Action Plan

PP1 - ERNACT

CONTENTS

1 EXECUTIVE SUMMARY

The selection of this action is the result of the process started by ERNACT within the DEVISE project in coordination with the Donegal Digital Action plan working group as the main responsible of the policy instrument addressed in the project.

As part of this process it was agreed within the Donegal Digital Action plan working group that to focus the work in the Action 2: Digital Innovation – Connecting talent, which objective is to create a collaborative environment for players in the field of technology research, innovation and tech businesses, as well as non-tech businesses within Donegal's priority sectors Digital Innovation Hubs action included in the Donegal Digital Action Plan.

The Innovation as a Service (IaaS) action presented is aimed to increase the uptake of disruptive technology solutions by SMEs in the Border region to accelerate their competitiveness and innovation levels. This is key to enabling SMEs to address the twin threats of Brexit and Covid-19. The unique approach of the project is to use sophisticated digital collaboration services to better network and connect the Border region's growing network of innovation hubs to technology providers (universities and institutes of technology) across the Border and West regions in Ireland.

The project will impact 120 manufacturing SMEs in the Border region, engaging with them over three years to identify and test 60 new solutions of advanced digital technologies, eventually implementing 40. This will have a positive impact on all 120 companies improving their ability to introduce new advanced processes into their businesses and innovation, productivity and entrepreneurial levels. It will also improve the skill levels of employees.

It will also enhance the capacity of the 12 local digital hubs to service SMEs in their catchment area enhancing their sustainability, reputation, range and quality of services.

The project will improve the capacity and responsiveness of at least 14 knowledge providers (institutes of technology, universities and the private sector) to supply high tech solutions to SMEs by stimulating demand, raising awareness of their offerings and, crucially, putting new systems and processes in place to facilitate effective collaboration with the hubs and SMEs.

2 GENERAL INFORMATION

- **Project: DEVISE**
- **Partner organisation: ERNACT**
- **Other partner organisations involved (if relevant): ……**
- **Country: Ireland**
- **NUTS2 region: IE01**
- **Contact person: Jose Manuel San Emeterio**
  - **Email: jsanemeterio@ernact.eu**
  - **Phone number: +353 74 916 8212**

3 POLICY CONTEXT

The Action Plan aims to impact:

☐ Investment for Growth and Jobs programme

☐ European Territorial Cooperation programme

☒ Other regional development policy instrument

- Name of the policy instrument addressed: **Local Economic and Community Plan for County Donegal (Donegal Digital Action Plan)**

In the case of DEVISE, the work carried with the Donegal Digital Working Group had its focus around **Action 2: Digital Innovation – Connecting talent,** which objective is to create a collaborative environment for players in the field of technology research, innovation and tech businesses, as well as non-tech businesses within Donegal's priority sectors.

The action proposed contributes to meet this objective since it creates a collaborative environment to transfer technologies from existing research capacity to support the digital transformation of businesses.

- New policy instrument addressed**: Border Enterprise Development Fund**

This action will be funded by the Border Enterprise Development Fund managed by Enterprise Ireland so we include it as new policy instrument addressed.

The Border Enterprise Development Fund is part of a package launched by the Ministry for Business, Enterprise and Innovation of the Irish Government and managed by the governmental agency Enterprise Ireland specifically designed to help the counties most impacted from Brexit: Donegal, Sligo, Leitrim, Cavan, Monaghan and Louth.

The main objective of the package is to support businesses across the region to strengthen their resilience and capabilities and drive economic activity.

4 ACTION: INNOVATION AS A SERVICE (IAAS)

4.1 BACKGROUND

The selection of this action is the result of the process started by ERNACT within the DEVISE project in coordination with the Donegal Digital Action plan working group as the main responsible of the policy instrument addressed in the project.

The Donegal Digital Action Plan is developed within the framework of the County's Local Economic and Community Plan(LECP) process, which mandated that a separate Donegal Digital Action Plan working group be setup to develop and implement the action plan.

Coordinated by ERNACT, this is a public-private partnership established in 2014 and formed by 9 permanent organisations, including Donegal County Council, Letterkenny Institute of Technology (LYIT), Enterprise Ireland (EI), Údarás na Gaeltachta, Industrial Development Authority (IDA), Pramerica, Inishowen Development Partnership and Fáilte Ireland to address the following challenges in County Donegal (Ireland):

- Need to expand the Letterkenny cluster to other areas within the County
- Securing staff with the required skills and experience
- Low levels of research activity and adoption of emerging innovation approaches needed
- Challenging provision of quality and sustainable public services

Donegal Digital has the following objectives:

1. Utilise extended community as the key dynamic to implement digital transformation
2. Build upon the strong foundation of the Letterkenny digital cluster to create new enterprises
3. Increase the level of digital research and innovation being carried out to allow us to address future generations

The objectives are achieved by a number of actions agreed by the members of the ecosystem who take responsibilities in their delivery according to their targets and expertise.

Annex 1 includes a detailed description of this process explaining the different activities and meetings involving the local stakeholders to define the actions and outcomes resulting from them.

Important note: this action covers a wider geographical area than County Donegal, in particular the Border region. The main reason is due to the fact that the core idea is to connect SMEs to digital technology knowledge providers beyond the county boundaries.

State of play in the region in the field of application

Small manufacturing businesses in the Border region can improve their innovation and competitiveness levels by accelerating the introduction of disruptive technologies into their manufacturing and supporting business processes. This takes place against a background of a need to diversify into other geographic markets as a result of Brexit, acute skill shortages and competition from firms in other advanced economies as a result of the introduction of Industry 4.0 manufacturing solutions.

It is predicted that traditional manufacturing SMEs, that do not innovate and successfully adopt to the Industry 4.0 model, will experience a downward cycle of lower profitability, productivity and competitiveness. This has significant implications for the Border region where 74% of the region's manufacturing is concentrated in subsectors classified as *low* or *medium-low* tech compared to 54% nationally.

Technology Providers: The Border region, and its adjoining areas, contains an impressive stock of research centres, institutes of technology, applied research expertise and demonstration facilities in manufacturing-relevant disruptive technologies.

Disruptive technology refers collectively to the latest breed of digital technologies embedded in Industry 4.0. This encompasses Internet of Things (IoT), 3D Printing, Robotics, Virtual Reality (VR), Augmented Reality (AR), Artificial Intelligence (AI), Machine Learning and Big Data.

It also encompasses older manufacturing services, such as product design and process management, which adapted for the cloud computing model, have boosted inter-company working across the supply chain.

Innovation Hubs: More recently, the rapidly growing number of digital and innovation hubs in the region provides a significant new channel to manufacturing companies in local areas that could be used to increase the

uptake of solutions and services on offer from technology knowledge providers related to relevant disruptive technologies. Arrangements for accessing the technology knowledge providers can benefit considerably by adapting to utilise the new channel of innovation hubs within the local innovation ecosystem.

This will not occur automatically, however. The distance between small companies and a relevant TKP can be prohibitive. Thus, systematic arrangements for working between the hubs and TKPs need to be put in place. Hub managers need to be trained to gain a degree of familiarity with the areas of expertise in TKP's. Hubs will need to include new services for their clients that promote the offerings of each provider, match particular manufacturing clients with the most relevant organisation and facilitate effective communication and working between the client and the chosen provider.

4.2 KNOWLEDGE APPLIED FROM DEVISE

Partner good practice/experience (please, detail: good practice name, short description and location)	How this good practice/experience has contributed to the actions developed in your Action Plan (detail any transfers, full or partial of good practice)
DEVISE Regional Supply/Demand analysis	DEVISE has provided us with the methodology to monitor and assess the current situation regarding the digital transformation of SMEs. The regional analysis has served to identify needs to cover and opportunities to explore
Imec good practice (West Flanders - Belgium): research programme for demand-driven, cooperative research on hardware-, software- and combined	This Imec programme has served as inspiration for the IaaS service as a way of: • Collaboration and research tailored to the needs of the consortium partners • Access to an extensive pool of expertise of academics and industry partners

Partner good practice/experience (please, detail: good practice name, short description and location)	How this good practice/experience has contributed to the actions developed in your Action Plan (detail any transfers, full or partial of good practice)
hardware/software innovations	• A route to valorisation through the industry partners
Apollo good practice (Laval – France): programme to support companies in their innovation process by adapting methods usually used by startups	The approach followed in the Apollo good practice is a very interesting input when carrying out the delivery and testing of the service to introduce disruptive digital technologies into the operations of the companies
Regional Manufacturing Digital Innovation Hub IoT-Compass (South Ostrobothnia – Finland)	The following activities are of particular relevance when implementing the IaaS service: - Digital Factory Academy: the TKP in IaaS can learn from this as a way of making their technologies and infrastructure available for companies get to learn more of digital manufacturing and industrial internet. - IoT Pilots: to implement company demand-driven pilots.

4.3 ACTION DESCRIPTION

The aim of the *Innovation-as-a-Service* (IaaS) project is to increase the uptake of **disruptive technology** solutions by **SMEs** in the Border region to accelerate their competitiveness and innovation levels. This is key to enabling SMEs to address the twin threats of Brexit and Covid-19. The unique approach of the project is to use sophisticated **digital collaboration services** to better network and connect the Border region's growing network of **innovation hubs** to **technology providers** (universities and institutes of technology) across the Border and West regions (see map).

The digital collaboration tools will be selected on their ability to enable effective and enhanced collaboration between the three groups (SMEs, knowledge providers and hubs) in an innovation support environment. They include tools for visual modelling of enterprise processes, display of knowledge provider technology prototypes and facilities, case management, virtual meetings, etc.

Project's value for the region

The project's unique promise to entrepreneurs and senior business managers in manufacturing SMEs in the Border region is that they can have the same access to Ireland's most advanced digital solutions, technology and knowhow from their own factory premises or local area as if they were located in Dublin, Galway or Cork.

This will resonate strongly with them as they experience on a daily basis the challenges of initiating productivity drives from peripheral border areas. No longer will they have to take a day out of their time-poor schedules to visit the university in Galway or Dublin to look at possible innovative solutions. They may have already decided not to go as they won't have the time afterwards and the human skills to select a promising solution, pilot it and successfully integrate it into their manufacturing processes. This can take months.

With the IaaS project and service, thanks to the wonder of Virtual Reality, the entrepreneur will be able to *experience* a variety of promising solutions from a range of universities and institutes of technology – without leaving their factory or local innovation hub.

They can even be taken on a tour of the remote facilities or shown a possible solution by a researcher in the university wearing a mobile head-mounted camera, assisted by augmented reality and video-conferencing software. This will build on the SME manager's recent experience of using tools, such as Microsoft Teams or Zoom, to keep their business afloat due to the Covid-19 pandemic.

IaaS will also empower the local innovation hub to go beyond and complement the existing range of services they provide (property solutions, entrepreneurship, start-up services, signposting to development agencies, etc). The hubs will:

1. Use virtual reality and video to actively promote the IaaS service through their websites, targeted campaigns with local manufacturing SMEs and in their day-to-day meetings with individual SMEs.

2. Use digital collaboration services, virtual reality and augmented reality to organise online meetings for individual, or webcasts and virtual with groups of, local SMEs with a chosen technology provider, university or institute of technology.

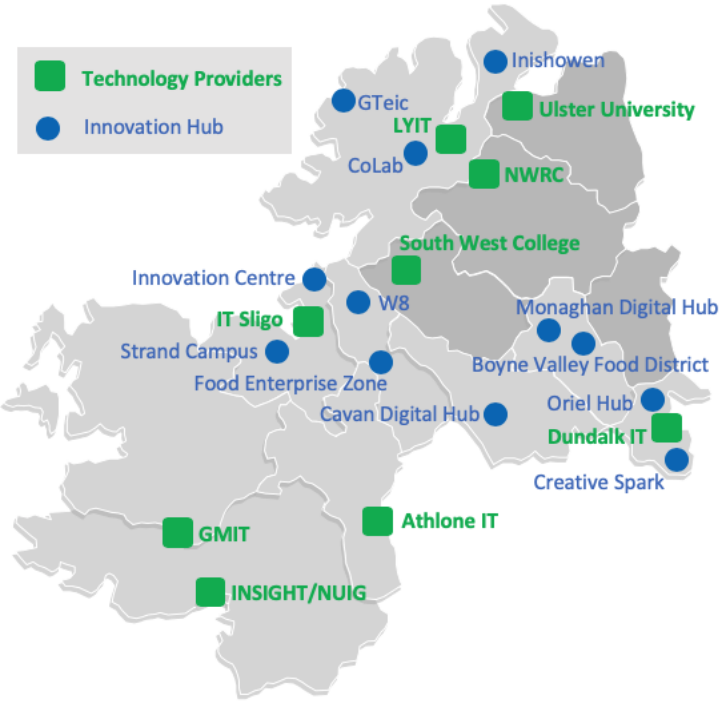
3. Use production process modelling tools to develop a model of the SME's key business processes collaboratively with the SME client and technology provider. This provides a common view of the area for improvement, simulate its impact on productivity and guide aid communication with the expert in the university.

4. Using CRM/Case Management service to maintain a unique case for each SME to maximise successful project manage implementation of the chosen solution.

Targets

This project intends to target 120 SMEs in the Border region, with a view to identifying 60 new solutions and implementing 40. More detail is included in the impact section.

Players involved and role in the implementation



The project's **partners** and **collaborators** comprise of the main technology focused **innovation hubs** in the Border region, along with disruptive **technology providers** (universities and institutes of technology) in the Border and West region as follows:

- **Innovation Hubs:** Donegal (CoLab, GTeic Gaoth Dobhair, Inishowen), Sligo (IT Innovation Centre, Strand Campus), Leitrim (W8 Centre, Food Zone), Cavan (Digital Hub), Monaghan (Digital Hub, Boyne Valley Food Innovation District), Louth (Oriel Hub, Creative Spark/Enterprise FabLab).

- **Technology Providers:** LYIT, Sligo IT, Athlone IT, GMIT, INSIGHT/NUIG, Ulster University, Dundalk IT, Industry 4.0 Dundalk, South Western College (Enniskillen/Omagh), North West Regional College (Derry).

In terms of development **roles**, both groups assisted define the target sector, manufacturing SMEs, and validate the feasibility of the project approach. The technology provider group assisted research the most suitable cloud collaboration tools, while representatives of the innovation hubs group envisaged how the IaaS service would be integrated into the existing hub services offerings.

In terms of project delivery roles:

- The Innovation Hubs will promote the service to their enterprise clients, carry out initial suitability testing, instigate and maintain on-going contact with the most suitable technology provider(s) on behalf of the client, provide related development support for the client (e.g., assistance to access innovation vouchers).

- The Technology Providers will promote their specialisms via the VR service, webcasts, 360 videos and augmented reality tours. They will engage in individual client consultations through the innovation hubs, using the digital collaboration tools developed and collaborate with clients to implement pilots and source solutions.

4.4 TIMEFRAME AND FUNDING

Include here the timeframe for the project funding application and set-up/implementation process. Note: this chart will be key for the reporting procedure on the indicators given in the Application Form (Number of Projects and Investments relating to your PI and other Policy Instruments)

Project/Action Investment Line/Funding Source + Amount (please state each source of funding)	***Submitted For Funding***	***Funding Decision***	***Project Start Date / End date***	***Other key milestones***
Innovation as a Service / Enterprise Ireland's Border Enterprise Development Fund (BEDF)/435.630 €)	*April 2020*	*June 2020*	*November 2020 / October 2023*	

4.5 WORKPLAN

The project has a total lifespan of 36 months, divided into six work packages. These are summarised below:

WP1- Management (M1–M36): By month 3, a service manager will be appointed and the project advisory board and steering committee, project executive and administration will be up and running. Progress reports against KPI's and cost claims will be submitted every six months to enterprise Ireland.

WP2- Cloud Collaboration Tools (M3-M8): During this period the digital collaboration tools described above, which form a key aspect of the project, will be evaluated, tested and selected. This will also involve analysis of how best to incorporate the new services into the general operation of the hubs and the overall industrial engagement processes of the knowledge providers. The hub managers and technology providers, consequently, will be fully involved in this process. This will be facilitated by the cloud computing nature of the tools, facilitating participation across the Border/Western region and an iterative approach to testing being able to link SMEs and technology providers and will be "wrapped" in a provider catalogue for use in all participating innovation hubs. It will contain the following sub-services:

1. Directory of technology providers and their Industry 4.0 specialisms

2. Virtual tours of each technology provider facility, with VR demonstrations of key solutions. This will also involve development of VR content for the knowledge providers

3. Access to online conferencing/webcasting service for hub managers and local SMEs to technology providers in the catalogue

4. Case management/customer relationship service/software, managed by hub managers, to manage the ongoing relationship between a particular enterprise and the technology provider

5. Cloud facility to model and simulate that part of an enterprise's process under investigation for improvement to ensure common understanding between the enterprise, hub manager and technology provider (all located in different locations).

WP3- Communication (M1-M36): This will involve developing and a brand and delivering a communications plan for the IaaS service, that leverages and respects the three different categories of organisations involved. Key aspects will be supporting communications between the hubs and their clients, where IaaS is only one of the range of services provided by the hubs and highlighting the potential of the new channel for the knowledge providers.

WP4- Training (M9-M12): This workpackage will develop and deliver the training needed for both hub managers and knowledge provider liaison staff to use each of the sub-services and their incorporation into existing day-to-day service offerings.

WP5- Service Piloting & Delivery (M13-M33): With the digital collaboration tools in place and the training complete, all completed by month 12, hubs along the Border region will now engage with manufacturing SMEs to implement the project's aim, i.e., introduce disruptive digital technologies into their operations. This phase of the project will begin in Month 13 and last for 20 months. Given that the overall target for the project is to engage with 120 SMEs, this equates to an average of 10 SMEs per hub or 20 per county (see table below).

WP6- Sustainability (M30-M36): This will involve expansion of the IaaS service to other hubs in the Border region and in the West region, in particular. It will also involve final plans for operation of the service during years 4 and 5 when the project funding is complete.

4.6 BUDGET BREAKDOWN FOR THE ACTION

Category of funding	Expenditure Amount
Salaries	204,600
Overheads *(i.e. calculated at x % of staff costs)*	61,380
Travel & Subsistence	45,400
External expertise	75,000
Promotional activities	11,000
Equipment	38,250
TOTAL	**435,630**

4.7 VIABILITY AND SUSTAINABILITY

The IaaS project will result in an added-value service, whose assets comprise of relationships between the innovation community in the Border and West regions, widely available off-the-shelf cloud-based software systems and the know-how embedded among innovation community staff on how to operate the different elements of the service.

This relatively low risk to sustainability is further reduced due to very low ongoing overheads, a new deliver company/entity is not needed, does not involve construction/refurbishment of buildings and does not depend on rental income to sustain it.

In the longer term, the project requires an organisation to coordinate access to the service, maintain its software elements and branding. ERNACT is committed to filling this role, and delivering and sustaining the service, for the next five years. During years four and five it will do this through its own operating budget. ERNACT is very well positioned to fulfil this role through its management of the ongoing Donegal Digital, its involvement in the development of the Inishowen Digital Hub, location in and strong linkages with LYIT/CoLab and the

wider innovation development community in the Border and West, and indeed across Europe.

The NWRA perceives the project as an important input into "*defining and implementing the EU post-2020 growth strategy priorities*".

The key determinant of effective project delivery and sustainability is that hub managers and technology provider staff find the service adds value to their core functions. Consequently, project implementation structures are designed to reflect this and to give representation to the large number of hubs and knowledge providers needed to deliver the project.

4.8 IMPACT EXPECTED

The implementation of the DEVISE action plan will bring:

4.8.1 Impact on the policy instrument addressed

It is expected an improvement of the policy instrument in the way of an implementation of a new project. The policy instrument improved is the Border Enterprise Development Fund which is the one providing the funding for the implementation of the IaaS action.

4.8.2 Specific impact on the region

The following table presents the specific impact expected on the region also broken down per county and hub.

	Number	SMEs targeted	Solutions Identified	Solutions Implemented
Region	1	120	60	40
Per Hub	12	10	5	3.3
Per County	6	20	10	6.7

4.9 MONITORING ACTIVITIES IN PHASE 2

Monitoring of activities will be done following the common methodology for the DEVISE project.

It will be implemented using a questionnaire developed by PP7 and it will follow this process:

1. Every semester in Phase 2 the survey, which includes information about the funding mobilised and specific information to gather the impact from companies participating in the action, will be collected.
2. The results will be analysed and summarised to be shared with the stakeholders
3. A final report aggregating all the data collected in the 4 semesters in Phase 2 will be produced.

Approval of Action Plan:

Brian Boyle, chairman of the Donegal Digital Action Plan working group, agrees to implement the Action Plan for PP1 - ERNACT as detailed above. I confirm that I have the required authorisation of to do so and that the required authorisation process has been duly carried out.

On behalf of: Donegal Digital Action Plan working group

Signed: BBoyle

Name: Brian Boyle

Position in Organisation: Head of Information Systems

Date: 19th January 2021

ANNEX 1 - LIST OF MAIN ACTIVITIES AND MEETINGS WITH THE LOCAL STAKEHOLDERS

Activity/meeting	Date	Stakeholders involved	Main outcomes
Regional Stakeholder Group meeting	Jul 2018	Donegal Digital Action Plan Working Group	DEVISE project presented to the Donegal Digital Action Plan Working Group (responsible of the policy instrument). It served for them to have a better idea on how the project could contribute to the improvement of the policy instrument.
Regional Stakeholder Group meeting	Dec 2018	Donegal Digital Action Plan Working Group	Presentation of the regional assessment methodology and good practices shared in the project. Commitment received from stakeholders (Enterprise Ireland, Local Enterprise Office, Udaras and LYIT) to circulate the questionnaires to their client SMEs to perform the micro-analysis and to organise the Intersectoral networking breakfast. Stakeholders also made an initial selection of their preferred good practices.
Regional assessment	Dec 2018 – May 2019	Donegal Digital Action Plan Working Group	Coordination to carry out the regional assessment as follows: 1) Macro-analysis prepared by ERNACT; 2) Micro-analysis - Enterprise Ireland, Local Enterprise Office, Udaras and LYIT to distribute the questionnaires to their client SMEs. ERNACT coordinating the process.
Regional Stakeholder Group meeting	Mar 2019	Donegal Digital Action	Presentation of results of the macro-analysis by ERNACT. Update on micro-analysis results gathered to date. Stakeholders agreed on reinforcing the distribution of the questionnaires. Agreement on

Activity/meeting	Date	Stakeholders involved	Main outcomes
		Plan Working Group	content and distribution of tasks to organise the intersectoral networking breakfast.
Intersectoral networking breakfast	May 2109	Donegal Digital Action Plan Working Group / SMEs from digital and other key sectors	Workshop with stakeholders where the results of the regional assessment were presented and used as a basis to configure the agenda. More than 40 attendees discussed on potential priorities and actions that could be included in the action plan. The initial list proposed included: 1) Digital clustering; 2) Digital audits; 3) Awareness raising; 4) Process automation pilots; 5) Digital demo centres and; 6) Digital skills
Staff exchanges	Oct 2019 – Sep 2020	Donegal County Council, Enterprise Ireland	Several stakeholders attended the staff exchanges in West Flanders and Laval. They served as inspiration and input to define the actions to be included within the action plan.
Regional Stakeholder Group meeting	Dec 2019	Donegal Digital Action Plan Working Group	Discussion on the actions that could be included in the action plan taking as a basis the results coming from the regional assessment and the interregional breakfast with companies.

Activity/meeting	Date	Stakeholders involved	Main outcomes
			It was agreed to seek for an action to create an ecosystem to support companies in their digital transformation. The action should allow these companies to have access to latest digital technologies like IoT, Virtual Reality, Robotics, etc. and support their integration into their processes and creation of new produts and services. Furthermore, the action should provide the required mechanisms for them to access to knowledge/expertise not restricted to their own geographical area. This led into the Innovation as a Service (IaaS) project idea.
Regional Stakeholder Group meeting	Feb 2020	Donegal Digital Action Plan Working Group	Discussion with the Donegal Digital Action Plan Working Group on potential funding streams that could support the action plan. As a result, the Border Stimulus Fund call planned to be launched by Enterprise Ireland in spring 2020 was identied as the appropiate one.
Coordination to apply for funding for the IaaS action	Mar – May 2020	ERNACT in coordination with the Donegal Digital Action	Coordination and submission of the IaaS application to the Border Stimulus Call launched by Enterprise Ireland.

Activity/meeting	Date	Stakeholders involved	Main outcomes
		plan working group	
Regional Stakeholder Group meeting	Jul 2020	Donegal Digital Action Plan Working Group	Presentation of the successful result of the IaaS proposal to the RSG group including the workplan to be carried out for its implementation in Phase 2.