



STEPHANIE Action Plan for North East England

Phase 2: January 2020 – December 2021

Interreg Europe: Space Technology with Photonics for
Market and Societal Challenges (STEPHANIE)

Prepared for Business Durham (Durham County Council) by Urban Foresight



STEPHANIE Action Plan for County Durham

Phase 2: January 2020 – December 2021

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Part I – General Information

Project	STEPHANIE
Partner organisation	Durham County Council – Business Durham
Other partner organisations involved (if relevant)	Urban Foresight (subcontracted to complete stakeholder engagement and Action Plan development)
Country	England, United Kingdom
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Introduction

This Action Plan has been developed as a result of Durham County Council’s role as one of eight EU regional partners in the Interreg Europe funded STEPHANIE project. STEPHANIE (Space Technology with Photonics for Market and Societal Challenges) has been structured in two phases. The first phase, from January 2017 to December 2019, has seen Business Durham – County Durham’s economic development organisation – exchange Good Practices in the influencing of research and innovation levels in this sector with other partner regions, create and consult a quadruple helix stakeholder network in the North East region, and collect market intelligence on the funding schemes available to businesses and researchers in the sector. These exploratory and reflective activities culminated in the development of this Action Plan.

The second phase, from January 2020 to December 2021, will see the Action Plan implemented across the North East region. Through this, the distribution of ERDF funding to research & innovation partnerships between SMEs and research bodies in the region should be successfully influenced towards spending in the Space Technology enabled by Photonics and its applications.

Through the market intelligence and stakeholder engagement activities, Durham’s STEPHANIE team have confirmed that the region has existing capabilities in the Space Technology using Photonics sector, but that the visibility of this sector can be improved and there is an opportunity to engage a wider range of stakeholders. The environmental conditions for growth in this area are there – the UK Government has set a target to support its businesses in capturing 10% of the global space market by 2030, and in the North East, research capabilities and funding sources are abundant. The research undertaken by Business Durham to inform the development of the Regional Vision required for STEPHANIE identified 52 active business support and research entities in the region and 49 different sources of funding for business development activities.

The Good Practices that will be implemented in the North East were chosen after consultation with key stakeholders in the quadruple helix. A series of 6 exploratory workshops and 8 face-to-face or phone interviews with individual sector experts have helped to shape the actions needed to successfully introduce

viable Good Practices in influencing research and innovation in the region's Space Technology with Photonics development and applications sectors.

Part II – Policy context

Name of the policy instrument addressed:

This Action Plan seeks to influence the following policy instruments:

1. England European Structural Investment Fund (ESIF) Operational Programme 2014-2020 / ERDF Priority Axis 1: Promoting Research and Innovation (North East) Priority 1b

Due to the changes anticipated in the UK's investments due to Brexit and the December 2019 General Election, this Action Plan also considers

2. Local Industrial Strategy (for North East England)
3. UK Shared Prosperity Fund

1. England European Structural Investment Fund (ESIF) Operational Programme 2014-2020 / ERDF Priority Axis 1: Promoting Research and Innovation (North East) Priority 1b

Space is a multi-disciplinary sector that requires highly innovative solutions to achieve better performance in instrumentations to deliver improved outputs. The developments in space and photonics are helping to improve applications to solve many challenges that are still relatively new to non-space sectors; these new end users and data analysts need innovation support to better utilise these outputs.

ERDF PA1b focuses on developing links and synergies between enterprises, research and development centres and the Higher Education sector, in particular, promoting investment in product and service development, technology transfer, social innovation, eco-innovation, public service applications, demand stimulation, networking, clusters and open innovation through smart specialisation. It also supports technological and applied research, pilot lines, early product validation actions, advance manufacturing capabilities and first production, in particular in key enabling technologies (such as photonics) and diffusion of general-purpose technologies. The policy also seeks to increase investment in research and innovation by SMEs, in sectors and technologies identified through smart specialisation.

The Policy Instrument is expected to produce an increase in the number of SMEs engaged in knowledge exchange, collaborative and contract research and innovation with research institutions, public institutions or large enterprises to help them bring new products and processes to market. The Action Plan seeks to improve the Policy Instrument through applying practical examples of how this can work in reality, and in an innovative sector such as space technology and photonics. It also aims to strengthen the socio/eco innovation target of products.

The UK manages its ESIF funds through National Operational Programmes. The UK Government's Ministry for Housing, Communities and Local Government (MHCLG) oversees the ERDF element of the ESIF programme. It awards funding allocations to each Local Enterprise Partnership (LEP) area which has a strategy that sets out how it proposes to use that funding. County Durham is covered by the North East Local Enterprise Partnership (NE-LEP) ESIF Strategy. This strategy covers two categories of regions;

Northumberland and Tyne and Wear are classed as More Developed, while Durham is Transition. This means that Durham has a ring-fenced funding allocation with 60% intervention rate, requiring a minimum of 40% match.

ESIF is governed by a National Programme Monitoring Committee (PMC), with local advice provided by LEP-level Sub Committees. This means that MHCLG are ultimately responsible for programme management and monitoring, including the issuing of Calls and project selection.

STEPHANIE is led by Durham County Council, which has representation on the NE-LEP ESIF Sub-Committee through the North East Combined Authority. The County Durham Economic Partnership (CDEP) also sit on this committee and help us influence the policy instrument. The County Durham Economic Partnership has an EU Funding Group whose aim is to help develop and oversee projects seeking ESIF support from County Durham. Durham's STEPHANIE Project Manager is an active member of this group and leads its Innovation workstream.

The STEPHANIE project team has developed an excellent relationship with MHCLG who have been engaged in the development of this Action Plan. They advised us that in June 2019, the County Durham Transition Region had a notional allocation of £18,645,527 for PA1, of which £12,495,909 had been committed; £2,279,779 was in the pipeline; and £3,869,839 was remaining.

On 28th June 2019, the 9th Call for PA1 was issued, with a total available budget of £10.8m to cover both the More Developed and Transition areas. The deadline for submissions to this Call was 30th September 2019. After this time, it is expected that Calls will be issued nationally through an ERDF Reserve Fund, a change introduced in response to Brexit.

The ERDF Reserve Fund will be established to provide a mechanism to ensure the UK commits all remaining ERDF funding. MHCLG is now developing how the Reserve Fund will work in discussion with partners, including its potential priorities. It will be delivered largely through existing arrangements which MHCLG will explain as details are finalised. The STEPHANIE project is seeking to influence this through its MHCLG contacts and the North East LEP ESIF Sub-Committee.

The value of the Fund will be determined by the outcome of the June calls which closed at the end of September 2019. Currency fluctuations that inform the available size of the Fund will also be factored in. Reserve Fund calls are anticipated to be published early 2020.

Further information on timings and mechanisms for distributing the funds have not been shared, as they are subject to the UK's changing political conditions – primarily the UK General Election on 12th December 2019.

2. Local Industrial Strategy (for North East England)

UK Government has invited Local Enterprise Partnerships and Mayoral Combined Authorities to produce Local Industrial Strategies that will align and support the UK Industrial Strategy. The Local Industrial Strategies aim to promote the coordination of local economic policy and national funding streams and establish new ways of working between national and local government, and the public and private sectors in the UK. They

are designed to be long-term (to 2030) and, based on strong evidence, should set out clearly defined priorities for how cities, towns and rural areas will maximise their contribution to UK productivity. They should allow places to make the most of their distinctive strengths.

Subject to Local Industrial Strategies being agreed by government, they will help inform local choices, prioritise local action and, where appropriate, help to inform decisions at the national level. They will also provide strategic overview which will inform Local Enterprise Partnerships' approach to any future local growth funding deployed through them. For example, it is expected that the Local Industrial Strategies will help local areas decide on their approach to maximising the long-term impact of the UK Shared Prosperity Fund once details of its operation and priorities have been announced.

The NE-LEP is leading on producing the LIS for North East England which is due to be published by March 2020. Key STEPHANIE project partners have been involved in various consultation exercises arranged by the NE-LEP to inform the region's LIS. The NE-LEP's Innovation Team has also been actively involved in the STEPHANIE project, including participating in a staff exchange to Florence to learn more about their good practices, particularly their Smart Specialisation approach.

3. UK Shared Prosperity Fund (SPF)

In 2018 the UK Government committed to creating a UK Shared Prosperity Fund (UKSPF), a domestic programme of investment intended to replace the ESIF programme when the UK leaves the EU. The objective of the UKSPF is to tackle inequalities between communities by raising productivity, especially in those parts of the country whose economies are furthest behind.

It is expected that the UKSPF will achieve this objective by strengthening the foundations of productivity as set out in the UK's modern Industrial Strategy to support people to benefit from economic prosperity. The UKSPF is expected to be a simplified, integrated fund that will ensure that investments are targeted effectively to align with the challenges faced by places across the country and supported by strong evidence about what works at the local level. It is expected to provide a national framework in England that works for local priorities as identified in Local Industrial Strategies.

At present there is minimal public detail on the UKSPF on key issues such as:

- Fund priorities and objectives;
- the amount of money to be allocated;
- the method of allocating it between the regions, e.g. will it be based on need and how will this be defined?);
- the funding model to be used, e.g. whether pre-allocating an amount for a region or inviting competitive bids from across the UK;
- the planning period duration and how this could conflict with domestic spending priorities;
- who will administer the funds, e.g. controlled from Westminster or by the devolved administrations, and the degree to which local authorities will be involved;

It is hoped that further detail, and perhaps opportunities to influence the new fund, will start to emerge after the results of the UK election on 12th December 2019 are known. Key STEPHANIE stakeholders in the UK will seek to work with MHCLG to help inform the new fund and ensure that it offers potential to appropriately support space technology themed projects when it is launched.

The policy instruments that the Action Plan aims to impact are:

<p>Investment for Growth and Jobs programme</p>	<p>1. England European Structural Investment Fund (ESIF) Operational Programme 2014-2020 / ERDF Priority Axis 1: Promoting Research and Innovation (North East) Priority 1b</p>
<p>Other regional development policy instrument</p>	<p>2. Local Industrial Strategy (LIS) for North East England See Action 2, Box 1</p> <p>3. UK Shared Prosperity Fund See Action 1, Box 6</p>

Part III – Details of the actions envisaged

ACTION 1

TITLE: *Establishing a Space Technology Cluster in the North East*

1. Overall Topic and Description of the proposed Policy Improvement

(please provide a brief summary of the proposed Policy Improvement that this Action refers to).

<p>Overall Topic</p>	<p>To develop a cluster which includes a space photonics focus, using a quadruple helix approach to develop a trusting community of technology providers and application users.</p>
<p>Specific Description</p>	<p>This Action, inspired and influenced by STEPHANIE project Good Practices from Brittany and Walloon, and facilitated by the North East Satellite Applications Centre of Excellence (NESACOE), will seek to influence the initiation of research activities into Space Technology using Photonics by enabling partnerships between SMEs and research organisations (ERDF indicator C26).</p> <p>NESACOE is an established economic development function within the remit of Business Durham, funded by the UK Space Agency and the Satellite Applications Catapult to stimulate opportunities in the space sector in the region.</p> <p>NESACOE will conduct this Action by building upon the work begun in Phase 1 to bring together relevant organisations. NESACOE will share the market knowledge developed through STEPHANIE with a series of technology clusters, promoting their activities together through STEPHANIE, upgrading their understanding of the value of this sector and initiating a region-wide focus on it, and influencing the direction of existing ERDF PA1 funds towards it.</p> <p>Regional innovation support for the sector are being developed around ERDF PA1 projects owned or established by a group of influential business support and research organisations. Their influence and expertise in the local area on the distribution of funding and support of technology sectors is highly valuable. By engaging them with STEPHANIE, in some cases we have introduced the space sector as a new sector of interest for them, where before they were unaware of its applications or of its value.</p> <p>Throughout Phase 2, the Delivery Partners who manage their projects will be in contact with NESACOE and the other Delivery Partners. The NESACOE will support them in communicating with the space sector, in holding any events or engagement activities</p>

	<p>around the sector, and in helping them to identify opportunities for collaboration.</p> <p>The unique position that NESACOE has in representing the full quadruple helix within the North East and beyond will be incredibly valuable in tying the community in with the space technology with photonics ecosystem. By completing this role, the trust and sense of community that STEPHANIE has established through its Phase 1 Stakeholder Engagement activities will be carried forward.</p> <p>Four existing programmes (IIIP, NE-BIC, SAM and the Water Hub) have agreed after engaging with STEPHANIE in Phase 1 to incorporate or adapt the Good Practices and focus some of their support efforts on space technology that uses photonics. For example, the Water Hub will work with NESACOE to deliver an engagement event in January 2020 for the region’s technology solutions providers on the value of space technology.</p> <p>One other project – D-FIB – has applied for funding in the latest round of ERDF PA1 applications, having designed some of its intended services that it will provide and its target SME sectors around STEPHANIE and its Good Practices.</p> <p>D-FIB is also introducing Innovation Voucher system as part of their SME support offer, which was also designed to replicate a STEPHANIE Good Practice and is presented in Action 3.</p>
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<p>2. Need addressed</p> <p><i>(please provide a brief summary of the NEED that you wish to address with this policy improvement)</i></p>	
<p>During the STEPHANIE Phase 1 activities, we met with nearly 70 different stakeholders in dedicated Space & Photonics Innovation Actors (SPIA) workshops, conducted a survey, completed a phase of research and mapping, produce a report on the “Capabilities and Competencies” of the sector, and attended workshops and networking events to represent STEPHANIE. Before this activity, the needs of both the Space & Photonics Innovation Actors in the region had never been systematically gathered, analysed and distributed. This made this research process a key activity in the development of the STEPHANIE actions.</p> <p>Our research identified a total of 236 organisations that contribute to the Space Technology with Photonics business environment in the North East region. These activities also made us aware of the imbalance in the quadruple helix and the visibility of space technology that uses photonics as an applicable solution within the North East region.</p> <p>As such, Durham looked for STEPHANIE partner Good Practices to emulate in order to establish communication channels between relevant players in the quadruple helix, and to foster trusting, productive relationships within the helix.</p> <p>This action will address these two needs:</p> <ol style="list-style-type: none"> 1. The visibility of the sector Space technology that uses photonics enables a wide-array of communications, data and 	

mapping functions, many of which are primarily classified as functions of other sectors. For example, aerospace or data processing. Further, because of the highly technical nature of research in this area, many activities are not promoted or are made inaccessible to sectoral players due to Intellectual Property protections.

2. The imbalanced quadruple helix

Prior to STEPHANIE’s involvement in researching the quadruple helix and organising shared exploratory workshops to those active in it, little had been done to link the Space sector and Photonics sector in the region together – despite the significant overlap and, indeed, dependencies on each other. In completing this research, it was discovered that the quadruple helix was disproportional representative of industry bodies and that the application users (i.e. civil society) had relatively negligible representation or interactions with the solution providers.

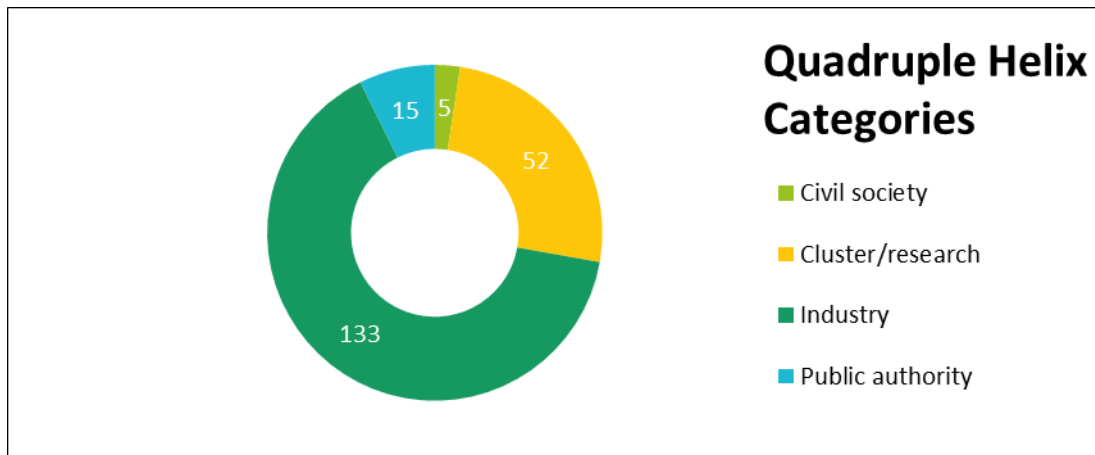


Figure 1 The count of quadruple helix players in the Space Technology with Photonics sector, identified in Business Durham's research activities for STEPHANIE. (June - July 2019)

The technology clustering action will help to address these issues by improving the visibility of the sector within existing PA1 owners in the region – encouraging them to focus on Space Technology with Photonics as a recipient of innovation and research funding and, as a part of this, to host events for the quadruple helix to meet, integrate and communicate.

3. Relevance to the STEPHANIE project

(please describe how this action derives from the project and in particular from the interregional exchange of experience. Where does the inspiration for this action come from?)

Details of proposed Policy improvement	Links with interregional input (including details of activities, good practices and knowledge shared)
We will develop a community with a focus on space technology using photonics and its many applications.	The Good Practices that have inspired and informed this Action are: 1. Brittany’s Technology and Application Sector Events

<p>We will do so by developing contacts and initiating activity between a group of business support activities that are currently focussed on different technological fields.</p> <p>This group will:</p> <ul style="list-style-type: none"> • build on the SPIA group and other stakeholders already involved • be influenced by appropriate overseas partner good practices, and • make good use of space photonics and geospatial market intelligence, <p>all from phase 1 of the STEPHANIE project.</p> <p>The cluster will use their existing/pending PA1 (Priority Axis 1: Promoting Research and Innovation) ERDF funding and the market intelligence available to them from STEPHANIE to distribute funds to SMEs in Space Technology with Photonics, and its applications. These funds will be used for innovation and research activities, in partnership with a research body or other expertise regionally and nationally.</p> <p>To instigate these projects and to foster the Space community, activities to improve the visibility of Space Technology using Photonics (its enabling technology, markets and applications) and to improve connections in the quadruple helix will be planned. These will include networking events and presentation opportunities that build on the networks offered by the existing ERDF projects.</p> <p>We will explore the possibility of being co-founding partners of a UK Space Photonics group. As a result of our STEPHANIE work, other UK regions with space photonics interests have been in contact with Business Durham/NESACOE and discussions will be held in 2020 to explore the possibility of setting up a UK-wide group.</p>	<ol style="list-style-type: none"> 2. Brittany’s Photonics Bretagne Regional Innovation Hub 3. Walloon’s Business and Competitiveness Clusters <p>The following is more information on the influence of each of the Good Practices on this action:</p> <ol style="list-style-type: none"> 1. Brittany’s Technology and Application Sector Events produce innovation outcomes by inviting both those with application needs & those with technology solutions to present and attend the events on a specific technology theme that is broad enough to generate interest from a range of helix players. <p>In Durham, we have arranged with two Delivery Partners for their projects (The Water Hub and SONNET) to include a Business to Business (B2B) engagement opportunity where Space Technology using Photonics challenges will be presented by end-users (i.e. challenge holders) to the solution providers (i.e. technology SMEs).</p> <p>This is directly inspired by the Photonics Bretagne events, with their sectoral focus and opportunity to exchange solutions within the quadruple helix a success factor that we would like to replicate.</p> <ol style="list-style-type: none"> 2. Brittany’s Photonics Bretagne Regional Innovation Hub has helped the growth, recognition and dissemination of the region’s photonics technology capabilities. The dedicated hub brings together around 120 member businesses, schools and RTOs working in photonics in the region, and operates as an RTO itself. <p>The services it offers members include support for innovation activities (from patent searches to partnership management), marketing services and events.</p> <p>We were inspired by this best practice after visiting Photonics Bretagne during the 6th Interregional Learning Event and Project Meetings on 13th – 14th June 2019. Here, we learned about how the regional agency develops the small business community in an area with historic capabilities.</p> <p>Our Capabilities and Competencies Map report identified the extensive population of Space Technology using Photonics companies and research</p>
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	<p>capabilities in the North East region (see Needs Addressed above). By replicating the hub’s activities – specifically those activities that aid businesses in innovating e.g. accessing partners, navigating funding – to the extent allowed by our resourcing, we hope to stimulate recognition and growth for the sector in the region.</p> <p>3. Walloon’s Business and Competitiveness Clusters are designed to support economic development and R&D and skills investment, respectively.</p> <p>This Good Practice demonstrates how clusters that are focussed on specific outcomes deliver demonstrable success. This informed the design of our clustering activity.</p> <p>Whereas we could have delivered an umbrella programme that joined together all the Delivery Partners, instead they are distinct projects that will deliver on specific remits.</p>
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4. Specific Activities and TIMEFRAME (please list and describe the activities to be implemented in order to achieve the policy change– add as many lines as necessary) – THIS REFERS TO THE ACTIVITIES EXPECTED TO BE CARRIED OUT IN THE IMPLEMENTATION PHASE (PROJECT PHASE 2)

Activity Number	Activity Description	Timing (with details)
Establishing, promoting and supporting the cluster		
The following Specific Activities are related to the cluster’s set-up and will be managed by NESACOE.		
1	<p>NESACOE will begin referring eligible companies to Delivery Partners</p> <p>NESACOE are already in touch with companies that are already part of the space and photonics network and need support. They will be referred to the Delivery Partner’s projects from the very beginning of the cluster’s activities.</p> <p>It will start to develop a North East cluster brand with the intention to launch in the first half of the year.</p>	January 2020
2	<p>Welcome the Delivery Partners to the cluster and confirm the terms of reference with them</p> <p>At the start of Phase 2, the Delivery Partners will be onboarded to the cluster with an introductory meeting arranged by NESACOE.</p>	January – March 2020

	<p>This meeting will provide the opportunity for the Delivery Partners to meet each other and network, as well as to learn more about STEPHANIE, the activities that the cluster is intending to replicate, and the current state of the region’s space technology with photonics business environment.</p> <p>This will set the precedent for the ongoing positive and trusting relationship between the Delivery Partners and NESACOE.</p> <p>During this engagement, the terms of reference for the inclusion of the Delivery Partners in the network will be confirmed with each partner and any necessary documentation produced and signed.</p>	
3	<p>Introduce the Delivery Partners to the cluster and companies showing ideas for projects via SPIA activities</p> <p>All of the Innovation Actors that were identified in the market research activities in Phase 1 will be contacted in an email newsletter from NESACOE that referenced the STEPHANIE project – a brand that is now recognised and understood by many in the region; helping to build trust in and understanding of the purpose of the new cluster</p> <p>This communication will explain how the cluster will function, introducing the network to NESACOE and profiling the Delivery Partners, promoting the support that they can offer to relevant SMEs.</p>	From January 2020
4	<p>Share market intelligence with the Delivery Partners</p> <p>NESACOE will complete market intelligence exchanges with the Delivery Partners, so that their awareness of the region’s Space Technology using Photonics quadruple helix capabilities is improved. This will directly influence their ability to engage with SMEs and research bodies in the region and introduce the stakeholders to the research and innovation opportunities that our Delivery Partners offer.</p> <p>(Please note that considerations for compliance with GDPR have been taken and that this contact-sharing activity will be conducted accordingly.)</p>	January 2020
5	<p>Ongoing strategic support and communications</p> <p>NETSACOE will maintain communications with the Delivery Partners, helping them to retain a focus on Space Technology and to overcome any issues they have in engaging with the new technology space.</p> <p>They will act as a touchpoint for any SMEs who would like to access support through the cluster but are struggling to identify a suitable programme.</p>	Throughout Phase 2

	Where necessary, NESACOE will organise meetings or plenaries with the Delivery Partners to foster the ongoing trusting community that the cluster forms.	
<p>Support SMEs in Research and Innovation in Space Technology using Photonics, and account for any C26 indicators resulting from the clustering activity.</p> <p>The following Specific Activities are milestones relating to the activities of the Delivery Partners in providing SME support and contributing to the Space Technology using Photonics quadruple helix ecosystem.</p> <p>This includes the accounts of the C26 indicator (see Box 9 on monitoring and indicators below).</p>		
6	<p>The Water Hub RIPPLE Event</p> <p>The upcoming RIPPLE event will feature a “Satellite Technology for Dummies” session which is aimed at stimulating connections between end-users and solutions providers in Satellite Technologies on the theme of water and environmental management.</p> <p>This activity has been designed thanks to the influence of STEPHANIE and the engagement events held by Photonics Bretagne that we would like to replicate in this region. In discussing STEPHANIE and Photonics Bretagne’s engagement events with the Water Hub, they suggested that the RIPPLE events could provide an opportunity to deliver on the objectives of STEPHANIE.</p>	18 – 19 th March 2020
7	<p>Durham University’s Intensive Industrial Innovation Programme defines new project opportunities for SMEs, including those working in Space Technology</p> <p>In defining the new IIIP projects across all four Universities, Durham University’s team will target businesses that are within the priority sectors identified in the economic plans of the North East Local Enterprise Partnership and Tees Valley Combined Authority.</p> <p>Currently SMEs working in the “Systems Satellite Applications” sector have been eligible to apply. (Space Technology may be one of these priority sectors – see Action 2 – but if it isn’t, the Phase 1 activities presented above will ensure a secondary focus on this sector.)</p>	Spring 2020
8	<p>Durham Future Innovation Building (D-FIB) funding application</p> <p>A full application for funding through ERDF PA1 will be submitted. The application has been influenced by STEPHANIE to include references to space technology in its target SME base and to include the Innovation Vouchers principle as one of its support mechanisms (see Action 3 for more information).</p>	Spring 2020
9	<p>The Water Hub’s SME support programme ends</p>	June 2020

	Any projects that have been initiated by the Water Hub’s activities in Space Technology using Photonics and applications will be accounted for by STEPHANIE.	
10	The Durham University’s IIP projects are allocated and indicators are accounted for C26 indicators on any new IIP placements that were influenced by STEPHANIE will be automatically claimed by the Universities to MHCLG as they are – by definition – three-year long collaborative research projects between the SMEs and the Universities.	Autumn 2020
11	Durham Future Innovation Building (D-FIB) begins The D-FIB programme, if successful in accessing its funding, will begin. Any SMEs that access support in undertaking a research programme with an RTO or expert that is related to Space Technology using Photonics and its applications will be accounted for by STEPHANIE.	Autumn 2020
12	End of the Sustainable Advanced Manufacturing (SAM) Project, University of Sunderland Once the SAM project’s funding ends, any Space Technology using Photonics businesses that have engaged with the programme in order to fund an innovation project that includes a research partnership will be accounted for. Any future funding bids or opportunities will be supported by the inclusion of the SAM project’s STEPHANIE partnership status.	December 2020
13	North East Business and Innovation Centre accounts for SMEs that have been supported through their innovation support programmes The current wave of funding for NE-BIC’s two innovation support programmes began in October 2018 and ends in the September 2021. There are currently 22 businesses engaged in these support programmes, with a total target of 74 SMEs to be reached. By the end of this wave, any Space Technology using Photonics businesses that have engaged with the programme in order to fund an innovation project that includes a research partnership will be accounted for.	September 2021

5. Players involved (please indicate the organisations in the region who are involved in the development and implementation of the action and explain their role – add as many lines as necessary) – THIS REFERS TO THE ACTIVITIES EXPECTED TO BE CARRIED OUT IN THE IMPLEMENTATION PHASE (PROJECT PHASE 2)

<i>Name of Organisation</i>	<i>Role in Action Plan Implementation</i>
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<p>North East Satellite Applications Centre of Excellence (NESACOE)</p>	<p>NESACOE will act as the leader and facilitator of this action.</p> <p>Using their existing operating budget, they will maintain communications with the Delivery Partners. They will facilitate relationships between the space cluster (particularly SMEs who are potential beneficiaries) and the Delivery Partners. Any events or other outreach activities conducted as part of the clustering activity will be coordinated or supported by NESACOE.</p>
<p>Durham University</p>	<p>Durham University leads a partnership with 4 of the region’s universities (Newcastle, Northumbria and Teesside) in supporting SMEs to access research capabilities by placing a dedicated PhD student in the business for three years.</p> <p>The Intensive Industrial Innovation Programme (IIIP) is funded through ERDF and has been running since October 2018, with two successful years of recruitment and allocation completed. This has seen £7.6m of funding allocated across 90 SMEs.</p> <p>Prior to their engagement with the STEPHANIE project, the Universities had limited engagement in the space sector and the placements available within it. After sharing information on the size of the sector and its varied applications, they will now actively include the space section and photonics technologies in the sectors of interest in the IIIP.</p> <p>Broadly speaking, the research conducted in IIIP’s placements involves large-data set analysis. Durham University believes that upstream space applications may be captured in this groups of research projects. As such, Space Technology with Photonics SMEs will be directly referenced in the next round of recruitment and project allocation).</p> <p>The University is in the process of applying for an extension to this programme with Northumbria and Newcastle Universities for the Autumn 2020 recruitment year. The ERDF application deadline was 30th September 2019, and in their application, Durham University have referenced the STEPHANIE project. Specifically, the role that the project has played in expanding the project selection team’s knowledge of Space Technology with Photonics applications and the need for projects within this sector. The Universities will approach the North East space cluster to invite research projects forwards, that a PhD student would be able to work on.</p>
<p>North East Business and Innovation Centre</p>	<p>The NE-BIC has expressed interest in establishing itself within the cluster in order to develop their market intelligence, confidence and relationships in this sector.</p> <p>Its integration will mean that SMEs in this technology space in the North East region will have direct access to two of the NE-BIC’s support programmes that are funded until September 2021 by ERDF PA1:</p> <ol style="list-style-type: none"> 1. Innovation Programme

	<p>SMEs in the North East LEP region can access help and support from the BIC's in-house experts, and a grant of up to 40% for funding an innovation project.</p> <p>2. Flexible Support Programme Offering SMEs, mainly in County Durham, 12 hours of bespoke support across four themes: horizon scanning, strategic planning, digital landscaping and knowledge/culture management.</p> <p>The Innovation Programme has been running for around 8 years and has proved popular. The Flexible Programme has been running for 2 years. In the last phase of funding, the BIC received 500 enquiries, but only supported 72 businesses in the end. This is because finding businesses with the right eligibility criteria can be difficult.</p> <p>NE-BIC's involvement in the North East's space cluster will broaden its target SME base and develop its presence and capabilities in the Space Technology using Photonics quadruple helix.</p>
University of Sunderland	<p>The University's SAM project offers manufacturing SMEs in the NELEP area support in product & process development and the introduction of new technologies. The project has over £800,000 available in grants to support capital, product validation, equipment and any other barriers to the strategic development of products and processes that these businesses may face.</p> <p>As with NE-BIC (see above), by integrating in the STEPHANIE community, the SAM project will benefit from the market knowledge and will be able to broaden its target SME base.</p> <p>It is funded until December 2020, partly by ERDF (£2.6m) and partly by the University of Sunderland (£2.5m).</p>
Business Durham	<p>Business Durham are developing an application for ERDF PA1 funding to support the Durham Future Innovation Building (D-FIB) project. This is a hub for building the innovation ecosystem in County Durham with an initial focus on innovation within SMEs in the construction sector by providing them with support in accessing research and innovation expertise.</p> <p>The application for funding was significantly influenced by STEPHANIE and the Good Practices that were shared in Phase 1 with Business Durham. In Action 3, more information is given on the close relationship between D-FIB's concept and STEPHANIE.</p> <p>Satellite communications and imaging are used in an increasing range of digital tools for construction. Smart construction is a growing industry, with the productivity and material savings posed by its uptake offering significant benefits, especially for smaller businesses.</p> <p>If successful in its bid for funding, this project will provide County Durham's construction sector SMEs with innovation masterclasses,</p>

	<p>networking opportunities and access to an innovation grant to assist them in procuring the best available expertise in the UK.</p> <p>D-FIB will continue to build on the same innovation ecosystem that has been central to STEPHANIE’s stakeholder group and be an active player in the Space Technology using Photonics community in the region.</p>
<p>The Water Hub; Durham University (lead), the Environment Agency, Durham County Council and Northumbria Water</p>	<p>The Water Hub is a partnership project between Durham University, Northumbria Water, Durham County Council and the Environment Agency. They are dedicated to stimulating collaboration between the quadruple helix in the North East to address place-based challenges to water management and supporting resilient communities.</p> <p>The Water Hub is funded for three years, starting in June 2018 and finishing at the end of June 2020. From then, funding sources other than ERDF may be used to extend the Hub’s operations, but ESIF will not be utilised.</p> <p>Environmental monitoring and water management is significantly dependent on satellite technology, including imaging and communications. As such, the Water Hub have acknowledged that STEPHANIE’s sectors overlap with the SMEs that they are interested in engaging with and helping to fund innovation.</p> <p>They have identified that the invisibility of space technologies is a barrier to innovation in this area. The Water Hub have an existing relationship with NESACOE which has strengthened under the influence of STEPHANIE. They will engage with the NESACOE for event support and advice on improving the visibility of space technologies in their stakeholder network.</p> <p>The Water Hub host regular quadruple helix engagement events, including an annual conference called RIPPLE. They are networking events with a strong focus on highlighting problems and scoping for solutions in a creative, collaborative environment. For example, previous events have included a “pitch my problem” session where challenge holders can showcase their needs to technology providers, who can then bid for seed funding to develop a dedicated solution.</p> <p>This is one of very few events in the North East region that is similar to the Photonics Bretagne sector-specific quadruple helix events. As such, we will be using this event to replicate this success. The 2020 event will feature a NESACOE presentation (dubbed “Satellite Technology for Dummies”) on satellite applications and how Space Technology using Photonics can be harnessed as a solution enabler.</p>
<p>SMEs in the cluster, facilitated by NESACOE</p>	<p>Project beneficiaries who will be contacted by the cluster’s Delivery Partners</p>

6. Risk and Contingency Plans (please describes any potential risks to Action Plan implementation and eventual contingency plans – add as many lines as necessary)

Description of Risk	Level of probability (High, Medium, Low)	Description of Contingency Plan
Brexit	Medium	<p>The decision of the UK to leave the EU is unprecedented. In preparation for the UK leaving the EU in 2020, the UK Government is converting the current ERDF programme to a national ERDF Reserve Fund. This will provide a mechanism to ensure the UK commits to all remaining ERDF funding. The exact arrangements of the fund are currently unclear, but we will seek to influence them where possible and appropriate, through the STEPHANIE programme. DCC is actively pursuing projects to spend existing ERDF allocation. DCC is also working closely with MHCLG and NELEP to influence the UK replacement for ERDF, the Shared Prosperity Fund (SPF). At present there is minimal public detail on the SPF. It is understood in the UK that SPF will replace ERDF, such that this cluster and its Delivery Partners will remain operational. DCC, NESACOE and its Partners will maintain a focus on applying for SPF or other replacement funds when or wherever necessary.</p> <p>Information on the UK Government's Government Guarantee that it will underwrite EU funding can be found here.</p> <p>The Community and its clustered organisations can still be brought together regardless of the funding landscape as part of NESACOE's programme of activities.</p>
NESACOE contract ends in March 2020	Low	<p>The current NESACOE contract is due to end in March 2020. DCC and other partners are in the process of seeking funding and actively engaging with the national Satellite Applications Catapult to secure funding and operators for the Centre. It is not expected that the region will be left without a Centre of Excellence, but it may change form, with a different operator or location.</p>

		If this is the case, Business Durham will support the transition of responsibility to ensure that the targets of STEPHANIE are still achieved.
Lack of buy-in from delivery partners	Low	Business Durham has an excellent record of partnership development and has resourced the monitoring activity (which will include Delivery Partner relationship management) accordingly.
Non-awards of funds to IIIP Phase 3	Low	IIIP is an existing, successful programme with demonstrable results in supporting research and innovation in the region's SMEs. It is not anticipated that this extension will be rejected. If funding is not awarded, the activities of the other programmes will still be carried out, so the loss of outputs will be only a small proportion of our expected results.
Non-award of funds to Durham Future Innovation Building	Low	Business Durham are confident that they will receive this funding. Their existing assets in the NETPark facility and their relationships within the local innovation ecosystem have established a strategically strong case for future projects such as D-FIB. As above - If funding is not awarded, the activities of the other programmes will still be carried out, so the loss of outputs will be only a small proportion of our expected results.
SME prospecting activities carried out by ERDF delivery partners do not target Space Technology using Photonics related innovations leading to lack of relevant C26 outputs.	Medium	STEPHANIE project partners (including networks) will suggest companies and individuals to the ERDF delivery partners that will 1. Fit the scope of the existing ERDF projects and 2. Have interests in innovating in space photonics. This additional pipeline of potential SMEs requiring support should increase the probability of relevant C26 outputs from the ERDF partners.

7. Costs (please describe the costs required to implement the Action Plan. This can refer to human resources and external costs required to set up the actions and to any funding required (e.g. if the Action refers to a call for proposals / a funding scheme)

North East Satellite Applications Centre of Excellence (NESACOE)

The costs associated with developing, facilitating and managing the community are expected to be a maximum of £15,000. These will be sourced from NESACOE's internal operating budgets.

The delivery partners and other support organisations in the North East are expected to provide in-kind support, such as meeting rooms and event spaces.

The specific costs required from each delivery partner to support the SMEs through their ERDF PA1 projects have been calculated using the following formula:

$$\text{Total cost of project (£)} \times \frac{\text{Expected no. of Space \& Photonics SMEs supported by the project thanks to STEPHANIE}}{\text{Expected total no. of SMEs supported by the project}}$$

Durham University, IIP3

Total cost = around £2 million

Total expected SMEs supported = 25

Of which are Space Technology using Photonics related = 1

Expected costs = £80,000

NE-BIC, Innovation Programme and Flexible Support Programme

Total cost = £820,000

Total expected SMEs supported = 85

Of which are Space Technology using Photonics related = 1

Expected costs = £9,650

Sunderland University, SAM Project

Total cost = around £5 million

Total expected SMEs supported = 208

Of which are Space Technology using Photonics related = 1

Expected costs = £24,519

Durham University, The Water Hub

Total cost = £757,000

Total expected SMEs supported = 60

Of which are Space Technology using Photonics related = 2

Expected costs = £25,233

Business Durham, D-FIB

Total cost = around £1.4 million

Total expected SMEs supported = 40

Of which are Space Technology using Photonics related = 1

Expected costs = £35,000

8. Funding sources (with reference to the above costs, please describe where the budget comes from to finance them)

The projects will be funded through ERDF PA1 at a grant intervention rate of 60%, with match funding sources provided by the Delivery Partners.

£10.8m total available ERDF budget in PA1 Call that closed on 30th September 2019.

Activities from Business Durham and NESACOE will be funded through their internal corporate staffing budgets, which are controlled by Durham County Council and by Satellite Applications Catapult and UKSA respectfully.

9. Monitoring (please describe the monitoring tools and indicators that you expect to use in Phase 2 – Implementation to ensure that your Action Plan is implemented correctly)

Indicators should also include measurement of the territorial impact (e.g. beneficiaries concerned, results achieved in terms of increased competitiveness or cleaner environment, etc.).

Monitoring tools (description of the tools and how they will be applied)	The cluster and its activities will be monitored through Business Durham’s management team. The process/systems for this are well embedded in their corporate systems.	
Indicators <i>NB: The indicator included in the Application Form should be reported here, as well as any other indicator deemed necessary</i>	target amounts	Means of Verification
1	Number of enterprises cooperating with research institutions and subject matter experts (ERDF C26 output indicator) claimed by the community’s Delivery Partners	6 Should the ERDF projects that are run by the Delivery Partners produce and claim a C26 output that was directly influenced by the STEPHANIE project, this information will be passed from the ERDF delivery partners to the STEPHANIE team to record. This communication chain will provide evidence of achievement of the indicator. For each output, evidence will be provided that shows how the STEPHANIE project influenced it. Durham County Council (Business Durham), as the lead for STEPHANIE, will monitor this with the delivery partners on a bimonthly basis.
2	One community of North East space cluster is created	1 Verification by Business Durham that there exists an active community of relevant organisations; with events, online communications and projects resulting from it.

ACTION 2

TITLE: Introducing Space and Satellite Applications as a Local Smart Specialisation Theme in the North East

1. Overall Topic and Description of the proposed Policy Improvement

(please provide a brief summary of the proposed Policy Improvement that this Action refers to).

Overall Topic	<p>We will work with NE-LEP to introduce Space Technology as a local Smart Specialisation theme in the NE Local Industrial Strategy, against which ESIF projects must be aligned.</p>
Specific Description	<p>Our objective is to influence and inform the LEP-wide Local Industrial Strategy, and ensure space technologies are included within the associated sectors and competences work.</p> <p>During STEPHANIE Phase 1, Business Durham and representatives from NE-LEP travelled to Tuscany and were impressed by the evidence of how the selection of the sector as a Smart Specialisation theme had initiated business activity and economic growth.</p> <p>This aligns with the European Commission’s RIS3 (Research and Innovation Strategies for Smart Specialisation) guide which states that - “The Commission encourages the design of national/regional research and innovation strategies for smart specialisation as a means to deliver a more targeted Structural Fund support and a strategic and integrated approach to harness the potential for smart growth and the knowledge economy in all regions.” - Page 7.</p> <p>NE-LEP is engaging with a wide range of partners through various processes including both the local authorities and other key partners such as NESACOE. Alongside this are a series of research studies which are informing the activity, including a review of smart specialisation/areas of advantage or sectors, competencies and niches. (The terminology Smart Specialisation has been replaced with ‘sectors and competencies’ in NE-LEP’s work, as they feel that this phrase resonated better with local partners). STEPHANIE has contributed to the process through Durham County Council and the NESACOE participation in consultation events and activities.</p> <p>NE-LEP have also been actively involved in the STEPHANIE SPIA group, and participated in the staff exchange to Florence mentioned above, to learn about the Tuscan good practice for themselves.</p>

	<p>This dialogue has resulted in a mutual understanding of the value of Space Technology – including those that use Photonics – and of the importance of its inclusion in future local industrial strategies.</p> <p>The process of developing the local strategy – including a daughter-document to the LIS, an Innovation Delivery Framework that will focus on supporting the full value chain of technology commercialisation – was due to conclude by the end of 2019, with the new LIS expected to influence future policy and funding from early 2020. However, this has since been delayed in light of the UK’s political circumstances. The timescale for this process remains uncertain in light of Brexit, the general election, and its surrounding political and economic uncertainty.</p>
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<p>2. Need addressed <i>(please provide a brief summary of the NEED that you wish to address with this policy improvement)</i></p>	
<p>In the North East region, there is a wide variety of funding available from EU and National sources and private investors to support innovation and research. However, they are often broadly distributed across sectors, technologies, project structures, and outcomes. In our Regional Vision, a key weakness in available funding schemes was identified as, “Much of the available funding has a broad sectoral target base, so is overly competitive and difficult to apply to narrow/specific space and photonics bids.”</p> <p>By introducing a regional focus on Space and Satellite Applications, the distribution of support to this sector will be designed, validated, executed and confirmed as part of a strategic process. The allocation of funds will be split based on an evidence-base that appreciates the full quadruple helix.</p> <p>Grant funding is awarded according to local, regional and national priorities identified in key strategy documents and policies. Current key documents include the UK Industrial Strategy, and the Local Industrial Strategies now being produced. The ERDF PA1 Call issued on 28th June 2019 states that “<i>applicants should demonstrate a close fit with the policy priorities set out in “Smart Specialisation in England”...In addition, applications will be expected to meet identified local development needs, as expressed in the scope of this call and as set out in the North East European Structural & Investment Funds strategy, as well as the Local Industrial Strategy where it has been published</i>”. Securing a space technology reference in these strategies will raise the profile of the sector and make it much easier for such projects to secure vital grant funding.</p> <p>For example, IIP, one of our technology cluster Delivery Partners identified in the Action above states on its website that it is “targeted at supporting businesses in (or hoping to access) the priority sectors identified in the economic plans of the North East Local Enterprise Partnership and Tees Valley Combined Authority.”</p> <p>The Space Technology ecosystem in the North East and Tees Valley regions already has significant focus. This is in part due to the location of the UK’s Satellite Applications Catapult’s regional Centre of Excellence (NESACOE) in Durham, as well as geographical and historical features such as two prominent observatories and four major ports in the regions. The current phase of NESACOE will end in March 2020, and at this time it isn’t known what form the next phase will take. By ensuring that NE-LEP is focussed on strategically supporting satellite application and other space technologies, the region will continue to build on this existing momentum.</p>	

3. Relevance to the STEPHANIE project

(please describe how this action derives from the project and in particular from the interregional exchange of experience. Where does the inspiration for this action come from?)

Details of proposed Policy improvement	Links with interregional input (including details of activities, good practices and knowledge shared)
<p>Space Technology and its applications will be included as a Smart Specialisation area in the North East’s upcoming Local Industrial Strategy to embed it into local policy as a priority sector to be enhanced and developed.</p>	<p>This Action has drawn on “The Smart Specialisation Strategy of Tuscany Region”, which followed the RIS3 guidance for developing a roadmap for the allocation of funds to three technology markets:</p> <ol style="list-style-type: none"> 1. ICT Photonics 2. Smart Factories 3. Chem & Nanotech <p>The roadmaps for innovation support activities and the allocation of funds are split into three strategic areas:</p> <ol style="list-style-type: none"> 1. R&D support 2. Innovation support 3. Enabling initiatives support <p>The roadmaps were implemented using a structured framework that collected evidence from a full range of stakeholders and developed an understanding of the region’s interregional position. It also featured a “validation” phase to ensure that the roadmap would implement sustainable results for the full benefit of society and the economy.</p> <p>Durham and the surrounding North East region have – like Tuscany – an economy that is traditionally based on heavy goods manufacturing. When the project team visited Tuscany, they were impressed to hear how the region had adapted its strengths in manufacturing and identified the Space Technology sector as a strategically viable growth area. Previous Smart Specialisation areas in the North East have been very broad, which has resulted in too-broad funding calls that have been inaccessible to specialist technology providers (see the Regional Vision & Needs Addressed section above). By refining the Smart Specialisation area, Tuscany proved that this issue could be resolved.</p> <p>The Innovation Delivery Framework in North East England has been designed in a similar way to Tuscany’s strategy, in that it is split into three programme strands that ensure that innovation support activities are applied across the full value chain of technology commercialisation has a strong chance of being supported nationally. These strands are:</p> <ol style="list-style-type: none"> 1. Places

	<ol style="list-style-type: none"> 2. Business Support 3. Innovation Delivery Partnerships (formal partnerships or competencies clusters with specific focuses on commercialising innovative technologies)
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4. Specific Activities and TIMEFRAME (please list and describe the activities to be implemented in order to achieve the policy change– add as many lines as necessary) – THIS REFERS TO THE ACTIVITIES EXPECTED TO BE CARRIED OUT IN THE IMPLEMENTATION PHASE (PROJECT PHASE 2)

Activity Number	Activity Description	Timing (with details)
1	<p>Release of the regional strategy</p> <p>The NE-LEP release the Local Industrial Strategy and accompanying Innovation Delivery Framework, featuring the Sector Competencies/Smart Specialisation.</p> <p>The language and structure of this release may change in the meantime, as the process evolves to account for the political</p>	Early 2020
2	<p>The strategy affects the distribution of funding</p> <p>ERDF Reserve Fund calls published inviting new projects with reference to their region’s Smart Specialisation themes.</p>	Early 2020
3	<p>RTOs and other organisations apply for funding to support research and innovation in the smart specialisation areas</p> <p>Full applications submitted for PA1 project(s) or any other new funds with a Space Technology theme.</p>	Summer/ Autumn 2020
4	<p>SMEs benefit from being able to access funding that is specifically for research and innovation in Space and satellite sector.</p> <p>Delivery of new PA1 project(s) with a Space Technology theme. The owners of the PA1 projects distribute funds to eligible SMEs.</p>	Autumn 2020 to Autumn 2023

5. Players involved (please indicate the organisations in the region who are involved in the development and implementation of the action and explain their role – add as many lines as necessary) – THIS REFERS TO THE ACTIVITIES EXPECTED TO BE CARRIED OUT IN THE IMPLEMENTATION PHASE (PROJECT PHASE 2)

Name of Organisation	Role in Action Plan Implementation
Business Durham	Lead in influencing the NE-LEP in their focus on Space and satellite technologies and applications in

	<p>the Local Industrial Strategy and Innovation Delivery Framework. This activity will include monitoring the release of the Strategy and promoting it in the Space Technology community (see Action 1).</p> <p>Business Durham will also be a potential project owner, but this involvement will not be defined and confirmed until 2020.</p>
North East Local Enterprise Partnership	Have responsibility for producing the Local Industrial Strategy for North East England
Regional Universities & RTOs	Potential deliverers as research institutes and project owners/funders.
SMEs	Project beneficiaries

6. Risk and Contingency Plans (please describes any potential risks to Action Plan implementation and eventual contingency plans – add as many lines as necessary)

Description of Risk	Level of probability (High, Medium, Low)	Description of Contingency Plan
Failure to include Space Technology as a priority sector/ competence for the region	Low	<p>Working closely with NE-LEP and key partners to ensure consistent messages.</p> <p>Our groundwork in researching and reporting on the region’s Space Technology capabilities and competencies will provide evidence of the strength of this sector.</p> <p>The Science and Innovation Audit that NE-LEP published in March 2019 was intended to inform the LIS. The Audit chose to focus on Digital Technologies in Advanced Manufacturing, reflecting the importance of this sector to the existing North East economy and its growth prospects. Space Technology is integral to many communications and processing services and is a sector that requires highly precise and technical hardware. As such, the alignment of this technology area with NE-LEP’s existing sectoral focus is significant.</p>
UK ESIF ERDF PA1 programme closes before the Local Industrial Strategy becomes available to influence it.	Medium	At June 2019 there was £3,869,839 remaining in the County Durham Transition area’s PA1 budget. It is not yet known how much will remain after the summer 2019 call closes on 30 th September 2019.

		<p>What funds remain beyond this call will be converted into a national ERDF Reserve Fund, which is due to issue a call in early 2020. Beyond the current ERDF programme, and in anticipation of the UK's departure from the EU, the UK Government is expected to launch a new Shared Prosperity Fund. At present there is minimal public detail on the SPF. We will continue to work with MHCLG and the NE-LEP to ensure that the new Local Industrial Strategy will influence whatever funds are available after it is launched.</p>
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7. Costs (please describe the costs required to implement the Action Plan. This can refer to human resources and external costs required to set up the actions and to any funding required (e.g. if the Action refers to a call for proposals / a funding scheme)

Costs relating to the implementation of this Action Plan are estimated to be around £5,000.

Some staff time of the Actors listed above will be dedicated to influencing and communications; some of this time will be reduced by earlier efforts in dissemination and processing through STEPHANIE engagement activities.

The value of projects expected to be developed in response to the new Smart Specialisation influence of the ERDF Reserve Fund call should become available in 2020 after the call closes. At this stage, it is not possible to estimate this value.

8. Funding sources (with reference to the above costs, please describe where the budget comes from to finance them)

Business Durham: Any staff time Business Durham commits to this action will be funded through Durham County Council's core budget.

The NE-LEP LIS development process is being funded by the UK Government.

It is intended the new Smart Specialisation theme will influence the new ERDF Reserve Fund call due to launch in early to mid-2020, and the UK Government funded Shared Prosperity Fund that is expected to eventually replace the ERDF programme. The PA1 funding expected to be available in the ERDF Reserve Fund call should become available in 2020, but the scale of the funding and its distribution mechanisms are subject to change and currently not known by Business Durham.

<p>9. Monitoring (please describe the monitoring tools and indicators that you expect to use in Phase 2 – Implementation to ensure that your Action Plan is implemented correctly)</p> <p>Indicators should also include measurement of the <u>territorial impact</u> (e.g. beneficiaries concerned, results achieved in terms of increased competitiveness or cleaner environment, etc.).</p>			
<p>Monitoring tools (description of the tools and how they will be applied)</p>		<p>Business Durham will confirm on receipt of the Local Industrial Strategy and/or the Innovation Delivery Framework that Space and Satellite Applications, or some variant thereof, has been included as an area of focus.</p> <p>Business Durham will be able to provide a copy of the relevant documentation.</p>	
<p>Indicators</p> <p>NB: The indicator included in the Application Form should be reported here, as well as any other indicator deemed necessary</p>			
		target amounts	Means of Verification
1	<p>Local Industrial Strategy or other regional innovation strategic framework for North East England produced that includes satellite/space technologies as a key sector/ competence/ enabling technology.</p> <p>The format and wording of this is dependent on NELEP’s development activities in light of changes to the UK’s funding and strategic landscapes.</p>	1	Strategy produced & approved
2	<p>Submission of a project for funding or support via NELEP’s innovation development framework.</p>	1	NELEP’s published list of projects submitted and/or approved.

ACTION 3

TITLE: *Introducing Innovation Vouchers principles in a new ERDF PA1 project*

1. Overall Topic and Description of the proposed Policy Improvement

(please provide a brief summary of the proposed Policy Improvement that this Action refers to).

<p>Overall Topic</p>	<p>Inspired by Tuscany, the new Durham Future Innovation Building project will introduce Innovation Vouchers for local businesses to ‘buy’ support or advice services from appropriate R&D institutions and experts to encourage and stimulate business innovation.</p>
<p>Specific Description</p>	<p>The Durham Future Innovation Building project is intended to enhance the innovation ecosystem in County Durham, with an initial focus on innovation in construction industry. D-FIB has been developed under ERDF Priority Axis 1 (Research and Innovation) and is applying for funding in the latest available round. It is intended to run from October 2020 to June 2023.</p> <p>As well as offering networking opportunities, innovation masterclasses and access to innovation collaboration opportunities, the project will be the first of its kind in the North East to trial using an “Innovation Voucher” style of grant.</p> <p>These vouchers will be available to SMEs in the region who are intending to grow or innovate in the smart construction area (which includes various applications of Space Technology using Photonics, including satellite imaging, mapping and geolocating) and need to procure expert support – whether that is in technical or business advice – or who need to produce prototypes.</p> <p>The innovation vouchers will be a grant that SMEs can access to be spent in a research institution anywhere in the UK that best provides the expertise they need. The application procedure and approval criteria are yet to be determined. The essence of this is that we were inspired by the innovation voucher GP in Tuscany to give SMEs the flexibility to bring knowledge from outside the region (where the expertise is not available within the region).</p> <p>The voucher will be awarded at 50% for a minimum total project value of £20,000 and a maximum value of £100,000.</p>

2. Need addressed

(please provide a brief summary of the NEED that you wish to address with this policy improvement)

Given the highly technical nature of Space Technology using Photonics and the global reach of the market, the network of experts, researchers, leading businesses and opportunities is national and beyond. And, for many businesses working in this sector, the support available for them to access the specific technical expertise that they need to advance, innovate or effectively network is limited the within the North East region.

For example, in the June 2019 SPIA workshop, one SME fed back that a lot of the support available to them in the region does not have the technical focus that they need. In the past they have spent money on accessing expertise in Greece and the US.

Currently, there are no ‘Innovation Voucher’ systems set up in the North East. From 2012 to 2016, Northumbria University ran a voucher system and the stakeholders interviewed confirmed that these were a popular option. This scheme was part of [a national trial run by Innovate UK](#) (then known as the Technology Strategy Board).

The flexibility that Innovation Vouchers offer SMEs in being able to access support on the specific topic they require in the UK, regardless of where the expertise provider is based, will be highly valuable to the North East.

In the UK, the space sector is clustered around Harwell and the South East region, and there are some minor clusters of photonics organisations in the South West and in Scotland’s Edinburgh-Glasgow corridor. By enabling businesses to reach out to the experts that are part of these networks, the capabilities of the North East’s Space Technology using Photonics ecosystem will become better known in these regions. In future, investment and businesses may be attracted to the North East as a result of this activity.

3. Relevance to the STEPHANIE project

(please describe how this action derives from the project and in particular from the interregional exchange of experience. Where does the inspiration for this action come from?)

Details of proposed Policy improvement	Links with interregional input (including details of activities, good practices and knowledge shared)
<p>Introduce the use of ERDF PA1 to fund Innovation Vouchers for businesses in the North East of England to commission R&D advice and support services from within and outside the region, according to where the required expertise is to be found.</p> <p>The Innovation Vouchers will be a key offer of the Durham Future Innovation Building project currently in development by Business Durham.</p>	<p>The Tuscany Region has used Innovation Vouchers under ERDF ROP 2014-2020 to offer grants for SMEs investing in:</p> <ul style="list-style-type: none"> a. innovation advisory and support services; b. secondment of highly qualified personnel from research & technological transfer organizations or a large enterprise, working on research, development and innovation (on condition that secondment personnel does not replace other pre-existing employee, but carries out new activities within the beneficiary). <p>The type of innovation services supported by the vouchers are:</p>

	<ul style="list-style-type: none"> - innovation advisory services such as: consultancy, assistance and training in the fields of knowledge technological transfer, acquisition, protection and exploitation of intangible assets (such as patents), use of standards and regulations embedding them; - innovation support services such as: the provision set up of office spaces, data banks, libraries, market research, laboratories, quality labelling, testing and certification for the purpose of developing more effective innovative products/processes /services. <p>The Innovation Voucher scheme that will be introduced through D-FIB will differ in that it is not a stand-alone support programme; it is part of the whole D-FIB programme, which also offers networking opportunities, innovation masterclasses and other events taking into account of the Quadruple Helix model. But the vouchers will directly replicate the Tuscany GP in what services recipients can claim against them. i.e. innovation advice & support services, and secondment of highly qualified personnel.</p> <p>A unique element we are particularly keen to emulate, is the idea that the vouchers can be used to purchase services, not just from within the local region, but also further afield if that is where the most appropriate expertise is to be found.</p>
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4. Specific Activities and TIMEFRAME (please list and describe the activities to be implemented in order to achieve the policy change– add as many lines as necessary) – THIS REFERS TO THE ACTIVITIES EXPECTED TO BE CARRIED OUT IN THE IMPLEMENTATION PHASE (PROJECT PHASE 2)

Activity Number	Activity Description	Timing (with details)
1	Full application for D-FIB to be submitted	Spring 2020
2	Project kick off Note that D-FIB is expected to run until June 2023.	October 2020
3	Enable SMEs to access expertise and support within AND outside the region SMEs in the region will have access to Innovation Vouchers through D-FIB that they can choose to exchange for expert support or prototyping services outside of the North East region.	October 2020 – December 2022
4	Accounting of Results Any Innovation Voucher-style grants that have been used by Space and Satellite Technology and Applications SMEs will be accounted	By December 2021

	for as a research and innovation RTO collaboration that was influenced by STEPHANIE.	
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5. Players involved (please indicate the organisations in the region who are involved in the development and implementation of the action and explain their role – add as many lines as necessary) – THIS REFERS TO THE ACTIVITIES EXPECTED TO BE CARRIED OUT IN THE IMPLEMENTATION PHASE (PROJECT PHASE 2)

Name of Organisation	Role in Action Plan Implementation
Business Durham	Will deliver ERDF PA1 project offering Innovation Vouchers (tbc)
Universities & RTOs (at any location)	Potential deliverers as research institutes and project owners/funders.
SMEs	Project beneficiaries

6. Risk and Contingency Plans (please describes any potential risks to Action Plan implementation and eventual contingency plans – add as many lines as necessary)

Description of Risk	Level of probability (High, Medium, Low)	Description of Contingency Plan
MHCLG (or influential NE-LEP partners) unwilling to allow Innovation Vouchers to be 'spent' outside our region	Medium	We will advocate that the region will still be benefitting because it will bring new expertise into the region. It may also have wider scope for this under the new ERDF Reserve Fund. We will use the evidence collected in our stakeholder engagement and the benefits that Tuscany have experienced in adopting this. See the "Needs Addressed" section above.
Full Application that will be submitted in Spring 2020 is not successful.	Medium	In the event of an unsuccessful bid, Business Durham will continue to look for opportunities to deliver an Innovation Voucher-based support service to the region's space SMEs. Whether this is within a Business Durham support programme, or through influencing the owner of another

		support programme active in the region.
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7. Costs (please describe the costs required to implement the Action Plan. This can refer to human resources and external costs required to set up the actions and to any funding required (e.g. if the Action refers to a call for proposals / a funding scheme))

Business Durham anticipate that 2 SMEs will benefit from the Innovation Voucher-style grant for Space and Satellite Technology using Photonics and related applications projects.

As this programme is specifically for Construction Innovation, the intersection between the two industries is not heavily populated, and only represents a small section of D-FIB's target SME base. This would cost a minimum of £20,000 and a maximum of £100,000 per SME to implement.

8. Funding sources (with reference to the above costs, please describe where the budget comes from to finance them)


£10.8m total available ERDF budget in PA1 Call due to close 30th September 2019, some of which will be funding this project if approved. This will be match funded by Durham County Council (£42,535) and from the SME participants (£500,000).

9. Monitoring (please describe the monitoring tools and indicators that you expect to use in Phase 2 – Implementation to ensure that your Action Plan is implemented correctly)

Indicators should also include measurement of the territorial impact (e.g. beneficiaries concerned, results achieved in terms of increased competitiveness or cleaner environment, etc.).

Monitoring tools (description of the tools and how they will be applied)	This project will be monitored through Business Durham's management team in their leading of the D-FIB delivery. The process/systems for this are well embedded in their corporate systems.		
Indicators <i>NB: The indicator included in the Application Form should be reported here, as well as any other indicator deemed necessary</i>	target amounts	Means of Verification	
1	Number of enterprises cooperating with research institutions (measurement unit number)	2	Innovation Voucher issued to an eligible SME.

Part IV – Official Signature(s)

Date:	27/03/20
Name	Sarah Slaven
Signature	<p><i>Stamp of the organisation (if available)</i></p> 

APPENDIX 1 – Glossary of Acronyms

Acronym	Detailed Name
D-FIB	Durham Future Innovation Building
EOI	Expression of Interest
ERDF	European Regional Development Fund
GP	Good Practice
IIIP	Intensive Industrial Innovation Program
LEP	Local Enterprise Partnership
LIS	Local Industrial Strategy
NE-BIC	North East Business and Innovation Centre
NE-LEP	North East Local Enterprise Partnership
NESACOE	North East Satellite Applications Centre of Excellence
PA1	Priority Axis 1 (Research and Innovation)
RIS3	Research and Innovation Strategies for Smart Specialisation
RTO	Research and Technology Organisation
SEP	Strategic Economic Plan
SME	Small to Medium Enterprise
SONNET	Smart Connected Technology Innovation
SPF	Shared Prosperity Fund
SPIA	Space & Photonics Innovation Actors
STEPHANIE	Space Technology with Photonics for Market and Societal Challenges
UKSA	UK Space Agency



APPENDIX 2 – Vision Accelerator

The following pages are a copy of the Vision Accelerator document, which was produced to compile and summarise the actions that have been taken by Business Durham, Durham County Council and Urban Foresight in the development of this Action Plan.

STEPHANIE

Action Plan Development - List of activities within 2019

Phase 1 (from January 2018 to September 2019)		
<p>Activities carried out at regional level</p> <p><i>(please note that these refer to very practical activities, e.g. fix meeting with person responsible for regional call, organise stakeholder workshop, analyse relevant documentation, etc.</i></p> <p><i>Then indicate when you expect to undertake these activities. In the draft you should focus on activities to be carried out in Semester 5 and 6. For the final version, please insert activities already carried out and describe their input to assessing feasibility.)</i></p>		
N°	Activity Description	Timing (month/year or exact date where possible)
1	<p>Networking and establishing mechanisms to influence regional policy at the North East Innovation Practice event, Newcastle-upon-Tyne, organised by the Innovation SuperNetwork North East England and the NE-LEP.</p> <p>Designed to be the first of a series of events, this event invited delegates to contribute to the region's innovation planning. It enabled Elaine and Dorothy to update local partners on the STEPHANIE project, and introduce STEPHANIE to a wider audience to strengthen the SPIA group.</p>	28 th February 2019
2	<p>Networking at the North East Satellite Applications Conference 2019 - Into the Blue Conference at Sunderland.</p> <p>This event enabled Elaine and Dorothy to discuss the STEPHANIE project with local partners and introduce it to a wider audience to strengthen the SPIA group.</p>	28 th March 2019
3	<p>Networking at the European Photonics Roadshow at Gateshead. This event was organised through the EPRISE (Empowering Photonics through Regional Innovation Strategies in Europe) Horizon 2020 project. This project supports SMEs working in the Photonics Industry to overcome market barriers and it was evident from the event that it has interesting synergies with STEPHANIE, and potentially holds information that may be useful for our Regional Vision. Elaine and Dorothy will explore this further with the local project partner, CPI.</p>	3 rd April 2019
4	<p>Appoint appropriately experienced and knowledgeable consultant to support us with the SPIA group; in producing the Vision Accelerator and Action Plan; and revising and finalising the Regional Vision.</p>	April 2019

5	Engaging with the region's ERDF PA1 current projects to identify opportunities to fund a space & photonics project in the region.	May – July 2019
6	Elaine attended a workshop hosted by the Water Hub (ERDF PA1 owner) and E2E. The workshop explored novel satellite communication technology applications and in her capacity as a STEPHANIE representative, Elaine shared her knowledge on this area.	3 rd July 2019
7	Interim version of the Action Plan. This first draft will be informed by ideas generated from the 2 staff exchanges and follow up consultation with appropriate regional partners.	by 31 st May 2019
8	Update Regional Vision – 1 st revision of the document produced at the start of the STEPHANIE project. The document will be updated according to regional developments and new, relevant information identified since the document was originally produced. The consultant and local stakeholders will be asked to contribute towards this.	by 9 th June 2019
9	Update/ Finalise Vision Accelerator – Elaine and Dorothy will draft the Vision Accelerator, which will be used to inform the Action Plan. They anticipate working with the appointed consultant to finalise it.	by 9 th June 2019
10	Hosting the European Space Agency Space 19+ ministerial workshop to be held in the North East region on 10 th June. This will give SMEs the opportunity to be consulted on the future ESA funding priorities for space in the framework.	10 th June 2019
11	The final of five SPIA workshops held on 10 th June. These workshops provided the opportunity for SPIA members to consider and inform the Regional Vision, Vision Accelerator, Action Plan and Stakeholder Engagement Event. It also supported the development of a cluster/network of regional quadruple helix players in the technology space.	Up to 10 th June 2019
12	Distribution of the North East's Space Technology using Photonics Capability and Competencies Map to set a baseline for the Action Plan. This was informed by a survey of the SPIA group, information from the SPIA workshops, the UK-wide innovation survey and market research using resources including the EPRISE database and the KTN technology landscapes.	9 th August 2019

	Distribution to internal stakeholders of the supporting map of quadruple helix contacts and stakeholder intelligence in the region.	
13	Project networking & dissemination at UK Space Conference at Wales. Elaine and Dorothy to attend as delegates to widen the project reach beyond current stakeholders. The UK event will enable us to discuss the project with a wider range of people from across the country, which may generate some further ideas for finalising the Action Plan as well as providing a fantastic networking/ dissemination opportunity.	24th-26th Sept 2019
14	Eight face-to-face or phone interviews with individual sector experts in the region: <ol style="list-style-type: none"> 1. Alex Cole – CPI 2. Rachel Murphy – Durham University 3. Gillian Middleton – NE-BIC 4. Ken Tears – Sunderland University 5. George Gerring – The Water Hub 	5 th August – 28 th August 2019
15	Agreement with NESACOE (North East Satellite Applications Centre of Excellence) on their role as leader and facilitator in the Action Plan.	September 2019
16	Submission of Draft Action Plan to Resolvo to forward to JS for review	5 th September 2019
17	Submission of Draft Action Plan including edits from JS feedback to Resolvo for review	13 th September 2019
18	Dissemination meeting with the NE-LEP: Face-to-face meeting with Alan Welby, the Innovation Director, to share the Action Plan with him and discuss how NE-LEP will strategically support its aims.	3 rd October 2019
19	STEPHANIE project Stakeholder Engagement event (AKA mid-term event or Open Engagement Event) - timed to coincide with Durham hosting the project partner meeting. This event is a dissemination event to raise awareness of the work we have been doing through the STEPHANIE project, how it interfaces with the local business context, and what can be expected during Phase 2.	13 th November 2019
20	Final version of Action Plan produced using any final ideas or suggestions that might have arisen from the last SPIA meeting, project partner meeting, or the Stakeholder Engagement Event to finalise the Action Plan.	5 th December 2019

21	Contribute to NE-LEP Sector Competences (which may be branded as Smart Specialisation or Innovation Delivery Framework) work to inform production of Local Industrial Strategy (NE-LEP are holding consultation workshops with key partners between June and December 2019).	by December 2019
22	Assign roles and responsibilities for monitoring the implementation of the Action Plan in Phase 2 within Business Durham and NESACOE.	By December 2019

Activities carried out at interregional level

(please complete each of the sections below, with suggestions for the interregional exchange that you wish to undertake. In the description, please indicate whether you refer to sessions to be carried out in a STEPHANIE Exchange Event, to Staff exchanges (and if so, indicate the specific GP of interest) or to other input.

Then indicate when you expect to undertake these activities. In the draft version you should focus on activities carried out from Semester 4 (i.e. Staff exchanges already organised). For the final version, please insert activities already carried out and describe their input to assessing feasibility.)

N°	Activity Description	Timing (month/year or exact date where possible)
1	Staff Exchange – Durham visited Prague.	19 th & 20 th November 2018
2	Staff Exchange – Durham hosted Prague	4 th & 5 th December 2018
3	Staff Exchange – Durham visited Tuscany with a representative from the North East Local Enterprise Partnership (NE-LEP) and were particularly interested in how Tuscany had included Space Photonics in its Smart Specialisation Strategy; and how it was using Innovation Vouchers to encourage more businesses to collaborate with academic partners (both from within and beyond the region) on this theme. Durham is now exploring how these good practices can potentially influence the situation in Durham and North East England, and will include them in its Action Plan as appropriate.	19 th & 20 th March 2019
4	Attend STEPHANIE project partner meeting in Lannion, France. Opportunity to further exchange and explore good practices of the overseas partners, particularly the hosts in	13 th & 14 th June, 2019

	Lannion. The Durham delegates will be particularly looking for ideas that can potentially be used to inform their Action Plan. They have appointed a consultant to accompany them to the meeting, to help with this task.	
5	Durham to host STEPHANIE project partner meeting. This is a final opportunity for partners to discuss and compare their Action Plans, and identify any final changes that may be required.	13 th & 14 th November 2019



Ministry of Housing,
Communities &
Local Government



European Union

European Regional
Development Fund

25th February 2020

Elaine Scott
STEPHANIE Project / Business Engagement & Opportunities Manager
Business Durham
Salvus House
Aykley Heads
Durham
DH1 5TS

Dear Elaine

INTERREG EUROPE: Space Technology with Photonics for Market and Societal Challenges (STEPHANIE) Action Plan for County Durham

Firstly, can I say congratulations on the successful application to Interreg Europe and for your invitation to attend and participate in the workshop in Durham at the end of last year. I found the day interesting and stimulating and it was a pleasure to engage with your proposed project partners.

Thank you for sharing the proposed STEPHANIE Action Plan for County Durham. I can confirm that the ERDF Managing Authority supports and endorses the proposed activity included in the Action Plan.

I look forward to working with you to share experience and best practice in respect of the ERDF programme's ongoing support for innovation and the evolution of policy regarding domestic successor arrangements to ESI Funds.

Yours sincerely

Iain Derrick
Team Leader
ERDF Policy and Partnerships

ERDF Managing Authority
Ministry of Housing, Communities and
Local Government
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