

Innovation Action Plan 2022 - 2025

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Introduction

The Innovation Plan will build on key sector strengths and assets in Lancashire and emerging technological markets leveraging the other facets of the Internationalisation Plan.

The plan will communicate a clear, distinctive value proposition around capabilities in Security and Resilience. It will facilitate R&D networks eg through university-business knowledge exchange and testbeds/campuses for crossover technologies and commercialisation.

It will target four complementary Missions:

- Cyber, Digital and Secure Systems - leveraged by the NCF activity, industrial digital & communications technologies
- Advanced Mobility & Manufacturing - aerospace and automotive, electech and new materials
- Energy, Low Carbon & Sustainable Technologies – nuclear, co-related energy vectors & clean tech
- Health analytics and Preventative Systems – value based care, automated diagnostics, targeted therapy

It will build strong clusters around the following strategic goals:

- Staying ahead - leading in current areas of strength and “owning” key fields of growth to keep us at the frontier
- Building new pathways - cross sector collaboration to use our strengths to create new opportunities across our sectors & with other regions
- Broadening our ecosystem - adoption & diffusion to spread good ideas and broaden our innovation capacity across the business base

Lancashire’s Strategic Objectives



Position Lancashire at the forefront of innovation, with cutting-edge and progressive research, leader in the fields of Industry 4.0+, cyber, space and security related industries, energy and low carbon technology, health innovation and advanced mobility. Lancashire’s universities are the most engaged universities in the UK supporting economic growth and collaborating with business and academia.



Build a globally competitive county by increasing trade, foreign investment, R&D and Innovation and visitor numbers, supporting business development and partnership working to deliver local growth ambitions and bring benefits to local businesses and residents



Promote the Lancashire brand internationally to attract investment, business visitors and increase visitor spend in the county, celebrating the strong quality of life offer. Exploit the new conference centre in Blackpool to host international events centred around our strengths in the North West Cyber Corridor, Net Zero technologies and defence.



Establish Lancashire firmly as a place which attracts and retains talent and investment in technology, skills and productivity and as a recognised destination of choice for business and leisure visitors.

Lancashire's Innovation Ambition



Lancashire to be recognised as the UK's leading innovation region in security and resilience eg through NCF with cyber-security and through the CETP with nuclear clean tech.



A 20% increase in UKRI and other innovation related funding which will underpin innovation relationships, clusters and growth (Wellcome Foundation and Bill Gates Foundation etc).



Development of a roadmap for the county that levers knowledge networks, bringing together innovation stakeholders with an international specialisation for each of the four Missions



Innovation partnership initiatives established with two key foreign markets to support FDI, Exports and Equity Investment in our four missions areas, alongside UKRI, our four universities (and their foreign campuses) and key corporates with bases in Lancashire.

Innovation Priority Sectors and Markets

A collaborative approach between stakeholders is key to driving innovation

Lancashire has the capability to serve as a testbed for innovation in a number of different sectors. However for the first three years of the Action Plan it is sensible to concentrate on a few sectors that features heavily in the Innovation Plan such as cyber security, Health and Nuclear.

Likewise, it can be inferred from Innovate UK funding that the commercialisation of research is behind other UK locations. Linking to the capital investment pillar could help attract innovative activity along with utilising the links between AMRC Sheffield and the AMRC NW. Ensuring that the funding landscape is set up for innovative companies, whether they are large companies undertaking R&D or smaller start-ups and SMEs.

Existing assets should be leveraged where possible to build collaborative relationships

Given the links between Lancashire's universities and academic institutions it makes sense to leverage these links. Lancaster University has partnerships with universities in Malaysia and China, as well as campuses in Germany and Ghana. This is not including numerous collaborative projects around the world. UCLan has 15 international partnerships including in the USA and Malaysia. UCLan Cyprus is working to be recognised as a world-class, research-led University, competing successfully and sustainably within a national and international market.

Edge Hill University and the University of Cumbria have engaged in over 70 international research collaborations.

There are also international partnerships to be considered from some of Lancashire's major companies such as BAE Systems, Westinghouse and Rolls Royce.

Therefore, Lancashire will need to prioritise:

- **Core markets** – where there are existing links and relationships as well as tangible and actionable opportunities
- **Emerging markets** – where there may be links as well as potential for growth in collaborative opportunities



Lancaster University has a partnership with Sunway University, Malaysia



UCLan also has a partnership in Malaysia with SEGi University

KEY SECTORS



Advanced Manufacturing



Energy & Low Carbon



Aerospace



Lancashire's advanced manufacturing innovation proposition

Key innovation strengths

- ✓ Large existing manufacturing cluster looking for innovation and upgrades
- ✓ Rapid growth in emerging tech utilising 5G, UAVs, HAPs, Secure Data Comms, Future Mobility and Cleantech
- ✓ AMRC NW, UCLan Engineering Innovation Centre, InfoLab at Lancaster University
- ✓ 5G Factory of the Future and Made Smarter pilot projects
- ✓ The only UK region with four Enterprise Zones and a University EZ

Opportunities

- Opportunities to connect **Innovation assets** within universities and Centres of Excellence in other countries (linked to investment pillar).
- Promote **Made Smarter programme** to show the county is at the cutting edge of industrial digitisation.
- Growth areas in **emerging industrial tech** including CNC, robotics, additive manufacturing, precision engineering, VR and digital twins, low carbon solutions, MedTech and intralogistics.
- Warton Enterprise Zone is a prime site for CAV and other **Future Mobility R&D**



Lancashire's aerospace innovation proposition

Key innovation strengths

- ✓ Leading global players and supply chains in the county
- ✓ Advanced Manufacturing Research Centre (AMRC) NW, (UCLan's) Engineering Innovation Centre, Lancaster Universities new Engineering Dept investment and the Quantum Tech Centre.
- ✓ £3m funding secured in 2020 for commercial drone technologies. Test facilities suited to Space Cluster technology. Crossover technologies in nuclear sector.
- ✓ Electech cluster, positioning, navigation and timing technology
- ✓ Blackpool Enterprise Zone, Warton EZ

Opportunities

- Opportunities to work with leading players in the aerospace sector to develop **low carbon aviation** solutions.
- Participation in **international programmes** such as Tempest Future Combat Air System provides access to global innovation networks.
- Emerging **drone technology** can be applied across multiple sectors such as offshore energy, nuclear, and food production. Surveillance and Comms
- **Warton EZ and Blackpool Airport** as a sandbox/test bed for new mobility solutions.



Lancashire's energy and low carbon innovation proposition

Key innovation strengths

- ✓ Significant strengths in renewables, nuclear, and other energy supply industries which are complemented by a flourishing engineering and technology sector
- ✓ One of the largest concentrations of environmental researchers in Europe at the Lancaster Environment Centre
- ✓ Lancaster University's Centre for Global Eco-Innovation
- ✓ Strong offshore industry that has previously attracted FDI in R&D related activities.
- ✓ The Clean Energy Technology Park
- ✓ Lancashire Centre for Alternative Technologies
- ✓ AMRC Low Carbon Building Demonstrator

Opportunities

- Working across international **Nuclear industry**.
- Government funding for **small modular reactors** in Lancashire.
- Opportunities to establish **infrastructure and demonstrator sites** that enable new technologies to be developed, demonstrated and commercialised.
- **Link with existing companies** such as Rolls-Royce who are aiming to become net-zero by 2030, and enable sectors it sells to in becoming net-zero by 2050.
- Connecting with **Irish Sea Rim super cluster** for energy resources.

KEY FDI SECTORS



Digital
(Cybersecurity)



Food & Drink



Health



Lancashire's digital innovation proposition

Key investment strengths

Cybersecurity

- ✓ Lancaster Cyber Security Centre of Excellence, is an internationally renowned multi-disciplinary hub and testbed for cyber security R&D.
- ✓ Lancaster University is one of only five universities in the UK to gain NCSC recognition as a Gold Academic Centre of Excellence in Cyber Security Education.
- ✓ New National Cyber Force (NCF) HQ is a £5bn investment that demonstrates government confidence in the county's capabilities and talent around cybersecurity.

Emerging Tech

- ✓ Privately funded ElecTech Innovation cluster inspires collaboration across sectors.
- ✓ £100m+ invested in high-tech collaboration hubs across Lancashire

Opportunities

Cybersecurity

- Develop links with clusters internationally who are operating in **offensive cyber activities**.
- Longer term, promote the county as having a niche expertise in **cybersecurity for supply chains and industrial digitisation**.

Emerging tech

- Promote **enterprise zones** as links to specialist innovation ecosystems with additional tax & incentives benefits
- Opportunities for **cross sector collaboration**



Lancashire's food & drink innovation proposition

Key investment strengths

- ✓ Food & Farming Innovation Centre (Myerscough College)
- ✓ Lancaster Environment Centre has internationally leading experience and labs addressing soil and cultivation
- ✓ Engineering Innovation Centre – UCLan
- ✓ Lancashire Drone Innovation Zone and precision farming/sensing
- ✓ The sector links to both advanced manufacturing and low carbon & energy providing opportunities for cross sector working.
- ✓ Links to health and social innovation, health analytics and preventative medicine

Opportunities

- Opportunities to work with **centres of excellence** in agriculture who are working on solutions around low carbon and circular economy farming solutions
- **Precision farming** innovation linked with sensors and drone developments.
- New **food product development and automation**



Lancashire's health innovation proposition

Key investment strengths

- ✓ Health Innovation Campus creates strong collaborative environment between research and practice.
- ✓ Healthtech collaborations between UCLan and NHS Trusts (eg Neuro-Rehabilitation Online).
- ✓ Diverse population and high levels of health risk provide useful populations for clinical trials.
- ✓ Post Covid surge in market for infection prevention and control aligns with local companies innovating in this sector.
- ✓ Crossover with nuclear and medicine, the CETP houses an NNL facility developing isotopes for alpha therapy.

Opportunities

- The local population allows the county to become a testbed for innovations developed elsewhere that lack a **diverse population** for thorough testing.
- Growing trends around MedTech and big data allow for **cross sector collaboration**.
- Developing **reusable/recyclable PPE** is a international opportunity that could involve cutting edge science combined with the county's traditional in textiles, paper and materials manufacturing.
- Nuclear medicine – unique facilities and expertise

Data modelling identified that the leading countries for investment based on R&D expenditure and incentives, patents, graduates, university rankings, and positions on the Global Innovation Index. This was followed by qualitative research that assessed the strengths of the highest ranked markets in sectors and technologies that were most relevant to Lancashire's innovation priorities and had strong internationalisation links to the universities. Core markets are the highest scoring markets in this pillar from the data modelling that have strengths across sectors, while emerging markets scored lower on the data modelling but have specific advantages that can be aligned to Lancashire.

CORE MARKETS



France



Germany



USA

Core markets provide a current and future opportunity. These are some of the most important innovation markets for Lancashire as well as providing exciting collaboration opportunities.

EMERGING MARKETS



Canada



Denmark



Malaysia

Emerging markets provide a more medium to long-term opportunity. There are genuine, material opportunities for innovation and collaboration but they may require more work to access than core markets.



In 2019, Lancaster University opened a campus in Leipzig, Germany

In the three year action plan the short term markets will be the focus of activity without losing sight of the medium to long term markets. Further work will be done to fine tune which markets each sector will target but primarily we see strong innovation opportunities with North America leveraging knowledge and corporate linkages aligned with close security arrangements.

SHORT TERM



Germany



Malaysia



USA

YEAR 1 →

MEDIUM TO LONG TERM



Canada



France



Denmark

YEAR 2 →

Focus Markets



The USA is a global leader in most sectors of relevance to Lancashire. The new US Infrastructure Bill prioritises clean energy and investing in demonstration projects and research hubs for next generation technologies like advanced nuclear reactors, carbon capture, and clean hydrogen. US stakeholders are currently working with UK on nuclear research.



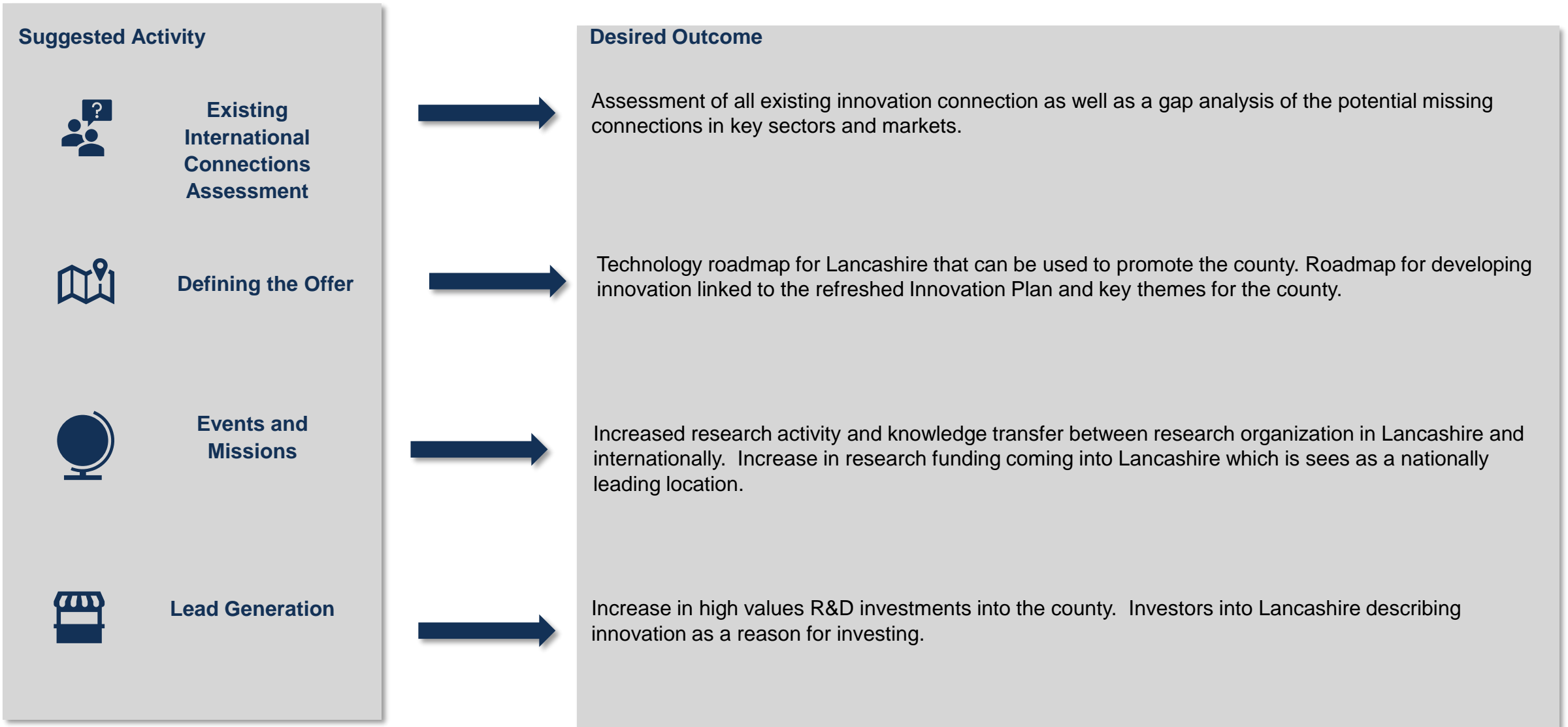
Germany is taking an increasingly important position in the European aeronautical R&D sector. As a global manufacturing hub, Germany is home to major players in Industry 4.0. Strategic partnership opportunities exist with Lancaster University's Leipzig campus.



Malaysia is emerging as an innovative power in Asia. Lancaster University has a strategic partnership with Sunway University, with joint research initiative on future cities. Lancashire has a relationship with leading health investor iGene who have already invested in the county.

Lancashire's Innovation Action Plan

This Action Plan sets out 4 suggested activities to enable to achievement of Lancashire's strategic objectives. These enablers and activities can be implemented by stakeholders across the county and aim at fostering greater cooperation and collaboration between the broad range of supporting organisations.



Leveraging Relationships

Description

- Build on work done as part of this strategy to fully assess existing international connections in terms of innovation.
- This goes beyond defining the offer to understand not only the existing international connections between academia, businesses and other industry stakeholders, but their appetite and capacity for further or new international, innovative collaboration.

Desired Outcomes

Assessment of all existing innovation connections as well as a gap analysis of the potential missing connections in key sectors and markets

Existing Relationships		
Cyber	Health	Nuclear
<ul style="list-style-type: none"> • Review all international collaborations with a cyber security theme. • Create a map of how many international students are studying any cyber security related courses and where in the world they are from. • Create a map of alumni that have graduated from cyber security related courses, where they are working and in what fields they are working. • Assess if there are any gaps in existing connections in cyber security fields. • Review gaps to see if there are other connections that can be leveraged to engage in further international cyber security collaborations. 	<ul style="list-style-type: none"> • Review all international collaborations with a health theme. • Create a map of how many international students are studying any health innovation related courses and where in the world they are from. • Create a map of alumni that have graduated from health innovation related courses, where they are working and in what fields they are working. • Assess if there are any gaps in existing connections in health innovation fields. • Review gaps to see if there are other connections that can be leveraged to engage in further international health innovation collaborations. 	<ul style="list-style-type: none"> • Review all international collaborations with a nuclear theme. • Create a map of how many international students are studying any nuclear related courses and where in the world they are from. • Create a map of alumni that have graduated from nuclear related courses, where they are working and in what fields they are working. • Assess if there are any gaps in existing connections in nuclear fields. • Review gaps to see if there are other connections that can be leveraged to engage in further international nuclear collaborations.

Workstream 1 - Leveraging Relationships



Activities are plotted against a three year timeline to help with prioritisation. Although the strategic outcomes are targeting a 10-Year strategy, activities will need to be reviewed and refreshed throughout to ensure relevance and keep material up to date.

Months	0-6	6-12	12-18	18-24	24-30	30-36
Activities	Map international collaborations		Map students, research networks and alumni across locations and fields of work		Leverage relationships	

Description	Build on work done as part of this strategy to fully assess existing international connections in terms of innovation. This goes beyond defining the offer to understand not only the existing international connections between academia, business and other industry stakeholders but their appetite and capacity for further or new international innovate collaboration.		
Ease of implementation	Will need resource to help mapping, could be facilitated through Masters placement or project alongside university.		
Proposed approach and activities	<p>This work will involve the following activities:</p> <ol style="list-style-type: none"> 1. Map collaborations in cyber security, health innovation and nuclear. 2. Establish Details of past and current specific fields of research in cyber, health innovation and nuclear 3. Map where international students are coming from to study cyber, health innovation and nuclear. 4. Map where and in which fields of cyber security, health innovation and nuclear alumni are working in. 5. Assess geographical gaps in cyber security, health innovation and nuclear. 6. Create a list of target markets for cyber security, health innovation and nuclear. 7. Create campaign to leverage stakeholder relationships to broker new collaborative relationships. 		
Resourcing and Budgetary Considerations	Number of FTE required 0.25	Number of months required 8	Total Cost of Workstream £20,000

Defining the Offer

Description

- Work with all stakeholders in the Lancashire innovation ecosystem to identify assets and strategic priorities.
- Map assets and priorities against themes such as cyber security, health innovation and low carbon/nuclear technologies.
- Link opportunities to achieving goals in other pillars, for example, supporting inward investment or creating a trade corridor.
- Develop arguments to support lobbying with government to attract more R&D funding to Lancashire.

Desired Outcomes

Technology roadmap for Lancashire that can be used to promote the county.

Roadmap for developing innovation linked to the refreshed Innovation Plan and key themes for the county.

Existing Activity		
Cyber security	Health	Nuclear
<ul style="list-style-type: none"> • Identify all cyber security asses, • Identify all cyber security innovation priorities.. • Map assets and priorities against government policy such as the Government Cyber Security Strategy 2022- 2030, UK and Innovation Strategy 2021. • Create proposition for cyber security linking to other pillars such as Foreign Direct Investment for companies to use the assets and talent available, capital investment for investment into schemes and the visitor economy for business visitors who can stay and spend in the county when visiting innovation assets or universities. • Create technology roadmap that can be used to support innovation in the county. • Create evidence and material re cyber security to support attracting R&D funding into Lancashire. 	<ul style="list-style-type: none"> • Identify all health innovation asses, • Identify all health innovation priorities. • Map assets and priorities against government policy such as the UK Innovation Strategy 2021 and Industrial Strategy re the ageing population. • Create proposition for health innovation linking to other pillars such as Foreign Direct Investment for companies to use the assets and talent available, capital investment for investment into schemes and the visitor economy for business visitors who can stay and spend in the county when visiting innovation assets or universities. • Create technology roadmap that can be used to support innovation in the county. • Create evidence and material for health innovation to support attracting R&D funding into Lancashire. 	<ul style="list-style-type: none"> • Identify all nuclear asses, • Identify all nuclear innovation priorities. • Map assets and priorities against government policy such as the 10 point plan for a Green Industrial Revolution, British Energy Strategy 2022 and UK Innovation Strategy 2021. • Create proposition for nuclear linking to other pillars such as Foreign Direct Investment for companies to use the assets and talent available, capital investment for investment into schemes and the visitor economy for business visitors who can stay and spend in the county when visiting innovation assets or universities. • Create technology roadmap that can be used to support innovation in the county. • Create evidence and material for nuclear to support attracting R&D funding into Lancashire.

Workstream 2 - Defining the Offer

Activities are plotted against a three year timeline to help with prioritisation. Although the strategic outcomes are targeting a 10-Year strategy, activities will need to be reviewed and refreshed throughout to ensure relevance and keep material up to date.

Months	0-6	6-12	12-18	18-24	24-30	30-36
Activities	Identify assets and innovation priorities		Map priorities against government policies		Create Innovation Internationalisation Roadmap	
		Review		Review		
Description	<p>Work with all stakeholders in the Lancashire innovation ecosystem to identify assets and strategic priorities. Map assets and priorities against themes such as cyber security, health innovation and nuclear.. Link opportunities to achieving goals in other pillars, for example supporting inward investment or creating a trade corridor. Develop arguments to support lobbying with government to attract more R&D funding to Lancashire.</p>					
Ease of implementation	Resource implications, needs to identify funds and capacity, degree of support from DiT and University joint placement.					
Proposed approach and activities	<p>This work will involve the following activities:</p> <ol style="list-style-type: none"> 1. Identify all cyber security, health innovation and nuclear assets. 2. Identify and map all cyber security, health innovation and nuclear assets 3. Map priorities against government policy such as Innovation Policy, Industrial Strategy and Energy Strategy 4. Create propositions for cyber security, health innovation and nuclear 5. Create technology roadmap 6. Create evidence and material to support innovation in the county 					
Resourcing and Budgetary Considerations	Number of FTE required 0.75		Number of months required 12		Total Cost of Workstream £ 60,000	

Events and Missions

Description

- Outbound missions to develop innovation partnerships with new markets around education and research.
- Conferences and events in Lancashire to increase attention of the county to local, national and international funders, research organisations and companies.

Desired Outcomes

Increased research activity and knowledge transfer between research organisations in Lancashire and internationally.

Increase in research funding coming into Lancashire which is seen as a nationally leading location.

Existing Activity		
Cyber security	Health	Nuclear
<ul style="list-style-type: none"> • Use relationship development and cyber security proposition to target specific market to create collaborations and attract funding into Lancashire. • Awareness of inward investment and export missions that are going to target markets and join missions to create new collaborations.. • Use missions to attract international students. • Identify and use industry champions to promote academic work in field of cyber security. • Where Lancashire universities are leading the research consider conference to publicise outcomes and benefits for Lancashire, UK and international businesses and academics. 	<ul style="list-style-type: none"> • Use relationship development and health innovation proposition to target specific markets to create collaborations and attract funding into Lancashire. • Awareness of inward investment and export missions that are going to target markets and join missions to create new collaborations.. • Use missions to attract international students. • Identify and use industry champions to promote academic work in field of health innovation. • Where Lancashire universities are leading the research consider conference to publicise outcomes and benefits for Lancashire, UK and international businesses and academics. 	<ul style="list-style-type: none"> • Use relationship development and nuclear proposition to target specific markets to create collaborations and attract funding into Lancashire. • Awareness of inward investment and export missions that are going to target markets and join missions to create new collaborations. • Use missions to attract international students. • Identify and use industry champions to promote academic work in field of nuclear. • Where Lancashire universities are leading the research consider conference to publicise outcomes and benefits for Lancashire, UK and international businesses and academics.

Workstream 3 - Events and Missions

Activities are plotted against a three year timeline to help with prioritisation. Although the strategic outcomes are targeting a 10-Year strategy, activities will need to be reviewed and refreshed throughout to ensure relevance and keep material up to date.

Months	0-6	6-12	12-18	18-24	24-30	30-36
Activities	Identify institutions to target re innovation		Join missions and events in target markets		Curate conferences to promote innovation	
		Review		Review		

Description	Outbound missions to develop innovation partnerships with new markets around education and research. Conferences and events in Lancashire to increase attention of the universities in the county to local, national and international funders, research organization and companies.		
Ease of implementation	Higher level placement might facilitate the capacity and resource.		
Proposed approach and activities	<p>This work will involve the following activities:</p> <ol style="list-style-type: none"> 1. Build on workstreams 1 and 2 to create a list of events and missions to engage with. 2. Use missions and events to attract students to courses in target subject areas. 3. Identify and use industry champions including alumni from universities to promote research and benefit to organisations. 4. Curate conferences on subject areas of collaborative international work and promote to Lancashire, national and international companies and academics. 5. Work with the Visitor Economy pillar to ensure a great conference and where extra time could be used to enjoy the benefits of Lancashire. 		
Resourcing and Budgetary Considerations	Number of FTE required 0.5	Number of months required 8	Total Cost of Workstream £30,000

Targeted Lead Generation

Description

- Build a target list of companies in priority sectors and markets with a high propensity to invest.
- Targeted campaign to attract not just companies related to innovation but also students, talent, businesses and research organisation to Lancashire.
- Identify and attract internationally mobile research projects.

Desired Outcomes

Increase in high value R&D investments into Lancashire. Investors into Lancashire describing innovation as a reason for investing.

Existing Activity

Cyber security

- Building on workstream 3 where target markets have been identified, develop a list of universities and research organisations that have strengths in cyber security.
- Interrogate DiT's pipeline of projects to see if there are any projects that are looking for research and development capabilities in cyber security.
- Engage with DiT project managers and FDI pillar to create bespoke proposition for the client.
- Develop cyber security projects which would be of interest to universities and research organisations on target list.
- Develop a campaign to target those universities and research organisations.

Health

- Building on workstream 3 where target markets have been identified, develop a list of universities and research organisations that have strengths in health innovation.
- Interrogate DiT's pipeline of projects to see if there are any projects that are looking for research and development capabilities in health innovation.
- Engage with DiT project managers and FDI pillar to create bespoke proposition for the client.
- Develop health innovation projects which would be of interest to universities and research organisations on target list.
- Develop a campaign to target those universities and research organisations.

Nuclear

- Building on workstream 3 where target markets have been identified, develop a list of universities and research organisations that have strengths nuclear.
- Interrogate DiT's pipeline of projects to see if there are any projects that are looking for research and development capabilities in nuclear.
- Engage with DiT project managers and FDI pillar to create bespoke proposition for the client.
- Develop nuclear projects which would be of interest to universities and research organisations on target list.
- Develop a campaign to target those universities and research organisations.

Workstream 4 - Targeted Lead Generation



Activities are plotted against a three year timeline to help with prioritisation. Although the strategic outcomes are targeting a 10-Year strategy, activities will need to be reviewed and refreshed throughout to ensure relevance and keep material up to date.

Months	0-6	6-12	12-18	18-24	24-30	30-36
Activities	Create target list of universities and research organisations		Interrogate DiT Pipeline for research projects		Campaign to target internationally mobile research projects	
Description	<p>Build a target list of companies and research organisations aligned with the priorities from the innovation mapping. Targeted campaign to attract not just companies related to innovation but also students, talent, businesses and research organisations to Lancashire. Identify and attract internationally mobile research projects.</p>					
Ease of implementation						
Proposed approach and activities	<p>This work will involve the following activities:</p> <ol style="list-style-type: none"> 1. Build a target list of universities and research organisations to target for cyber security, health innovation and nuclear innovation projects 2. Interrogate DiT's pipeline of projects to see there are any cyber security, health innovation or nuclear projects that need R&D 3. Engage with DiT project Managers, FDI pillar to create bespoke proposition 4. Develop cyber security, health innovation and nuclear projects to attract investment from international universities and research organisations. 5. Campaign to target internationally mobile research projects in cyber security, health innovation and nuclear. 					
Resourcing and Budgetary Considerations	Number of FTE required 0.25	Number of months required 8	Total Cost of Workstream £40,000			

Workstream Activities 2022 - 2025



Activities are plotted against a three year timeline to help with prioritisation. Although the strategic outcomes are targeting a 10-Year strategy, activities will need to be reviewed and refreshed throughout to ensure relevance and keep material up to date.

Months	0-6	6-12	12-18	18-24	24-30	30-36
Activities	Map international collaborations		Map students and alumni across locations and fields of work		Leverage relationships	
	Identify assets and innovation priorities		Map priorities against government policies		Create Innovation Roadmap	
	Identify institutions to target re innovation		Join missions and events in target markets		Curate conferences to promote innovation	
	Create target list of universities and research organisations		Interrogate DiT Pipeline for research projects		Campaign to target internationally mobile research projects	
			Review progress		Review progress and refresh	

Summary

Workstream	Resource	Cost	Outcomes
1.Leveraging Existing International Relationships	0.25 FTE	£20,000	Map activities, gaps and targets
2. Define the Offer	0.75 FTE	£60,000	Synthesise opportunities and create propositions
3. Events and Missions	0.5 FTE	£30,000	Successful well attended events across all four priority Missions
4. Lead Generation	0.5 FTE	£40,000	Leads generated in all four priority Missions
Total	2	£150,000	

A Universities manager works across all four universities in Lancashire but their role is not specifically in relation to internationalisation. However they could contribute by keeping progress of the action plan on track.

The resource needed for this action plan may come from placements form the universities cohort of students both undergraduate and post graduate lasting from between eight and twelve months, The placements will need supervision and the universities will ned to take this into account when allocation resources to these activities,. However defining the offer and lead generation will need external resource.