undertaking relevant programmes of learning at Reaseheath College as well as external businesses and industry representatives accessing through bespoke training packages, CPD courses and workshops, and virtual and remote learning material.</p> <p>The specialist equipment and facilities will support education and training to upskill/retrain existing practitioners and provide them with access to and familiarity with new technologies.</p> <p>Regional employers and stakeholders within the sector will have the opportunity to access the equipment through knowledge-exchange programmes and, by acting as a host centre, Reaseheath College will provide a platform for farmers and producers to share knowledge and experience of the impact of digital and STEM training and technology on productivity and business development. In addition, some businesses are not yet fully aware of the advantages of new technology and may not have the skills and resources to adapt to new ways of working. Access to the facilities will help support their decision making around future investment.</p>

<p>C4: Value for Money</p>	<p><i>Please provide evidence of how your proposal offers value for money. For a transport scheme this can be a BCR figure. Please state numerically. If no BCR available please provide explanation of when it may be available or other justification (including for non-transport schemes an indication of return on investment or unit costs).</i></p> <p>The College currently has some 550 students/learners following courses (L1-L6, apprenticeships, CPD and short-course training programmes) in the subject areas of agriculture, horticulture and related sectors. The average income per student/learner is £6,500/yr. The income ranges from £200/day for a short course up to £9,200 for a full-time HE student.</p> <p>The specialist equipment and facilities, and the new programmes of learning, bespoke training packages, CPD and workshops, and virtual and remote learning material, are expected to attract an additional 150 students each year, generating additional income of some £350,000/year.</p> <p>The capital cost of the specialist equipment is £996,000. The operating cost is £270,000/year.</p> <p>The indicative return on investment is of the order of 8% which is consistent with the Reaseheath College’s current EBITDA.</p> <p>A detailed financial budget demonstrating procurement, value for money and return on investment will be developed should the bid proposal be approved.</p>
<p>C5: Other Outputs</p>	<p><i>Please quantify any other benefits or outputs arising from the project, stating whether these are direct or indirect. You will need to provide evidence of how you have arrived at your benefit and output figures.</i></p> <p><u>Other direct benefits:</u></p> <p>Environmental Performance Indicators</p> <p>All the work we do must deliver positive, quantified and beneficial impacts to one or more of the following environmental performance indicators:</p> <ul style="list-style-type: none"> • Reductions in greenhouse gas and pollutant emissions • Waste avoidance, minimization, recycling and reuse • Resource efficiency and raw materials use • Soil, Water and Air quality <p>The new equipment and facilities will support Reaseheath’s engagement with industry through, for example, stakeholder and policy workshops, conferences, study tours and knowledge exchange activities, research and continued innovation relevant to the food production and supply chain, and technology development, testing, trialling and validation.</p>

If an Appraisal Summary Table (AST) or other Assessment Summary is available for this Scheme, please append to this Information Form.

D: Financial Case

This section is asking you to set out the financial case for your Scheme.

<p>D1: Scheme Costs</p>	<p><i>Before putting forward a Scheme proposal for potential funding, Scheme promoters should ensure they understand the financial implications of developing the Scheme (including any implications for future resource spend and ongoing costs relating to maintaining and operating the asset), and the need to secure and underwrite any necessary funding outside the Local Growth Fund contribution.</i></p> <p><i>Please provide details of a funding profile (by year) for the Scheme in terms of:</i></p> <ul style="list-style-type: none"> • <i>Total annual cost</i> • <i>Local Growth Fund funding sought;</i> • <i>Promoting Organisation contributions;</i> • <i>Third Party contributions (public and private).</i> <p><i>If applicable please show capital and revenue costs as separate lines. You may attach the funding profile as a separate annex if required.</i></p> <p>A funding profile over five years is being developed. Due to certain cost confirmations being required from suppliers and sub-contractors. These will be available in September 2019.</p> <p>Confirmed and detailed costings will not be available until we launch tenders and place contracts for supply. Most suppliers of new innovative technology require the College to sign a non-disclosure agreement when discussing costs. The technology is so new to the market they will not risk potential competition and procurement has to be handled sensitively and confidentially.</p> <p>Local Growth Fund funding sought: £996,000</p> <p>Total annual running costs for years 1-5: £270,000</p> <p><u>Reaseheath will provide:</u></p> <ul style="list-style-type: none"> • Staff and facilities management = £150,000/yr • Overheads and running costs of new specialist equipment £100,000/yr • IT Infrastructure, additional server centre and licenses £20,000/yr
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<p>D2: Promoting Organisation Contributions</p>	<p><i>Please provide a commentary on your commitment to spend. Scheme promoters must demonstrate that they can commit a minimum contribution fund of at least one third of the total scheme cost and any cost increases incurred after Final Approval will be borne in full by the promoting authority.</i></p> <p>Reaseheath College will provide a significant amount of land, buildings and infrastructure to allow the installation and development of the facilities.</p> <p>Reaseheath College will work to cover any additional costs should the scheme overspend.</p> <p>It is the colleges ethical obligation to support our students and businesses with a variety of funded activities.</p> <p>We are taking steps to lower legacy costs as much as possible by ensuring our procurement procedure is sustainable and fit for purpose.</p> <p>The related infrastructure improvements will be funded through current year resources and all future project proposals will enhance benefits.</p>
<p>D3: Third Party Contributions and Leverage</p>	<p><i>Please provide further details on any third party contributions for your Scheme. This should include evidence to show how any third party contributions are being secured, the level of commitment and when they will become available. Please include contributions of cash and in-kind (e.g. land and buildings). Also provide information on any additional resources that your project will leverage in as a result of the initial investment.</i></p> <p>No third-party contributions are envisaged at this time. However, we will be exploring potential collaborations with equipment and technology providers with a view to developing partnerships that can reduce the initial costs of capital equipment, and of maintenance and service contracts. These partnerships are not confirmed and the College will not be in a position to confirm them until Local Growth Fund Skills Funding from the LEP has been secured.</p>

<p>D4: Affordability and Financial</p>	<p><i>How resilient is your proposal to changes in financial circumstances? What risk allowance has been applied to the project cost (e.g. QRA / Optimism Bias, Contingency)?</i></p> <p><i>How will cost overruns be dealt with? How will these costs be shared with any third party funding partners?</i></p> <p>We will build in a contingency into the planning and development of the scheme. This will be built into the procurement process.</p> <p>Reaseheath will underwrite the scheme.</p> <p>There will be legacy costs / threats and legacy benefits / opportunities. Our proposal will have legacy costs. Any ongoing costs that arise from the proposal, that do not increase revenue, would be classed as a legacy cost.</p> <p>We have assessed the known costs and put in measures to avoid these escalating. These include: regular project management team meetings to go through the budgets and financial accounts and identify any costs that are not in line with the project budget.</p> <p>After financial assessment we do not believe that these costs will have a negative impact on the College's financial accounts.</p> <p>We will manage negative legacy costs including any residual problems - contamination, unforeseen additional costs, difficulties in the scheme life cycle and disappointment in performance - as we do every other project.</p>
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<p>D5: Legacy Benefits</p>	<p><i>Please provide information on any legacy benefits of your Scheme.</i></p> <p><u>LEGACY BENEFITS</u></p> <p>There will be many legacy benefits for the beneficiaries of the proposal:</p> <p><u>Students</u> – future courses will be designed around the new technology and will continue to be updated to keep up with the Agri-Tech sector.</p> <p><u>Businesses (local)</u> – CPD courses and short programmes for local businesses will be developed with their needs in mind and with consultation at every stage now and in the future.</p> <p><u>Public Sector</u> – We will work with other public sector partners to develop projects that can support and use the facilities, including using the equipment to test technology.</p> <p><u>Reaseheath College</u> - The legacy benefits will include cutting future costs of running the College farm. Cost savings can be reinvested into providing newer technology as it becomes available and affordable.</p> <p>There will also be legacy benefits in terms of unexpected outcomes:</p> <p><u>By-products</u> – working with the suppliers of the equipment we will encourage students to look at advancing technology and working on smaller projects with the main suppliers.</p> <p><u>Spin-offs</u> – we will encourage our students to develop an interest in technology in other sectors (e.g. engineering) and encourage people from other sectors to look at developing their skills in the Agri-Tech sector.</p> <p><u>Business Start Up</u> - Students starting their own businesses where they see a market.</p> <p><u>Partnerships</u> - Partnerships between businesses in the Agri-Tech sector, whether that be business partnerships or project partnerships. Partnerships between local business and national companies. E.g. Applications to Innovate UK will be encouraged. Partnerships between Agri-Tech business and those from completely different sectors e.g. Automotive</p> <p>Miscellaneous - The positive legacies / legacy benefits will include:</p> <p><u>Alternative Uses of Buildings</u> - We expect buildings and installations to have secondary uses by smart, viable refurbishment, relocations, up-grades and changes of use.</p> <p><u>Retrofit</u> - We will look at standards in retrofit construction.</p> <p><u>Health and Safety</u> - With new technology comes new health and safety regulations, for which we will develop courses.</p> <p><u>CSR</u> - Extra dimensions to on-going corporate social responsibilities.</p> <p><u>Self-promotion</u> - A feel-good factor and more self-promotion, locally, regionally and nationally. A greater appreciation of our rural economy.</p>
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	<p><u>Stakeholder Opportunities</u> - Hidden, unexpected benefits or legacies for certain unexpecting stakeholders, which are currently unidentifiable.</p> <p><u>Brexit</u> - To be able to manage the challenges the sector faces and for our Agri-Tech sector to continue to be successful even after Brexit.</p> <p>As the Agri-Tech sector is so fast moving we do not want to be searching too much for new legacies when in fact we should be, nurturing and retaining past positive legacies as intended or unintended by-products of recent projects and programmes.</p> <p>See Appendix 1 for other legacy projects.</p>
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aE: Management Case - Delivery

This section is asking you to demonstrate how you intend to assess whether your Scheme is deliverable in the next spending round or at some future date as well as providing assurance that you have the capacity and capability to deliver the project as proposed.

<p>E1: Current Scheme Status</p>	<p><i>Please state scheme status e.g. Is the scheme at the conceptual stage? Has a business case been developed? What if any internal and external approvals does it require? Is the project reliant on external funding? If so, has a bid for funding been submitted/ was it successful?</i></p> <p>The scheme requires the following approvals:</p> <p>The scheme is fully approved by the College’s Executive and reflects the College’s Five Year Strategic Plan.</p> <p>The scheme will require Reaseheath College Board approval prior to any contract being signed.</p> <p>An outline business and financial plan has been drafted but fully costed and detailed plans will be prepared, and signed-off by Reaseheath College’s CFO, should LGF funding be secured.</p> <p>The project is reliant on LGF external funding.</p>
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Please provide a scheme programme and phasing showing key activities and milestones.

Appendix 9 provides a more detailed list of milestones (Project Plan)

Deadline for third invitation to bid for a maximum of five investments between £500,000 and £1,000,000	13 August 2019
LEP appraisal of bids to be completed	Approximately 2 – 4 weeks after deadlines for each invitation to bid
Panel convened to review and prioritise bids	Week commencing 2 or 9 September
Decisions of Employers’ Skills and Education Board and Performance and Investment Committee	18 September 2019 Panel with approvals in principal announced to bidders within a few days of meetings
Further information to be provided if necessary	
Contract investments	September to December 2019
Deadline for Local Growth Fund to be spent	March 2021

E2: Project Plan

January 2020

Milestones reviewed and updated.
Project Plan finalised and Gantt/PERT charts developed.
Procurement planned, approved and promoted.

April 2020

Purchase and installation of machinery starts

May 2020

Machinery testing
Staff training modules

June 2020

Ongoing procurement for ancillary equipment
End of student academic year

August 2020

Businesses selected for initial modules
VLE content prepared and launched

September 2020

Start of new academic year

December 2020

End of term for students. Existing facilities will remain open for businesses to have sole use and specific short courses – should businesses demand due to Xmas and their own closures.

January 2021

Testing and commissioning of specialist equipment and facilities
Official Open / Launch of Overall Agri-Tech facilities
New term for students
First joint partnership project with students supporting businesses

February 2021

Curriculum Review starts for the September 2021 student intake

March 2021

Project Spend completed and final evaluation submitted to the LEP

June 2021

Evaluation of first academic year activity

July – August 2021

Business specific courses – no students on site

	<p>Detailed project plans, Gantt and PERT charts, deliverables and milestones, funding, and programmes of work, will be prepared should LGF funding be secured.</p>
<p>E3: Other Partners Involved in Scheme Delivery</p>	<p><i>Please provide details of the partnership bodies (if any) you plan to work with in the design and delivery of the proposed scheme. This should include a short description of the role and responsibilities of the partnership bodies.</i></p> <p>Whilst in the design and delivery phase of the proposed scheme we will be working closely with the selected suppliers, College staff, Milking Equipment association, the AHDB, the Association of Vertical Farming, industry representatives and key stakeholders.</p> <p><i>Please provide specific information on any private sector partners.</i></p> <p>At the present time no private sector partners are formally engaged with the project.</p>

<p>E4: Operational Issues</p>	<p>Please provide the proposed project management structure:</p> <p>Marcus Clinton – Reaseheath Principal & CEO Marcus will have overall responsibility of the scheme delivery, future developments and capital investments.</p> <p>Graeme Lavery – Chief Financial Officer and Director of Resources Graeme will oversee delivery of the capital project, and its financial aspects along with providing project delivery updates to Reaseheath College Board.</p> <p>Ben Hunt – Head of Premises Ben will lead on the day-to-day delivery of the capital project, on installation and commissioning of capital equipment, and monthly monitoring reports to the Executive.</p> <p>Simon Burgess – Head of Projects, Research and Innovation Simon will lead on the delivery of the scheme which includes: monitoring the project milestones, risk register and reporting to the Executive on project performance.</p> <p>Ed Parrish – Farm Manager Ed will liaise project team members, with suppliers and organisations engaged with the delivery of the robotic milking equipment, and will be responsible for the day-to-day operation and use of the equipment.</p> <p>Sarah Hopkinson – Curriculum Area Manager: Academy of Land and the Environment (Horticulture) Lead project manager of the Controlled Environment Food Production Module Sarah will liaise with liaise project team members, and manage development of the curriculum and strategic engagement with organisations and businesses to develop and deliver relevant skills, training and education in controlled environment food production.</p> <p>Alan Brown – Curriculum Area Manager: Academy of Land and Environment (Agriculture) Alan liaise project team members and will manage development of the curriculum and strategic engagement with organisations and businesses to develop and deliver relevant skills, training and education in robotic milking systems and associated applications.</p> <p>Mark Biddulph – Programme Leader –Academy of Land and Environment (Agriculture) Mark will lead the team of curriculum staff in the detailed development and delivery of skills, training and education.</p>
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<p>E5: Scheme Acceptability</p>	<p><i>Please comment on any community support for this Scheme.</i></p> <p>Not applicable at this stage</p> <p><i>Has public consultation on the Scheme demonstrated its public acceptability?</i></p> <p>Not applicable at this stage</p> <p><i>Is the scheme likely to invoke objections or involves damage to the local environment? For example use of greenbelt land, destruction of heritage of cultural landscape including listed buildings, or development in an area with special landscape designations e.g. SSSI, AONB</i></p> <p>Not applicable at this stage</p>
<p>E6: General Risk to Scheme Delivery</p>	<p><i>Please describe the principal risks (and risk mitigation) associated with your Scheme, including:</i></p> <p>Reaseheath will take full responsibility for scheme risks. A comprehensive risk register has been developed (See Appendix 11 – Risk Register as at the submission date). The risk register will be continuously reviewed. Any risks that are deemed to be those of partner organisations or suppliers will be written into contracts and reviewed regularly.</p> <p>Other risks in addition to the above include overspend, unidentified issues with the building, sickness in the herd, fit out timing overrun, course take up and others. Appropriate mitigation measures will be in place.</p>

E7: Monitoring and Evaluation

Please indicate proposed arrangements for monitoring progress of the project and post project evaluation. The LEP would expect such evaluations to be made publicly available as part of its transparency and accountability agenda.

As part of the College's overall governance procedures the scheme will be approved by Reaseheath College Board and overseen by the Finance and General Purposes Committee.

We will develop a range of performance indicators to monitor progress. These will align with the KPIs currently being developed by the LEP for the network of pledges, the communications hub and the Institute of Technology.

Baselines are currently being established.

SMART targets will be agreed with the LEP in key areas such as:

- Increases in the numbers of young people choosing to study for STEM and digital skills and qualifications and acquiring the relevant qualifications at L2-6
- More young people showing clear progress and application of key employability and citizenship skills
- More curriculum being developed and delivered in collaboration with our groups of employers
- Improvement in overall quality of training and education
- More highly skilled people being trained to meet business need – in particular, more technical skills and more graduates in STEM and digital related subjects
- More coherent packages to meet business needs for education, skills, and learning with clear progression routes
- More in-business training and development including continuous professional development
- Levels of satisfaction of people who are engaged
- Levels of satisfaction of employers, learners and training providers.

Review

Monitoring and evaluation protocols will be agreed with the LEP.

Progress will be reviewed regularly by the project team. Our intention is to complete regular checks associated to the Gantt Chart and detailed work plans.

Monthly project management meetings with the project management team, suppliers and potential partners.

The LEP are welcome to join any meeting and advise where necessary. Quarterly reports will be expected from all involved in the scheme's delivery.

Reports will be available to the Employers Skills and Education Board when requested. Project monitoring reports can be provided to the LEP for relevant Board meetings on request.

Evaluation

- A project evaluation will take the form of a Summative Assessment and a more qualitative completion report.
- Once the first year of students have completed the modules their evaluation / progress will be added.

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| | <ul style="list-style-type: none">- Any person / business using the facility will be expected to complete a relevant evaluation form. |
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F: Commercial Case This section outlines the proposed deal in relation to the preferred option outlined in the economic case.

<p>F1: Products and Services</p>	<p>What goods and or services are being procured? E.g. are you going to procure a building contractor and project management support?</p> <p>Reaseheath must follow public procurement guidelines for the following:</p> <ul style="list-style-type: none"> • Two robotic milking machines and ancillary equipment • Automatic slurry handling robot • Controlled Environment Food Production Units (stand-alone) • Data management system • Ancillary equipment (biosecurity, image sensors, robotic handling etc) • SMART Unmanned Aerial Vehicles • spectrophotometers • portable lux/spectral meter • as chromatograph • portable gas analysers • portable water quality analysers <p>Due to the majority of the equipment being so specialised the management of the installation will be written into the tender documents so that we have one main contact from each procured supplier.</p> <p>Together with a named lead project manager from the college this small team will head up the installation.</p> <p>A quality training programme will also be written into the tender documents.</p> <p>A first-year maintenance contract will also be expected from each supplier.</p>
<p>F2: Procurement</p>	<p>Please state how the project will be procured</p> <p>The main items of capital equipment will be purchased. All equipment will be procured following the College’s procurement policies and regulations</p> <p>See Appendix 12 for Reaseheath College’s procurement strategy See Appendix 13 for Reaseheath College’s financial regulations See Appendix 14 for Reaseheath College’s procurement procedures.</p>
<p>F3: Value for Money</p>	<p>How will you ensure value for money?</p> <p>Value for money will be assessed in line with Reaseheath College’s Value for Money Strategy (Appendix 15)</p> <p>All equipment will be procured following the College’s procurement policies and regulations</p>

<p>G1: Eviden ce</p>	<p><i>Please list here and provide copies of all technical reports documenting the evidence base for the Scheme and the Scheme's performance</i></p> <p>Background documents on Robotic Milking & Dairy Digitalisation: https://researchbriefings.files.parliament.uk/documents/SN02721/SN02721.pdf This briefing paper sets out key statistics and current trends for the UK dairy industry.</p> <p>http://www.framfarmers.co.uk/how-to-get-involved/case-studies/robotic-milking-increases-production</p>
<p>G2: Suppo rting Inform ation</p>	<p>https://www.online-sciences.com/robotics/artificial-intelligence-in-agriculture-advantages-disadvantages-uses/ Describes how Artificial Intelligence can improve agricultural productivity.</p> <p>https://www.investmentbank.barclays.com/our-insights/generation-z.html?cid=paidsearch-textads_google_google_content_gen_z_uk_gen_z_exact_304539267298&gclsrc=aw.ds&&gclid=CjwKCAjwnMTqBRAzEiwAEF3ndsivARicSeK3Ue9T46mu2JOjI8OGJg85Hm-tkY83DwEqciuXPCIQ5RoCQVEQAvD_BwE</p> <p>https://www.online-sciences.com/robotics/applications-of-artificial-intelligence-in-agriculture-agricultural-robots-drones-plantix-app/ Describes the applications of AI in Agriculture.</p> <p>https://www.independent.ie/business/farming/rise-of-the-dairying-robots-34559110.html</p> <p>Background documents on Controlled Environment Food production: https://ahdb.org.uk/news/do-the-costs-for-vertical-farming-stack-up (useful background document outlining how the AHDB sees VF)</p> <p>http://cambridgehok.co.uk/ (Cambridge HOK have supplied our Glass House nutrient management system)</p> <p>https://innovateuk.blog.gov.uk/tag/vertical-farming/ (Innovate UK have supported a number of VF projects)</p> <p>https://vertical-farming.net/</p> <p>https://www.wired.co.uk/article/largest-vertical-farm-in-europe</p> <p>https://www.independent.co.uk/environment/vertical-farming-solution-food-security-hydroponics-aquaponics-urban-agriculture-a8547561.html</p> <p>https://www.growup.org.uk/</p> <p>https://v-farm.co.uk/</p> <p><i>Please include any additional facts which may assist the Local Enterprise Partnership to assess this Scheme against strategic fit and deliverability.</i></p> <p>Letters of support – see Annexes 1-10 Reaseheath College has used the Bentley Model to create an outline map of our Capability Network (see Appendix 20).</p>