Language of Innovation Project Report

June 2024

Contents

Project Introduction

Background

Raising productivity is one of four priorities for the Department for the Economy (DfE), along with regional balance, good jobs and decarbonisation. Northern Ireland's productivity performance falls behind that of the United Kingdom (UK), being consistently below the UK average over the past 20 years (ONS, 2023[1]).

Innovation can contribute to DfE objectives as it is a key driver of productivity. Through developing new products, introducing new ways of doing things, adopting new technology or developing new business models, businesses can be more efficient, raise turnover and become more resilient in the face of challenges. A key aim for raising innovation, and therefore productivity, is to increase the number of businesses engaged in innovation.

All businesses have the potential to innovate but data suggests that innovation is more likely to occur the larger a business is. The UK Innovation Survey 2023[2] indicates that 50% of large businesses were innovation active, compared to 36% of small and medium enterprises (SMEs)[3]. To raise innovation levels across the economy, attention must be paid to the barriers faced by smaller businesses.

Evidence[4] suggests that inaccessible language and communications are a barrier to innovation, specifically for NI micro businesses and SMEs. There is also a miscomprehension of what innovation is and what its benefits are for businesses. Research is required to understand the barriers and enablers to the adoption of innovation, including innovative technology and innovative management procedures, amongst micro businesses and SMEs, specifically in terms of exploring businesses' understanding of innovation and the language used.

The DfE tasked the Department of Finance's Innovation Lab (now part of Innovation Consultancy Services) with using behaviourally informed user research to engage with micro businesses and SMEs to explore and compare their understanding of innovation, and to identify and investigate any gaps and barriers that might exist between the providers of innovation support and those who might access it, to prompt these types of businesses from not knowing about innovation and support available, to knowing about it and wanting to engage in it.

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[1] ONS, 2023
[2] United Kingdom innovation survey 2023: report - GOV.UK (www.gov.uk)
[3] Inter Departmental Business Register | Northern Ireland Statistics and Research Agency (nisra.gov.uk) [4] The-Tech-Tonic-2023 (9).pdf

Innovation activities and definition

Innovation takes place in businesses through a range of activities and processes, which can be understood differently by different parties. The following activities and definitions are used as a starting point for how micro businesses and SMEs in Northern Ireland might understand innovation and the behaviours associated with innovating.

The UK Innovation Survey[5] uses the following activities to define a range of innovation categories:

1. Introduction of a new or significantly improved product (good or service) or process;
2. Engagement in innovation projects not yet complete or abandoned;
3. New or significantly improved forms of organisation, business structures or practices and marketing concepts or strategies;
4. Activities in areas such as internal research and development (R&D), training, acquisition of external knowledge or machinery and equipment linked to innovation activities.

Invest NI's Innovate NI programme defines innovation as '*the development and implementation of a new or improved product, service, model, or process which is novel (significantly different), and has/will be introduced to the market (product/service) or implemented within the business (process, model) creating value*'.

This definition, which aligns with OECD[6] and ISO Innovation Management, alongside these four activities, provides a reference to how those providing support and resources define it.

Research aim

The aim of this project is to apply insights from behavioural science to explore micro businesses and SMEs' language barriers to understanding, identifying, and facilitating innovation.

Research objectives:

   I. Provide recommendations on communicating with businesses about the importance of innovation and current innovation programmes with a view to driving future innovation;
  II. Research existing barriers in order to drive increased understanding of innovation leading to more enquiries to support schemes and more successful applications;
 III. Take a behavioural approach to identifying existing gaps in order to make recommendations for future interventions; and
  IV. Provide recommendations to inform a future communications strategy.

The research is positioned within a NI context to reflect the perspectives of both local businesses and innovation support providers.

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[5] United Kingdom innovation survey 2023: report - GOV.UK (www.gov.uk)
[6] Oslo Manual 2018: Guidelines for Collecting, Reporting and Using Data on Innovation, 4th Edition | en | OECD

Innovation Lab and Innovation Consultancy Services

Sitting within the Department of Finance, the Northern Ireland Public Sector Innovation Lab was formed in 2014 and recently merged with Business Consultancy Services to form Innovation Consultancy Services. Its purpose has been to support the NICS (Northern Ireland Civil Service) and wider Public Sector to improve services through user-centred innovation and design. In doing so, it has drawn upon several areas of expertise, including:

- Behavioural science
- Service design
- Strategic insight labs and workshops
- Statistical analysis
- User research

The work tends to be demand driven with a portfolio of projects across NICS and the Public Sector. These projects are often prioritised based on links to PfG outcomes and Departments' strategic objectives.

Innovation Lab Projects

Innovation Lab based projects have typically taken a user-centred approach to supporting customers and problem solving. Projects follow a *Double Diamond* approach (Fig. 1), with a strong emphasis on problem definition, contextual understanding, intervention design and testing.
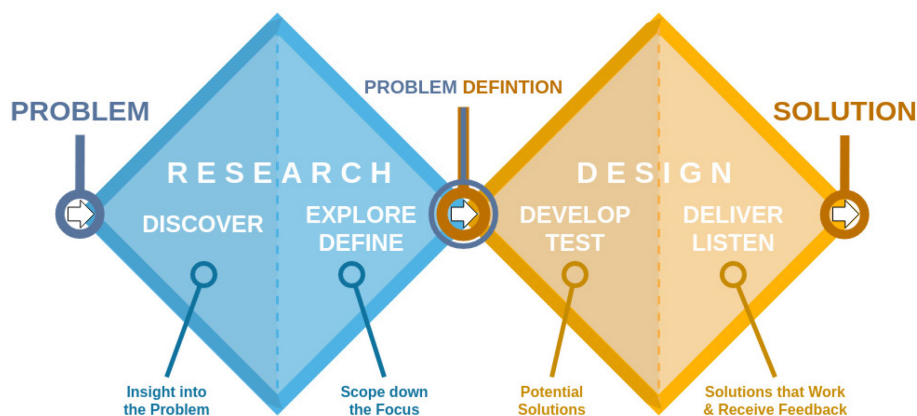
Fig 1: The 'Double Diamond'

Behavioural Science approach within Innovation Lab

One of the principal areas of expertise is Behavioural Science. This stream of work applies psychological and social science insights to wider societal problems being tackled by the public sector, with the aim of changing or influencing people's behaviour. This is a relatively young field with increasing application across public policy problems. The team has worked

to develop capacity and capability in Behavioural Science across the NICS, including delivering training to over 1700 civil servants to date. The primary role, however, is to tackle challenges including rates arrears in LPS (Land and Property Services), rent arrears in NIHE, court fines in Department of Justice, NICS HR sickness absence communications, recycling in Belfast, and increasing adherence to COVID-19 protective behaviours.

Methodology

Within Behavioural Science several tools and models of behaviour change have been developed and are routinely applied to research projects depending on suitability. In this project, the Behaviour Change Wheel (BCW)[7] is the basis behind the methodology and the COM-B model of behaviour change is a central component.
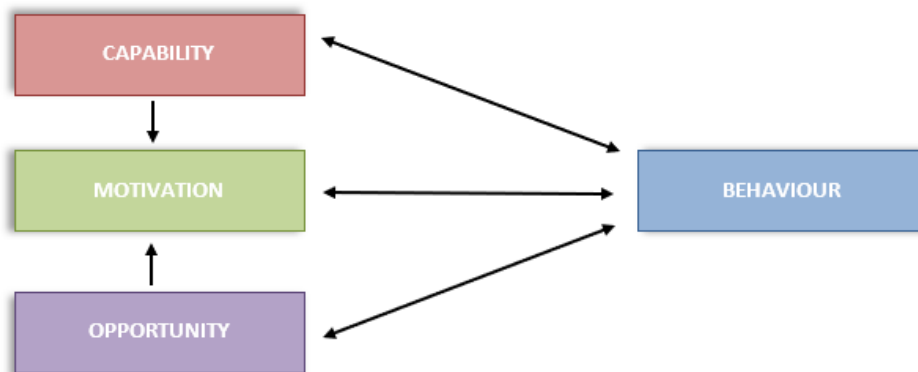

Fig. 2: COM-B Model of Behaviour Change (Michie et al., 2014)

COM-B recognises that behaviour (B) is part of an interacting system, and results from Capability (C), Opportunity (O) and Motivation (M):

- *capability* includes knowledge and skills, in terms of the psychological and physical ability to take part in a particular activity;
- *opportunity* includes all things outside of the individual that make a particular behaviour or activity possible or prompt it to occur; and
- *motivation* includes all the processes involved that direct behaviour including habits, emotions, and analytical decision making,

It is used to understand behaviour and to change it. In the case of this research identifying the opportunities to innovate that are associated with understanding what innovation means will be central. The full detail outlining the use of COM-B to create a behavioural diagnosis is provided in Annex 2.

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[7] Behaviour Change Wheel (BCW)

The research methodology took an iterative approach to layering and developing understanding, with each phase informing the next.

Phase 1: Sought to identify any existing published literature pertaining to how micro businesses and SMEs understand innovation. This included potential barriers experienced by these businesses in innovating, or recognising innovation within their business, and in accessing support for innovating.

First, a grey literature review (of non-academic material) was undertaken, followed by a review of academic material, including 326 research articles. The review process is outlined in Annex 1.

Phase 2: Nine semi-structured, in-depth interviews were conducted with individuals employed to support businesses in identifying or developing opportunities for innovation (**providers**). Participants were selected on a purposive sampling basis.

The objectives were:

I.   to explore and develop better understanding of the innovation landscape as it appears from the providers' perspective;

ii.   to build upon the desk-based research (Phase 1) in providing behavioural context to the barriers and enablers of access to innovation experienced by micro businesses and SMEs; and

iii.   to inform the development of an interview guide for subsequent interviews with businesses (Phase 3).

The project team worked together to identify interview questions generated by findings from Phase 1 and guided by topics reflecting the wider research question in exploring potential language and communication barriers to understanding and engaging in innovation. These included, *inter alia*:

i.   their definition of innovation;

ii.   how they come to engage with micro businesses and SMEs regarding innovation;

iii.   how the topic of innovation is broached with businesses and the language used;

iv.   their impressions about how innovation is perceived by micro businesses and SMEs; and

v.   beliefs regarding what does and does not work to communicate with businesses about innovation.

Phase 3: Comprised five semi-structured in-depth interviews conducted with participants who either run or are employed by micro businesses or SMEs. Participants were selected on a purposive sampling basis, recruited through providers engaged with in Phase 2.

The objectives were:

i.   to investigate the level of understanding that micro businesses and SMEs have around innovation;

ii.   to identify to what extent the language currently being used is a barrier to these businesses accessing support and resources;

iii.   to explore to what degree the providers' assumptions about how businesses approach and understand innovation are correct; and

iv.   to identify, from the businesses' perspectives, what could be improved in the innovation support landscape, with regard to understanding innovation.

Findings

Understanding 'what innovation means' involves recognising its relevance to micro businesses and SMEs, both to the business itself and to the owners and employees. This includes examining how innovation benefits these businesses and how beliefs about 'typical' innovators influence perceptions of innovation.

Effective communication of innovation to micro businesses and SMEs depends on the messaging, both verbal and visual, and the messengers. This section begins by outlining research findings that build an understanding of these key considerations from the perspectives of both providers and businesses. Specific findings from each research phase are detailed in Table 1.

1.   Literal definitions of innovation

When asked to define 'innovation', every answer differed, across all participants, irrespective of whether they were providers or businesses. Anyone who had been through a recognition/accreditation or financial support process was familiar with the recognised definition used by Invest NI's Innovate NI programme. The adjectives most commonly used to describe innovation were: ***adaptive, changed, creative, efficient, improved, novel, productive, valuable.***

2.   Innovation definitions being context dependent

Across providers and businesses there was consensus that a particular definition of innovation is required where awards/certificates and financial support are being accessed, but a wider definition applies outside of this, which allowed for smaller changes, smaller scale impact, improvement rather than necessitating something being new, experiences rather than products, less dependency on technology, and relative innovation – i.e., context dependent, relative value.

3.   Innovation versus innovating

A common theme across both groups was the belief that innovation tends to reflect a product or an output, whereas innovating - i.e., innovation in action – may be more

reflective of real-world efforts - e.g., implementing a more efficient process or changing practices to cut costs. Innovating additionally suggested an ongoing process and longer-term investment in being innovative that extended to a business culture.

A further aspect of this was that all participants gave 'practice based' examples in trying to describe 'innovation'. They appeared to find it more effective to exemplify innovation rather than confine it to a language-based definition.

4. What innovation means in business related terms

Providers spoke about innovation as a pre-requisite for 'survival', seeing it as an essential part of continuing to exist and a means to sustain and grow customer base.

Businesses believed that innovation, as they practise it, extends beyond Invest NI's Innovate NI programme definition. While they appreciated and accepted this definition, they also perceived it as focusing on more novel and high-level aspects of innovation. Businesses viewed innovation, as they practised it, as covering any ideas, changes, and developments that saved time, money or proved more sustainable, thus improving the efficiency of the business. This was also indicative of the view of some providers.

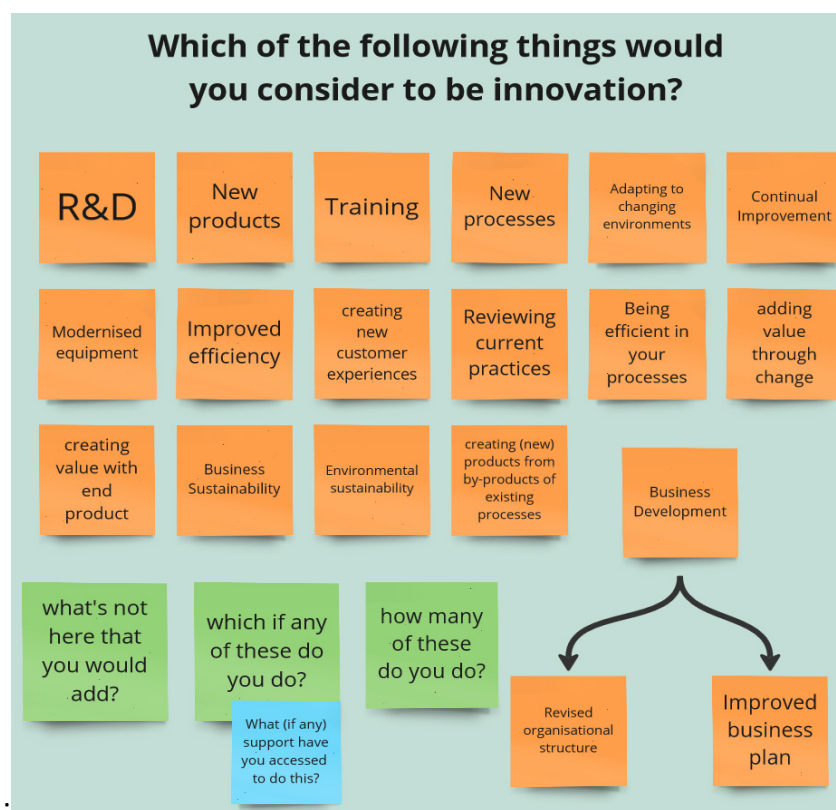All participants viewed the following:

Fig. 3: Interview prompt 'which of the following things would you consider to be innovation?'

The purpose of the exercise was to guide exploration of understanding in the concept of innovation through a simple, visual approach. Providers and businesses alike identified all but two of the features as being representative of innovation, namely, "business

development – revised organisational structure, improved business plan" and "being efficient in your processes". In both cases these features were instead deemed to be a possible by-product of innovation as opposed to innovation itself.

To understand to what extent this fully reflected participants' views they were asked to provide additional suggestions of what they would consider to be innovation. Additional suggestions included:

- flexibility and ability to adapt;
- having the right people in the right team – being an innovative, 'multi-disciplinary' team;
- innovation as a process with a beginning, middle and end as opposed to being a product or 'an innovation'; and
- open-mindedness, in terms of ongoing learning, revision and possibility to respond to changing customer and societal needs.

Participants also suggested that the Innovate NI programme definition of innovation overlooks smaller businesses and should place less emphasis on revolutionary ideas, instead focusing more on 'just good ideas'. Although these findings initially appeared contradictory, they were indicative of participants' views of innovation moving beyond products to reflect processes, even extending to attitudes and culture. It appears that business development, specifically reflected in a revised organisational structure or improved business plan, fell outside of what was considered to be innovation.

5. Innovation messengers

Innovation is communicated through many existing channels and by many providers of support. How this is delivered impacts businesses' understanding of innovation. Providers were identified as key communicators and key facilitators of understanding. Businesses identified that trusted and supportive providers, who can assist businesses in translating the concept of innovation into something meaningful and business relevant, are important to enabling understanding.

Campaigns to engage businesses in innovating also include messengers, for example the funders, the providers, the exemplar 'innovator' portrayed. These findings revealed the importance of seeing relatable innovators depicted. This includes crossing gender, age, location (Belfast versus wider NI), business sector, and business size divides. It further includes depicting relatable stories and innovation 'journeys' that show challenging starting points, so that those businesses currently struggling may feel inspired.

6. Innovation messages

Easily understood and simplified content of campaigns, applications and guidance will improve understanding of what innovation is, the potential benefits for individual businesses, and encourage these businesses to seek innovation support.

Recommendations:

The 15 recommendations generated through the research findings are now presented according to 4 respective themes.

Theme 1: Improving coordination and outreach to build understanding of innovation

1. Consider how to create more joined up access to innovation resources and support (e.g.'One stop Shop').

2. Identify and avail of opportunities to target micro businesses, SMEs and other difficult to engage groups via existing contacts: e.g., accountants, Women in Business, LPS business rates, etc.

Theme 2: Opportunities for providers to support businesses in understanding innovation.

3. Encourage existing providers in the focused provision of support to micro businesses and difficult to engage SMEs.

4. Ensure delivery of support allows for tailoring of bespoke messaging specific to the business size, sector, and type where possible, avoiding a 'one size fits all'.

5. Ensure, in all cases, that delivery of support includes identifying business specific opportunities, e.g. are specific grants available for that type of business or would they benefit from a specific type of support due to their structure etc?

6. Ensure that guidance and support provided to micro businesses and SMEs translates to implementable actions to enable innovation within their business.

Theme 3: Awards, certificates, and financial support, and how they communicate innovation

7. Review existing forms to produce simpler, more accessible versions with language that is less tech focused and more relatable across sectors.

8. Alleviate existing cost barriers to accessing support for innovation, e.g. making the application process more accessible could reduce the need for businesses having to pay 3rd party companies for help in applying.

Theme 4: Communications and media

- *Where communications are targeted*

9. Ensure campaigns actively target difficult to engage micro businesses and SMEs, for example, those in rural locations and those across sectors which are perceived to be overlooked.

- *Communication content*

10. Create case studies that present businesses and people representative of the wider micro business and SME community; make them more accessible.

11. Create case studies that more openly depict the journey and the challenges so that all businesses can see innovation as attainable; making being 'exceptional' less of an exception.

12. Highlight how awards elevate and reposition the business, affecting both public perception of the business and the personal identity of the business owner /employees.

13. Frame opportunities in terms of the benefits for the business –

e.g., highlight how the awards/certificates will benefit the business.

e.g., highlight how innovation will benefit the business.

14. Illustrate that support is relevant and accessible for all demographics.

15. Highlight and demonstrate to micro businesses and SMEs that innovation is more than new/novel product development, and also encompasses innovative business processes.

Rationale for recommendations
The process pursued to produce these recommendations is presented for further reference.

Phase 1 findings

•   Although much research has been undertaken to consider innovation in the context of micro businesses and SMEs, it does not focus on how innovation is understood by those businesses;

•   Current research focuses on practice-based barriers to innovation, including those related to finance, skill, market-based knowledge, and technology related information. Knowing these practice-based barriers to innovation may be useful if communication is to counter them/challenge existing perspectives;

•   Relevant findings that pertain to communication focus only on internal communication required to enable the delivery and advancement of innovation rather than the understanding of innovation;

•   'Innovation' as a term is restrictive and means different things to different businesses; and

•   Innovation and what it means should be better adapted to reflect what it means on a business-by-business basis – i.e., it should be translated into something more relatable.

Phases 2 and 3

Table 1: Development of findings across the two user groups (Providers and Businesses)

Initial Assumption	Providers' beliefs and experiences	Businesses' beliefs and experiences
Accessing support – application process		
Language and understanding of innovation act as a barrier for businesses in accessing support.	Language, in some cases, is a barrier for understanding innovation but not for accessing support/financial support.	Experience of the application form, including technical language, was at times inaccessible – e.g., "what is ideation"?
Businesses seek resources and financial support to aid in innovation in a solo capacity.	In some cases, providers do not see advisers as crucial parts of the innovation support process.	It can be challenging to navigate the innovation support space without an advisor. The level and extent of support experienced can vary from one advisor to the next.
The main barrier to accessing support is understanding what innovation actually is.	There was a sense that the process of applying for support can be bureaucratic.	The language and format of the forms can prove lengthy and laborious, relative to the potential benefit. Completion often requires outside help.
Accessing support – benefits		
Financial support is one of the main ways that businesses are encouraged to innovate.	Financial support is a popular and useful tool to facilitate and encourage innovation.	Funding can be helpful in facilitating companies to innovate and proceed with proposed developments.
Awards/Certificates are useful	Awards/certificates are helpful and sought after by the business community. They are also a pre-requisite to receiving much of the available innovation support.	Awards/certificates can be a necessary step prior to accessing financial support, for some businesses.
Current mechanisms for targeting businesses		
All businesses are targeted equally to grow the amount of innovation in NI.	Several of the providers believed micro businesses and SMEs were not the target market for support.	Support is perceived as not targeting those 'difficult to engage' smaller businesses and that this may be from 'insufficient funding.'
Micro businesses and SMEs' are not accessing support or being reached in the same way larger businesses are.	Split assumptions; some thought that they were targeting many different sectors of the business community and tailoring communication to each sector, others admitted that certain businesses were less considered in how they targeted support.	Belief that existing campaigns and opportunities are not always as inclusive as they could be.

There may be a multitude of ways to communicate innovation.	Case studies are a good tool to help display how the innovation support process can work. There is also a general slant towards showcasing the most successful innovation stories.	Would like to see more relatable case studies that are 'everyday,' and depict the real, lived journeys that led to success stories rather than the polished final product.
Terminology used to describe innovation		
Language around innovation is acting as a barrier of some description.	Providers spoke about how they adapt their language in engaging with businesses to reflect different businesses and differing requirements.	The language of innovation is perceived as remaining fairly engineering/product design/STEM focused. This is perceived as making access easier for businesses working in that space and a barrier to the those who do not.
Innovation is difficult to define and is often described with much variance.	There are a wide range of activities that fall under the umbrella of innovation, but the Innovate NI definition contains specific criteria.	Participants identified a wide range of business activities as innovation; suggesting knowledge of what, according to providers, innovation comprises, was good.
Innovation is difficult to define and is often described with much variance.	Each provider defined innovation differently, although all roughly aligned with Innovate NI definition. Providers often considered the Innovate NI definition to be a little more restrictive, with innovation beyond the support application process being wider in day-to-day business.	Each business defined innovation differently, however once presented with the Innovate NI definition there was general agreement with it. They did, however, consider it more restrictive, more prescriptive, and less encompassing of wider innovation.
The perception of innovation is of new and cutting-edge inventions.	An emphasis on the definition of innovation as entailing new and novel approaches and offerings was present across all professionals interviewed.	Novelty and newness were heavily emphasised when businesses were asked to define innovation, however this was often very product focused.
Accessing support – early engagement		
People did not access innovation support because they didn't understand what innovation was.	Engagement with support required pro-active research steps, coming in via FHE college, local council, and another provider rather than being 'invited' in.	Businesses undertook a lot of independent research to find out what support was available and learned a lot from their own mistakes and their peers. Councils and Further & Higher Education colleges were generally very helpful.
Anyone can access innovation support, its open to all.	Accessing innovation support requires prior understanding and experience in researching opportunities– often from a strong business background.	Even those with strong existing backgrounds in business struggled to navigate the innovation support space.

People are not accessing support because they may not understand that they are innovating.	Accessing support can depend on the business using the right language with providers, and in the application process more widely.	Accessing support can require fluency in communicating that not all businesses have. For many, applications feel arduous and time consuming. In particular, language of forms proved challenging to those without business background, with some outsourcing filling of forms.
The efficacy of the current messaging is somewhat unknown.	General thoughts were that the message needed to be consistent across sectors, and that information about available support should be centrally available/signposted from central hub to ensure this.	Belief that a more streamlined and consistent approach should be taken – a 'one stop shop' for information and guides.
All businesses need to come forward to avail of innovation support.	Existing supports appeared relatively tech focused and would not be as accessible to all, for example the service industry.	Perception that current provision of support favours particular businesses ('tech,' 'bright and shiny') of particular size (ideally not micro), in particular locations (Belfast-centric).
Awards and recognition for innovation		
Awards / Certificates are a driver of innovation.	Awards/certificates are very good for increasing visibility but there is a perception that they could be better promoted across multiple sectors. Additionally, there was the view that some businesses may not be aware of the benefits, suggesting that addressing this might drive greater engagement.	Mixed views around innovation awards/certificates. Some understand these as improving their business's standing in their industry, expressing pride in being a reward recipient. Others do not see the benefit or how they are relevant for their own business improvement, describing them as a box-ticking exercise.
Businesses are interested in what support for innovation is available to them, and how it will benefit their business.	Generally, it was thought that the focus needed to be on publicising what businesses can get from following the innovation process and how their business might prosper as a result.	Businesses were really interested in what innovating means for their business – what they will gain from it, how it relates to them, and how it will improve/benefit their business in the future.
Language used to describe innovation may be a barrier to business accessing support.	Having a background or being in the STEM industry is advantageous when talking about innovation.	Those with engineering or STEM background are more comfortable with the language around innovation, and better set to access information and support.
Micro businesses and SMEs might not be comfortable calling themselves innovators. There may be a cultural	Businesses are being innovative/innovators but wouldn't necessarily use that word.	Some businesses will recognise themselves as innovators, while others won't. Often depends on their background (e.g. they identify more readily if they are from engineering background).

hang up with self-promotion.		

Conclusion

This project had four research objectives:

I.   to provide recommendations on communicating with businesses about the importance of innovation and current innovation programmes with a view to driving future innovation.

The research identified an imperative for relevant, meaningful communication with businesses by providers and other sources. In addition, it presented how the terms "relevant" and "meaningful" are interpreted by businesses and providers.

II.   to research existing barriers in order to drive increased understanding of innovation leading to more enquiries to support schemes and more successful applications;

The research identified barriers to understanding innovation currently impacting businesses' perceptions of being eligible for schemes. In addition, some barriers within the application process were identified.

III.   to take a behavioural approach to identifying existing gaps in order to make recommendations for future intervention; and

Gaps outlined at 'II' were considered in terms of how they impact businesses' behaviours including innovating and accessing schemes (see annex 2). Opportunities to address these were provided through recommendations.

IV.   to provide recommendations to inform a future communications strategy.

Opportunities to inform future communications strategies were identified through the research recommendations widely, and in particular concerning messenger, targeting and content design.

The aim of this research was to apply insights from Behavioural Science to explore micro businesses and SMEs' language barriers to understanding, identifying and facilitating innovation. Identifying two user groups, providers and businesses, enabled source triangulation. A qualitative approach was taken, which comprised of 14 in-depth, semi-structured user interviews, generating 13 hours of data. This allowed in-depth exploration of each user group's experiences.

The two data sets were then explored using thematic analysis resulting in 21 key findings (table 1). These findings were categorised according to 6 broad research themes: *i. accessing support – application process; ii. accessing support – benefits; iii. current mechanisms for targeting businesses; iv. terminology used to describe innovation; v. accessing support – early engagement;* and *vi. awards and recognition for innovation*.

These themes identified the gaps in understanding that impact innovation in practice within micro businesses and SMEs.

Behavioural Science was then applied to produce a behavioural diagnosis (annex 2). This meant identifying what is necessary to support micro businesses and SMEs' to improve their understanding and drive innovation. This diagnosis forms the basis of 15 recommendations pertaining to 4 areas; *i. improving coordination and outreach to build understanding of innovation; II. opportunities for providers to support businesses in understanding innovation; III. awards, certificates, and financial support, and how they communicate innovation; IV. Communication and Media.*

Future opportunities to translate findings directly into content design can be facilitated as a final stage to the COM-B BCW process, which transitions from behavioural understanding to intervention design. Interventions have been provided within Annex 4 to illustrate examples of how the 15 recommendations could be translated into practice to support micro businesses and SMEs.

Literature Review

Exploring micro businesses and SMEs' language barriers to, and facilitators of, understanding and identifying innovation.

A review of existing non-academic literature was carried out using the search terms;

"Communicating innovation," "understanding innovation", "language of innovation," "knowledge of innovation", "barriers to innovation," "facilitators of innovation" AND "small business", "micro business," "SME"

The search of 'grey' literature returned 1,000s of articles, which were filtered to consider English language publications, and publications that related to smaller economic areas.

Upon further interrogation, there was no mention of barriers to innovation and in cases where barriers were described, the 'most significant barriers' to innovation were financial[8], with small businesses affected to a greater degree than larger firms, lack of skilled personnel, lack of knowledge of market information, lack of information on technology. There was no mention of a lack of understanding of, or failure to identify, innovation as a barrier for SMEs[9][10].

In cases where language is discussed in relation to innovation, it was to state that 'innovation is not a one size fits all term'[11], especially in the case of small businesses where language should be adapted to be more appropriate[12] and consistent across contexts[13] rather than in reference to a lack of understanding or inability to identify innovation.

A further review of 54 academic articles that were broadly centred around innovation in SMEs turned up similar themes in that, there was no mention of language or terminology around innovation. Those articles that mentioned the definition of, or language around, innovation did not look at these in any investigative capacity referring to innovation for their own purposes. These, therefore, offer no insight into the research question.

Much of the literature revolves around either case studies where innovation is being actively employed by companies, in which case it does not need to be identified and there is no barrier of language around innovation as the SME has enacted it – or it focuses on how innovation works within companies based on many variables such as knowledge of ICT[14], markets, technology and more.

Where communication or language is mentioned in these articles, it is in reference to the value of communication within SMEs, with their customers and suppliers and also good communication within the company.[15] Another article stressed the importance of communication, without which

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[8] [Barriers to Innovation among Spanish Manufacturing SMEs](#)
[9] [Innovation and Barriers to Innovation: Small and Medium Enterprises in Addis Ababa](#)
[10] [Financial and Non-Financial Barriers to Innovation and the Degree of Radicalness](#)
[11] [Back To Basics: What Is Innovation?](#)
[12] [Barriers to innovation within small firms in a peripheral location](#)
[13] [Design for Behaviour Change as a Driver for Sustainable Innovation: Challenges and Opportunities for Implementation in the Private and Public Sectors](#)
[14] [Aware or not? IT Organisations, Knowledge Management and Innovation](#)
[15] [Organizational communication and innovation in micro and small companies: a study on the application of the "Innovation Radar"](#)

innovation cannot spread.[16] This particular article mentioned that some participants 'did not understand the terms used, or that they were difficult to understand', but this appears to be in reference to technical language specific to the digital specialism, and it is not clear if the participants were misunderstanding the term 'innovation', specifically.

Following this review, it is clear the literature does not speak to the issue of micro businesses and SMEs 'struggling to identify or understand the concept of innovation (or innovative practices) due to opaque language and so is not helpful in our goal of investigating this issue.

To conclude, existing literature has nothing specific to say regarding how innovation is identified or understood in regard to language. This highlights the need for the research we are planning to conduct as there is a real gap in the literature in this area.

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[16] [Digital innovations in rural micro-enterprises](#)

COM-B Behavioural Diagnosis

BEHAVIOURAL COMPONENT	SOURCES OF BEHAVIOUR	Behavioural drivers	Existing gaps and opportunities identified by research	Behavioural recommendations
CAPABILITY The individual's physical and psychological ability to engage in the behaviour	*Physical* Capacity to engage in necessary physical processes	N/A		
	Psychological Capacity to engage in necessary thought processes	Understanding what innovation is; Understanding that support for innovation exists; Understanding how to look for innovation support; Knowing where to look for innovation support; Knowledge to understand the application forms; Having the written skills to complete the application forms.	Examples provided and recognised. Previous knowledge required. Previous business/corporate skill required. Luck, word of mouth, existing network previous knowledge required. Previous knowledge required and specific 'key word' insight to 'tick the box'. Currently working in tech/engineering allows the fluency in the language of innovation. Not doing so acts as a barrier	More joined up access to innovation resources and support; Targeting of micro businesses - SMEs 'and other difficult to engage groups via existing contacts: e.g., accountants, Women in Business; Review and revision of existing forms to produce simpler, more accessible versions with language that is not sector specific and that is more inclusive and do not depend on third party 'translation'.

OPPORTUNITY All factors lying outside the individual that make performance of the behaviour possible or prompt it	*Physical* Physical opportunity provided by the environment	The time to explore innovation opportunities when a small business requires 'all hands-on deck'; Having the money set aside to cover typical business as usual work to allow the research of innovation opportunities and to research associated support opportunities. The presence of support in all locations; The presence of support irrespective of business size;	The smaller the business, the less opportunity. Favours those with existing financial support. Some believed it to be Belfast centric. Some believed it to exclude many micro businesses. Perceived as tech, engineering, IT focused.	Alleviate existing cost barriers to accessing support for innovation Ensure campaigns and work priorities for existing providers actively target rural businesses, smaller businesses, and those across wider sectors
	Social Cultural milieu that dictates the way we think about things	Seeing relatable others as innovators; Peer-to-peer support with innovation; Access to mentorship that is relevant and tailored to reflect understanding of business needs.	Case studies - polished, unrealistic examples. Creates social norm and possibility. Allows translation of business into relevance for support opportunities.	Create case studies that present businesses and people who are more 'everyday', more accessible. Showing the journey and the challenges resonates and makes the exceptional less of an exception. Ensure mentors have the skills to tailor what they present to the specific business rather than using a 'one size fits all'. Ensure mentors have the understanding and objectivity

				required to identify opportunities.
				Ensure generic facts are translated into implementable steps with the business so that action can be undertaken
MOTIVATION All brain processes that energise and direct behaviour	*Automatic* Emotions and impulses arising from associative learning and/or innate dispositions	Feeling proud of receiving an award/ certificate

Fear of losing out by not innovating | Boosts confidence, drives further innovation and willingness to self-declare innovation. | Highlight how it feels to 'shine'. Highlight a sense of awards as being elevating and repositioning the business accordingly – public perception and personal identity. |
| | *Reflective* Evaluations and plans | Believing awards/ certificates are beneficial; Believing innovation is beneficial; Believing support is relevant and accessible; Planning to access support Planning to review business from innovation viewpoint – e.g., to consider future opportunities e.g., to translate existing opportunities into action | Raising profile. Increasing productivity, profit etc. Planning to innovate may support future opportunities to access support. | Support businesses in understanding how they can plan to innovative and how they can translate existing opportunities into accessing support |

Research Methods

Phase 1 process and findings

The overarching finding from the literature review was that extant research does not focus on the language of innovation from the perspective of understanding, but rather on the processes involved in innovation (e.g., product development) and the practical barriers to innovating (e.g., lack of finances, lack of skilled personnel etc.).

• Although much research has been undertaken to consider innovation in the context of micro businesses and SMEs,' this does not focus on how innovation is understood by those businesses;

• Research focuses on practice-based barriers to innovation including those related to finance, skill, market-based knowledge, and technology related information. Knowing these current conceptions of what innovation comprises may be useful if communication is to counter them/challenge existing perspectives;

• Findings pertaining to communication focus on internal communication required to enable the delivery and advancement of innovation;

• 'Innovation' as a term is restrictive and means different things to different businesses; and

• Innovation and what it means should be better adapted to reflect what it means on a business-by-business basis – i.e., it should be translated into something more relatable.

In addition to the literature review, a piece of auto-ethnographic research was undertaken from the perspective of a micro business owner who might be interested in finding ways to improve their business. This involved one member of the behavioural science team putting themselves in the position of this business owner and following the process they would be expected to take when starting the journey of innovating.

The results of this research were then explored and coded via the four activity codes that are used in the UK Innovation Survey as a basis for defining innovation. The goal of this exercise was to investigate the language that was already being used to discuss business growth and innovation, then compare how this mapped on to Invest NI's Innovate NI programme definition of innovation. It was found that all the results and information that were analysed contained some aspect or activity that are used to define innovation but none of the resources called it that. This suggests that there may be a lot of innovation and innovation related material being accessed but not necessarily termed as such.

The key findings from the literature review and conclusions from the auto-ethnographic research were considered together to guide the next stage of the research – Phase 2: Primary research – Provider interviews. Findings from both were used to develop an interview guide. This guide was designed to reflect the COM-B themes – capability (physical and psychological), opportunity (physical and social) and motivation (automatic and reflective). These shaped the question content, with the questions themselves being posed from a semi-structured stance to allow for an organic interview process that was user-centered. This ensured meeting the requirements of the research question, presenting an opportunity to explore gaps in knowledge and understanding of innovation already identified.

Phase 2 findings

To ensure consistency, each 60-90 minute interview was conducted by the same behavioural scientist. Using electronic recording and a transcription function, the interview content in each case was then edited to ensure accuracy. The video recordings were deleted, and all interview transcripts were fully anonymized. Following this, each transcript was analysed and coded according to themes, with these being reflective of the research question. Excerpts relevant to the coding were highlighted. These were recorded using colour coded sticky notes on Miro.

In addition, all themes were collated into one Excel document and themes that spanned multiple interviews or were particularly salient to the research were drawn out. The themes that best characterised the information gained from the interviews were then added to a further pane on the same Miro board and represented with a supporting quote from one of the providers. There was also a focus on how each provider defined innovation to see if they were broadly aligned.

In an approach that reflected the iterative nature of the research and the collaboration central to it, the findings from this phase were then reflected upon as a full project team in order to explore possible 'next steps'. This entailed taking time to think about what areas the wider project team wished to investigate as well as the best way to approach the interviews with businesses based on the findings of the interviews with the providers.

Phase 3 findings

Each interview lasted 30-60 minutes and were all conducted by the same behavioural scientist while a second behavioural scientist made notes capturing the content of the interview.

The project team worked together to identify interview questions generated by findings from phases 1 and 2 as well as incorporating suggestions from the DfE team about potential language and communication barriers. These included, inter alia:

i. Their definition of innovation and how it compared to the Innovation NI definition?

ii. Whether they consider themselves as innovators (and follow up).

iii. Whether they look for support in innovation activities and where they seek it.

iv. Any problems they have identified with the innovation support landscape.

As part of the interview several participants were shown a Miro board with boxes containing innovation activities or words associated with innovation **(Fig. 3).** They were then asked which of these they considered innovation and which they did not consider to be innovation. The same process was then repeated with the perceived benefits of innovating. Immediately following the interviews, details and comments that were salient were discussed to ensure that they were recorded, and the full scope of the business answers were represented. This information was then distilled into a 3-stage summary that represents the process of the research undertaken:

Initial Assumption – Providers' beliefs and experiences - Businesses' beliefs and experiences

To complete this summary the findings from the business interviews were used as a starting point, from there any corresponding findings from the interviews with providers were added and finally the understanding and thoughts that provided context for the work (gathered from the initial conversations with the DfE team and the literature review) were added to complete the picture. These findings are presented in **Table 1**.

Examples of recommendations translated into interventions

The 15 recommendations generated through the research findings are now presented according to respective themes, with examples of what these might look like in practice.

Theme 1: Improving coordination and outreach to build understanding of innovation.

1. Consider how to create more joined up access to innovation resources and support.

- This might look like the creation of a 'One stop Shop' to act as a first port of call for businesses seeking support.

2. Identify and avail of opportunities to target micro businesses and SMEs and other difficult to engage groups via existing contacts.

 - For example, using accountants, Women in Business, LPS business rates, etc to target communications at businesses which may be difficult to contact through conventional means.

Theme 2: Opportunities for providers to support businesses in understanding innovation.

3. Encourage existing providers in the focused provision of support to micro businesses and difficult to engage SMEs'.

- This might look like a concerted effort to run schemes that target businesses further outside of the traditional catchment area.

4. Ensure delivery of support allows for tailoring of bespoke messaging specific to the business size, sector, and type where possible, avoiding a 'one size fits all'.

- This might look like grouping advisors based on skills or interests and where possible assigning them to relevant businesses.

5. Ensure, in all cases, that delivery of support includes identifying business specific opportunities.

- This might include amending existing forms and improved guidance to better support advisors.

6. Ensure that guidance and support provided to micro businesses and SMEs translates to implementable actions to enable innovation within their business.

- One way to achieve this is by making sure that each step of the innovation process or innovation support process is explained in very basic and easily understood language with examples and realistic goals.

Theme 3: Awards, certificates, and financial support, and how they communicate innovation.

7. Review existing forms to produce simpler, more accessible versions with language that is less tech focused and more relatable across sectors.

- This might be achieved by simplifying the language and questions on the forms and by streamlining them as much as possible.

8. Alleviate existing cost barriers to accessing support for innovation.

- this could include changing support processes so that the need for 3rd party advisors is reduced.

Theme 4: Communications and media

- *Where communications are targeted*

9. Ensure campaigns actively target difficult to engage micro businesses SMEs', for example, those in rural locations and those across sectors which are perceived to be overlooked.

- might look like a concerted effort to run schemes that target businesses further outside of the traditional catchment area

- *content*

10. Create case studies that present businesses and people representative of the wider micro business and SME community; make them more accessible.

- For example, make the examples of successful businesses and successful innovation more varied and diverse in promotional campaigns.

11. Create case studies that more openly depict the journey and the challenges so that those aspiring to innovate can more readily identify, making being 'exceptional' less of an exception.

- For example, make the examples of businesses and innovation more accessible and relatable in promotional campaigns.

12. Highlight how awards elevate and reposition the business, affecting both public perception of the business and the personal identity of the business owner /employees.

- For example, more coverage of companies that have been recognised/received awards and the benefits that have come from that.

13. Frame opportunities in terms of the benefits for the business –

e.g., highlight how the awards/certificates will benefit the business.

e.g., highlight how innovation will benefit the business.

- This might look like more case studies or more examples of how companies have improved (in terms of profit, stability etc) from innovating

14. Illustrate that support is relevant and accessible for all demographics.

- This might look like campaigns that more explicitly focus on the harder to reach business types or it may also look like more case studies and examples of a wide variety of sectors and companies receiving and benefiting from support.

15. Highlight and demonstrate to micro businesses and SMEs that innovation is more than new/novel product development, and also encompasses innovative business processes.

-This might look like using language that focuses on any ideas, changes, and developments that saved time, money or were more sustainable, thus improving the efficiency of the business to describe innovation rather than emphasising the creation of new products.

-This includes all communication media. It might present at someone performing a task that involves/comprises innovating, or where products are included, they might be more experience based.

-This includes explicitly connecting business benefits of innovation with the concept of innovation to make it more relevant and attractive for business.