



In partnership with

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Evaluation Report

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I. Executive Summary

I.1 The programme

In 2022, the North East Local Enterprise Partnership in partnership with the Innovation SuperNetwork, launched the Challenge North Tyne programme (the Programme), an open innovation challenge project that fosters an openness towards innovation practice and which uses a mission-framework. This involves the establishment of specific challenges and concrete targets that act as a frame and stimulus for innovation.

The Challenge North Tyne programme aims to create a systemic approach to solving complex problems shared by multiple stakeholders, to build on other existing investments made by North of Tyne Combined Authority (NTCA) within the innovation support system, and to support the development of market leading solutions that address key challenges.

The two challenge areas defined by the programme as of priority importance to NTCA and the wider regional ecosystem are:

1. Supporting older people at Home, Work and Play, and
2. Delivering Energy Efficient, Net Zero Homes

In essence, the programme consisted of four key elements:

- A 'challenge agreement and definition' stage
- Applications for and award of a Stage 1 grant (unmatched, £5,000)
- Delivery of an Accelerator support programme
- Applications for and award of a Stage 2 grant (50% minimum match, up to £20,000)

I.2 This report

This report presents the findings of an independent evaluation of the Challenge North Tyne programme, which was commissioned in April 2023 and concluded in January 2024. The evaluation is focused on assessing the impact of the programme, both on its participants and the wider innovation ecosystem, and learning lessons that can be used to inform the design and implementation of challenge-led innovation support in the future. The evaluation therefore follows an approach which follows both a traditional methodology for assessing the impact and value for money of the programme, but also seeks to understand its contribution to systemic change within the innovation ecosystem.

I.3 Evaluation findings

I.3.1 Progress to targets

The monitoring data captured by North East LEP allows demonstrates that the programme has met all core output targets.

In all, 130 businesses engaged with the programme, with a majority (74 businesses, 57%) working on the Ageing mission, a further 42 businesses (32%) working on the Decarbonisation mission, and 14 businesses (11%) working on both.

The programme had a target of delivering intensive business support (>12 hours) to at least 40 businesses, and it delivered this level of support to 44 businesses (i.e. 110% of target). In addition, the programme targeted a further 60 businesses to receive between 3 and 12 hours of support has also been achieved (65 businesses have received this level of support to date, i.e. 108% of target). The remaining 21 businesses that engaged in the programme received fewer than 3 hours of support.

Monitoring data also evidences that a total of 50 Stage 1 grants were issued to a total of 47 businesses (meaning two businesses received two Stage 1 grant awards). The data also shows that seven Stage 2 grants have been awarded. This is considerably fewer than the original target of 40, and was driven by the fact that the Programme budget was unable to stretch to this many awards of Stage 2 grants, and it was decided that a smaller number of larger grants would have most impact.

1.3.2 Outcomes

The programme has been successful in delivering a large number of outcomes for programme participants (both Solution Providers¹ and Challenge Supporters²), as follows:

- It has successfully encouraged a large number of organisations to engage in open innovation via a challenge-led programme. This includes 130 SMEs and also around 25 Challenge Supporter organisations. Furthermore, the delivery partners and funders have gained valuable experience in designing and delivering an open innovation programme.
- Across the participant organisations, the programme has transferred knowledge and skill, both directly through the delivered support on the Accelerator element, and indirectly through assisting businesses to advance their innovation projects and gain knowledge and skills along the way. Challenge Supporters have also gathered important intelligence regarding the ideas and innovations being brought forward by the supplier base.
- Ideas for products and services were tested and new products and services launched as a result of the programme. Whilst not all of the innovation projects that the 130 participants brought into the programme will go forward to full launch (as is to be expected in an innovation programme), there is significant evidence that ideas have been developed and advanced by virtue of the grant and support received. Many of the ideas within the cohort were very early-stage, requiring exploration and testing prior to finalisation of the concept or specification, and the programme has supported a large number of ideas to progress through further development stages.
- As a result of the support provided, the work funded by the grants and the engagement with Challenge Supporters, the programme has facilitated the identification and assessment of a wide range of market opportunities. This is crucial to the successful commercialisation of the innovations being developed, and is often cited as a key barrier to innovation. Therefore the programme has instigated a model which contributes to breaking down this barrier.
- As a result of the programme, many partnerships and collaborations have been established; these include between Solution Provider and Challenge Supporters, and also between Solution Providers within the cohort (i.e. an internal market involving clients and suppliers has emerged). Given the central role of collaboration in open innovation in general, and the importance of a combined effort to address major challenges in particular, this is a very welcomed outcome.
- The programme has led to an increase in the level of private investment acquired by participating businesses in two ways. Firstly, the seven businesses that were awarded Stage 2 grants have been required to match this investment from their own or other sources. It is estimated that this amounts to at least £170,000. Secondly, it helped participants to progress their innovations, many are now well placed to move to the next round of development, often requiring additional investment funding. Examples include businesses which are forecasting raising sums of around £300,000 and £1 million pounds in the next year in order to fund further development and launch.
- The programme has led to an increase in the level of understanding of, and role for, open innovation in the innovation support ecosystem. This is demonstrated by the reaction of the delivery partners and funder to their roles in the programme and their reflections upon that

¹ The SMEs that participated in the programme and undertook innovation projects

² Organisations that supported the Challenge programme, be that in support of challenge identification and definition or by supporting Solution Providers to develop their innovation

experience. This is important, as it is a precursor to developing the role that open innovation (and challenge-led innovation in particular) might play in a future innovation support system.

- The Challenge North Tyne programme has demonstrated that a sustainable model for challenge-led innovation can and indeed has been developed. There are numerous ways in which the model can be adapted and improved, and it is not intended to be a ‘one size fits all’ solution. From an investment point of view, the evaluation evidence indicates that it has influenced thinking and indeed plans in relation to future investment in innovation support. The impacts delivered – both tangible and intangible – is considerable.
- Participants in the programme report a growth in open, collaborative mindset and behaviours, which is a significant benefit because it means that organisations have acquired sustainable skills and attitudes which will support and underpin success in future innovation projects, as well as that directly supported by Challenge North Tyne.
- There is strong evidence that the programme has already delivered business growth and that further development and launch of the products and services that have been supported by the programme will lead to additional growth in the future. Most innovations are still at pre-launch stage, meaning growth that flows from the revenue achieved by market launch has yet to occur. However, participants predict quite considerable growth potential driven by their programme-supported innovations.

1.3.3 Economic impacts and Value for Money

The survey provides evidence that indicates that for a minority of beneficiaries, job creation is both an ambition and an outcome that the programme is helping to deliver. Amongst the Solution Provider survey respondents (32 responses completed all relevant questions), the results indicate the following:

- 5.5 FTE jobs have been created to date
- A further 45 FTEs are forecast to be created in the next 2-3 years

Therefore, the evaluation concludes that as a result of the Challenge North Tyne programme, an estimated of 50.5 FTE jobs (gross) will be created in the next 2-3 years³. However, this estimate is based on a survey sample which is 25% of the population, meaning that future economic impacts across the entire cohort of beneficiaries could be more significant.

If 50.5 FTE jobs were indeed created as a result of the programme, the evaluation estimates that this would deliver annual gross GVA totalling £2.48 million to the North of Tyne economy.

When factors such as displacement, leakage, deadweight and multipliers are taken into account, and persistent effects over three years are considered, the evaluation estimates that the programme will deliver net GVA of £5.63 million (net present value).

Two expressions of value for money have been calculated, as follows:

- Cost per net job created is a maximum of £22,184.
- Return on investment is at least 7.9:1 (i.e. every £1 of public investment delivers £7.90 of net additional GVA to the economy).

1.3.4 Lessons learned

Key lessons arising from the evaluation with respect to delivery and impact can be summarised as follows:

- **Strategic alignment.** The two Challenges are appropriately aligned with regional strategies and needs, and it is crucial that this continues for future programmes. The practices of engaging with intermediaries and Challenge Supporters should continue and should be widened in line with the targeted challenge.

³ It is important to acknowledge that this forecast, based on the responses of beneficiaries to the Solution Providers survey, may be subject to optimism bias and therefore may be reflective of optimistic projections and expectations.

- **Scope of Challenges.** Further consideration may need to be given to provide more clarity and focus on challenge definition in future programmes, in order to enable more focused innovation within smaller participant groups and facilitating customer adoption.
- **Challenge exploration.** Dedication of additional time to group-based development of ideas would be beneficial (the caveat being that participants in these types of sessions need to be well matched).
- **Solution providers and segmentation.** A strong outcome from the Challenge North Tyne programme was the broad range of Solution Providers specifically in terms of sector, innovation capacity and maturity etc. Whilst this was a positive for this programme, it did throw up challenges regarding the content delivery, relevance and pace of the Accelerator element. More flexibility in delivery, based around participant segmentation, could help maximise value and benefit.
- **Solution provider support and investment.** The Challenge North Tyne grants (especially the Stage 1 grants) and the wide scope to utilise this small investment to develop and test ideas (within the framework established by each participant in their initial applications for funding), without needing to demonstrate a specified return on investment was widely applauded. Further consideration may be needed in terms of marginally uplifting the level of grant support, particularly where this is accompanied with a further refined approach to challenge definition, as per the above.
- **Communications.** Where reasonable investment and time allows, challenge programmes should draw on a range of short and longer form content and channels to get relevant messages across.
- **Challenge Supporters.** Feedback received through the consultation clearly indicates that Solution Providers valued the engagement of Challenge Supporters where this happened and therefore future programmes should seek to maximise this engagement. Additional financial resource is one part of the solution, alongside tighter challenge definition.
- **Links to broader business and innovation support ecosystem.** Numerous respondents felt that the provision of more directed 1-2-1 support would have been valuable, so knitting the wider innovation ecosystem and landscape into programme delivery is seen to be key and will drive further outcomes over the longer term.
- **Acknowledging social value and impact.** The opportunity to make an impact at the societal level is commonly stated as a motivator for involvement in Challenge-led programmes, and also represents one of the key types of impact that such programmes can achieve. For funders, ensuring that such objectives are established and taken into account when appraising options will become increasingly important, whilst for delivery partners, the challenge is to build content which supports the achievement of such outcomes through programme participation.

In addition, this evaluation represented an opportunity to reflect on the approach to evaluation of Challenge-led innovation programmes (and open innovation support programmes) more generally. The key lessons are as follows:

- For Challenge-led innovation programmes in particular, co-design of the evaluation approach is key, in order that the full range of potential impacts are mapped out and anticipated from the very start of an initiative.
- An evaluation partner should be commissioned once the programme has been awarded funding and in advance of challenge scoping. Advice on evaluation methodologies could even be acquired at the Business Case stage.
- Early commencement of an evaluation process would allow for engagement with stakeholders and partners that are involved in challenge scoping, to understand their expectations of the programme and how they might best engage with evaluation throughout the process. This is particularly important if some stakeholders are only involved early on, and/or if the delivery

period happens some time after the initial challenge scoping (as the quantum of time elapsed can affect the quality of evaluation evidence).

- Where feasible, evaluations should be designed with sufficient time and resource to properly engage with the wider innovation ecosystem in order to explore the ecosystem wide effects. This could be conducted through the convening of a group to observe and monitor such impacts from pre-delivery to post-delivery, for example.
- Ideally, the evaluation timetable should include a longer tail-end evaluation post programme delivery and investment to enable a more robust assessment of outcomes (and to test whether forecasts around post-delivery growth have been borne out in reality).
- One important output of this evaluation is the summary of desk research which was conducted to inform the development of an evaluation framework. This asset (reproduced in the Appendix of this report) could be kept current as new research and approaches are generated, and could be employed at the outset of any relevant evaluation in order to inform its design.
- Evaluation design in relation to Challenge-led programmes should carefully consider whether to attempt to capture the social, as well as economic impact of those programmes (and if so, how that might be done).

2. Introduction

In 2022, the North East Local Enterprise Partnership in partnership with the Innovation SuperNetwork launched the Challenge North Tyne programme (the Programme), an open innovation challenge project that fosters an openness towards innovation practice and which uses a mission-framework. This involved the establishment of specific challenges and concrete targets that act as a frame and stimulus for innovation.

The Programme formed part of the North East Strategic Economic Plan's (SEP) Innovation Programme and was delivered using an award of £713k funding through the North of Tyne Combined Authority's (NTCA) Investment Fund for delivery across the North of Tyne locality⁴. This was matched with £166k contribution from participating SME businesses.

The contract with NTCA required that the Challenge North Tyne programme be independently evaluated, in order to capture the impact of the programme on participants, explore the effectiveness and success of the programme and understand how it has contributed to the wider innovation ecosystem. The evaluation therefore is required to examine both the process of delivering the Programme, and the impact that has arisen from delivery (for direct beneficiaries, for organisations supporting the innovation challenges, and also on the wider innovation ecosystem).

1.4 Evaluation aims and objectives

The programme Business Case acknowledged the need for the programme to be evaluated independently, in line with the requirements of the funder. The Business Case states that the evaluation should be “embedded as a core process... capturing and monitoring innovation outputs through action-learning to ensure new models of innovation support are adopted in future interventions”.

In addition to exploring the standard process and impact themes within the evaluation, the fact that this is a challenge-led programme provides a valuable opportunity to explore a wider range of questions and to establish approaches for the future. The brief made clear that the evaluation must go beyond a ‘standard’ evaluation cost-benefit methodology as the nature of the mission-led challenge programme requires an investigation and assessment of both tangible and non-tangible outcomes where collaboration, the breaking down of silos, and the facilitation of cross-disciplinary ‘know-how’ and ‘expertise’ are intended to generate new opportunities and approaches.

The evaluation approach therefore addresses a number of core questions comprising:

- the impact for the participating businesses and onwards into the wider innovation ecosystem;
- what elements of delivery and engagement derives greatest value (and understanding what ‘value’ means in this context);
- the perception of risks and rewards across the programme participants;
- how the relationships between ‘Challenge Supporters’ and ‘Solution Providers’ develop and manifest themselves and how this may be quantified;
- assessing the role and contribution of the programme’s communications and wider engagement approach plays in meeting the overall objectives; and,
- how the Challenge North Tyne programme compares to similar challenge-led and mission-oriented projects.

As well as directly responding to these questions, the evaluation was also intended to highlight key lessons learned and to inform the development of a framework for evaluation future challenge-led programmes and projects.

⁴ Which covers the three local authority areas of Northumberland, North Tyneside and Newcastle upon Tyne.

Note that a rapid desk research exercise was undertaken in order to inform the evaluation framework for the study. This was deemed important due to the challenge-led nature of the intervention and recognising that the impacts of the programme extend beyond the direct benefits that beneficiaries may achieve, and include wider influence on the innovation and policy ecosystem regarding knowledge and potential future implementation of open innovation programmes (of which mission- or challenge-led programmes are one example). The paper written to summarise the key messages from the desk research is reproduced in Appendix I (see page 60).

1.5 Approach

This report presents the findings of the independent impact evaluation of Challenge North Tyne. In order to inform the report, the evaluation team has undertaken the following research tasks:

- Undertaken desk research to examine both programme documentation as well as a wider literature review in relation to challenge-led innovation, related support and published reports related to evaluating similar programmes.
- Reviewed and reported on monitoring data provided by North East LEP.
- Undertaken a beneficiary (Solution Provider) survey. This received 37 responses from a sample of 111 businesses contacted by North East LEP and who had participated in some aspect of the Programme.
- Developed a stakeholder (Challenge Supporter) survey, circulated to 32 organisations, and receiving 9 responses.
- Undertaken depth interviews with 15 Solution Providers and 4 Challenge Supporters, plus North of Tyne Combined Authority as the funder, and the North East LEP and Innovation SuperNetwork as delivery partners.
- Delivered a group workshop involving 18 participants and covering a number of key evaluation themes.

1.6 Introduction to the Challenge North Tyne Programme

The paragraphs below, taken from the Programme Business Case, summarise the prevailing context at the time (September 2021) and the overall aims of the Programme:

“As made clear by the UK Government’s Innovation Strategy and by NESTA’s Mission Possible report, complex economic and social problems cannot be tackled with the speed and impact required without dedicated activity to bring together partners around key problems, to define shared priorities and to commit to supporting and adopting new solutions. It is clear through the Combined Authority’s commitment to a Green New Deal that North of Tyne is well placed to be a leader in demonstrating the impact of mission-led innovation and a leading proponent of making real the UK Government’s Mission-led Innovation Strategy. Both the Innovation Strategy and NESTA’s report also demonstrate that mission-led innovation programmes complement and enhance rather than displace investment in technology and clusters and in traditional innovation grant programmes.

Challenge North Tyne aims to deliver on this ambition by delivering a project that:

1. Demonstrates impact of mission-driven innovation through live challenges in areas that are top priority in terms of economic growth and social benefit as defined by UK Government, agreed by NTCA and engage leading partners across key industries to define challenges for which North of Tyne SMEs can build solutions.
2. Provides clarity and a blueprint on mission-led innovation activity across the North of Tyne area through a governance structure and case conferencing approach that builds a platform for

business support programmes to align activity for greater impact, to promote mission-led best practice across the region with key partners, communities and investors and to demonstrate how innovation missions can contribute to NTCA's innovation ambitions.

Mission/challenge-led innovation is not new. The UK Government has already invested billions of pounds into challenge-led innovation via UK Research and Innovation and Innovate UK specifically which have been proven to return £7 for every £1 invested. The Innovate UK innovation competitions have demonstrated demand and impact from thousands of businesses across the UK. There are tried and tested methods to support challenge-led innovation. These programmes have been used as useful comparators and good practice for the proposed project. However, less than 4% of businesses in the NTCA area have benefited from this investment to date.

In this context Challenge North Tyne's objectives are:

- To create a systemic system to solve complex problems shared by multiple stakeholders inherent to the needs of the NTCA geography and thereby paving the way for a more systemic ecosystem wide approach to challenge-led innovation.
- To build on existing investment in innovation assets/hubs and clusters in NTCA to create a complementary innovation support system leading to an increase in innovation activity and maturity in the region.
- To support the development of market leading solutions addressing key challenges with high potential for scale-up and growth and leading to the creation of jobs and an increase in R&D investment.

Challenge North Tyne will employ tried-and-tested best-practice in mission-led innovation to:

- Deliver an intense end-to-end challenge led innovation programme in the NTCA area,
- Define priority challenges and create pathways to new markets for SMEs in the North of Tyne area,
- Build new connections between existing NTCA innovation programmes to ensure complementarity of effort, clarity on respective areas of focus, identification of potential 'missions' NTCA funded programmes may tackle, ability to share mission-led innovation best practice, and acceleration of impact by collaborating where appropriate,
- Demonstrate North of Tyne's leadership in adopting effective mission-led innovation practices, and
- Build a framework for local government and other sectors to collaborate on shared missions and build the confidence and innovation maturity of industry partners in North of Tyne to invest in solutions and lead missions in the future.

The two challenge areas defined by the programme as of priority importance to NTCA and the wider regional ecosystem are:

3. Supporting older people at Home, Work and Play, and
4. Delivering Energy Efficient, Net Zero Homes

1.6.1 Investment objectives

Investment objectives of the Programme include:

1. Increase the number of organisations taking an external perspective to problem solving through open innovation, to create new markets and increase competitiveness.
2. Deliver intensive support for new-to-innovation and innovative SMEs for co-design and co-development of solutions (products, services, or processes) to the challenge themes.
3. Rapidly mobilise and effectively communicate the project to ensure short-term participation, with long-term impact and legacy.

4. Embed evaluation throughout, capturing and monitoring innovation outputs through action-learning to ensure new models of innovation support are adopted in future interventions.

1.6.2 Programme Theory of Change

A Theory of Change is a process to understand the changes required for a project, service or organisation to achieve its anticipated goals. A Theory of Change:

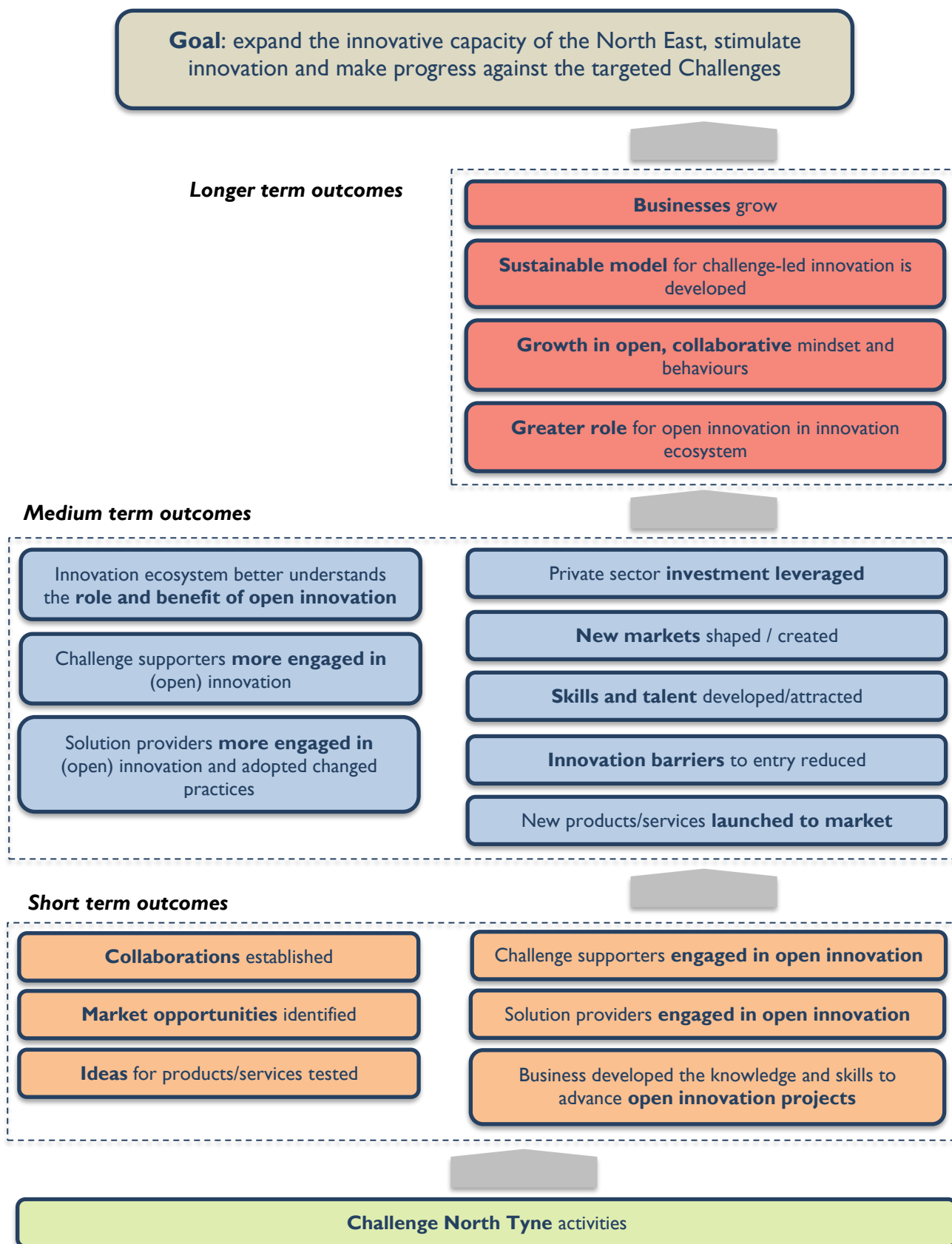
- Seeks to challenge a project on whether the changes required for it to deliver on its goals are sufficient and likely to happen.
- Helps to set the framework for evaluation, because it is much easier to identify the steps that are required to deliver success.
- Supports the assessment of not only whether intended outcomes and impacts have been achieved, but also how and why.

The change map overleaf illustrates in a diagrammatic and summary form how the Challenge North Tyne programme expects to achieve its objectives.

A Theory of Change captures the following elements of a Programme:

- **Goals:** the ultimate impact that the Challenge North Tyne programme is seeking to bring about.
- **Outcomes:** the changes that are expected to happen as a result of what Challenge North Tyne does and which should ultimately contribute to achieving its goals. These outcomes may occur as a result of something the programme does directly or indirectly (or less tangibly). The outcomes are further broken down as follows (which broadly matches the original short, medium and long term changes set out in the original Challenge North Tyne Business Case):
 - **Short term outcomes (within 1 year):** changes which the programme is most likely to bring about directly, and which are necessary for the delivery of subsequent outcomes. These should be measurable within relatively short timescales; certainly within the timescales of the project and the evaluation.
 - **Medium term outcomes (1-2 years):** changes which will start to come about as the short-term outcomes begin to have an effect. To a great extent these will be directly influenced by the programme. These should be measurable in the short-to-medium term.
 - **Longer outcomes (2+ years):** changes which will build from previous outcomes. These are more likely to be influenced by other factors external to the programme (e.g. policy change, other developments in client businesses, economic climate, technology developments and market drivers). Some of these changes may take many years to emerge (5+), and making a direct causal link between success here and the actions of the programme may be difficult to establish.
- **Activities:** the actions that the programme will undertake which should bring about the required changes (outcomes) that will ultimately deliver the project's objectives.

Figure 1: Challenge North Tyne - Theory of Change



1.7 Programme targets - outputs and outcomes

The Programme Overview document summarises the intended outputs and outcomes of the Programme as follows:

- 100 SMEs receiving intense support and accelerating their own innovation capability through participation in the project.
 - Up to 40 receiving 12+ hours of support
 - Up to 60 receiving 3-12 hours of support
- Up to 50 companies will receive financial support: All of these 50 companies will receive an innovators' grant of £5,000 to engage in the co-design process (financial support Stage 1)
- Of the 50 companies, 40 will go on to receive additional funding to further develop their product or service and ensure successful launch to market. SMEs will be expected to provide between 20% and 50% match funding for this grant based on carefully designed criteria. This will allow less mature innovators to participate in the programme and increase the intensity of innovation activity in the region. (financial support Stage 2)
- The project will support 30 enterprises to introduce new-to-market products.
- The project will support 20 enterprises to introduce new-to-firm products.
- 100 SMEs receiving intense support and accelerating their own innovation capability through participation in the project.
- 10% inclusion of social enterprises amongst the open innovation partnerships.
- 20% inclusion of participating organisations and SMEs from Less Developed localities, Rural or socially deprived communities, and under-represented demographic groups.
- 45 direct jobs created.
- 25 direct jobs safeguarded.

In addition to these quantifiable output and outcome targets, the Programme also aims to achieve a number of more qualitative impacts both in relation to the direct Programme beneficiaries, but also within the wider innovation ecosystem. Whilst some of the qualitative impacts experienced by Solution Providers are commented on (see section 2.1), evidence in relation to the wider innovation ecosystem has not yet been captured, beyond a few qualitative comments received through the Challenge Supporter survey.

The Theory of Change provides a complementary list of outcomes, as follows:

- Organisations engaged in open innovation
- Knowledge and skills developed
- Ideas for products and services tested and new products and services launched
- Market opportunities identified
- Collaborations established
- Private sector investment leveraged
- Growth in open, collaborative mindset and behaviours
- Business growth
- Greater understanding of and role for open innovation in the innovation support ecosystem
- Sustainable model for challenge-led innovation is developed

In addition and although not captured in the Theory of Change, an important outcome of the early stages of the programme was the identification and definition of relevant challenges and the attraction of Challenge Supporters to engage and support the challenge definition phase and engaging in a co-design process. The extent to which the programme has delivered against this targeted outcome, along with the others listed above, is covered in section 3.

1.8 Supporting context at the interim report stage

“What we've done before isn't going to get us to where we need to be, and we need to get comfortable in the mess, in an uncertain environment, asking more questions and doing more discovery upfront rather than pretending we've got the answers”.

[Sarah Cox, Challenge North Tyne Lead, Innovation SuperNetwork
– quoted in [Pattern, October 2023](#)]

The above quote from Sarah Cox, Innovation Challenge Lead at Innovation SuperNetwork, provides a number of important points of reference for the evaluation of the Challenge North Tyne programme. Firstly, the acknowledgement that the external environment remains subject to uncertainty and change. Whilst it is arguable that this assertion has not materially changed since the inception of the evaluation, it is nevertheless fair to say that – with a general election looming – the policy environment remains fluid, even fractious. A very recent and specific example of this, and one of direct relevance to the ‘Delivering energy efficient, low carbon homes’ challenge theme, was the Government’s announcement in late September declaring a new approach to Net Zero⁵ that seeks to “to ease the burden on working people” by, for example, “extending deadlines to transition to clean energy”. A further, broader example – and one closer to home - sees the region anticipating the creation of the new North East Mayoral Combined Authority with the promise of further devolution providing “more funding and local decision making powers... [and] with greater powers and more resources, this new deal promises to deliver bigger and better outcomes for everyone in the North East.”⁶

North East Mayoral Combined Authority

In December 2022, the Government announced a devolution deal for the local authority areas of County Durham, Gateshead, Newcastle, North Tyneside, Northumberland, South Tyneside and Sunderland. As the Devolution agreement states: “The North East deal will unlock significant long-term funding and give local leaders greater freedom to decide how best to meet local needs and create new opportunities for the people who live and work there. The government recognises that devolution is a journey, not a one-off event, and this agreement is the next step in a process of further devolution.”

This devolution agreement includes:

- The North East electing a directly elected mayor to provide overall vision and leadership, seek the best value for taxpayer’s money, be directly accountable to the city region’s electorate, and to receive new powers on transport, housing and skills.
- Control of a £48 million per year investment fund over 30 years (£34 million revenue and £14 million capital), to be invested by the North East to drive growth and take forward its priorities over the longer term.

The deal acknowledges that “the North East also faces challenges which impact on productivity levels and the ability to grow” and that these include “increasing innovation investment and exploitation”. It states that “innovation will be vital to levelling up the North East” and that a particular call will be to “strengthen the North East’s local innovation capacity to help realise the potential of local innovation assets and the innovation potential of small and medium-sized enterprises”.

⁵ <https://www.gov.uk/government/speeches/what-the-pms-new-approach-to-net-zero-means-for-you>

⁶ <https://www.devolutionnortheast.com/>

Secondly, Sarah’s quote underlines the requirement for more questions to be asked as part of a journey of discovery – a journey that is a collective undertaking, underlined by the repetition of ‘we’. This strongly echoes some of the principles of emerging policy regionally and nationally. This includes, for example, the launch of the regional collaboration Insights North East⁷ in May 2023, and the views expressed in the joint BEIS / DSIT research paper ‘Making Innovation Matter - How the UK can benefit from spreading and using innovative ideas’:

<p>Insights North East</p> <p>Insights North East (INE) is a new project led by Newcastle University and delivered via a core partnership with the NHS, North of Tyne Combined Authority, Newcastle City Council, and Northumbria University.</p> <p>INE is a demonstrator illustrating how anchor institutions can collaborate to maximise the potential for university research to inform place-based policy-making and practice, ensuring that future research agendas are demand-led and shaped by the needs of the North East. Specific policy areas covered of relevance to Challenge North Tyne include the Transition to Net Zero, Inclusive Economic Growth and Health and Wellbeing. An early policy positioning paper from INE has focused on Inclusive Innovation and considers the development of a working model to embed inclusivity in innovation interventions using a number of overarching characteristics.⁸ (please see the Appendices for further details).</p>	<p>Making Innovation Matter How the UK can benefit from spreading and using innovative ideas - BEIS/DSIT</p> <p>The Research Paper includes the following observations and statements:</p> <ul style="list-style-type: none"> • “There is opportunity to realise greater returns on the UK’s R&D investment through a concept to consumer approach to innovation; focusing on key challenges and incentivising all stakeholders to collaborate as part of a cross-sector, cross-discipline innovation supply chain to take ideas from concept to application at scale.” • “Inspire stakeholders and communities to address key innovation challenges in an open and inclusive way... Broaden the diversity of participation and perspectives and build trust.” • “Develop a more joined-up ‘supply chain’ approach, with cross-sector fertilisation of ideas and technologies, and place-based specialisms, creating ‘hubs’.”
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The joint BEIS/DSIT Research paper itself follows on from the UK Government publishing in mid-2021 its Innovation Strategy⁹. As the Strategy states:

“Innovation is central to the largest challenges the world faces, from climate change and the ageing society to global pandemics. The UK must be in the vanguard of the response to these challenges... Furthermore, by

⁷ https://insightsnortheast.co.uk/news_story/conferencepressrelease/

⁸ INE’s ‘Inclusive Innovation - Improving outcomes for innovation-led growth in post-industrial cities’ paper states that “despite a lot of work and interest in recent years, Inclusive Innovation remains a ‘fuzzy’ concept [sitting] in a lexicon of terms – for instance, inclusive growth, social innovation, levelling up, EDI (equality, diversity, and inclusion) – that seek to describe how progress can benefit everyone in general, and ‘left-behind’ places and communities in particular. INE proposes “a working definition that sees inclusive innovation as interventions that can demonstrate a tangible mix of at least some of the following characteristics: 1. Types of Outcomes: Innovation infrastructure and services are making a contribution to the challenges that affect people’s lives 2. Distribution of benefits: Communities receive some and increasingly equal levels of benefits from the investment and services of innovation projects and programmes 3. Involvement and Ownership: Communities have some agency/influence in shaping the priorities and activities of innovation intervention strategies, programmes, and projects. The paper can be found at: <https://insightsnortheast.co.uk/wp-content/uploads/2023/12/Inclusive-Innovation-Research-Summary.pdf>

⁹ UK Innovation Strategy – Leading the Future by Creating It - <https://www.gov.uk/government/publications/uk-innovation-strategy-leading-the-future-by-creating-it>

supporting innovation in places, sectors, and businesses across the UK, we can level up the economy and create high-value new jobs and trading opportunities as we build back better.”

The Strategy’s primary objective is to boost private sector investment across the whole of the UK, creating the right conditions for all businesses to innovate and giving them the confidence to do so. It also seeks to show direct leadership and action, including “through new missions”. It is worth reflecting on a number of particular points in the Strategy:

- Under the section titled ‘Employing public procurement to stimulate innovation’, whilst it considers innovation through the lens of public procurement (through the Government Commercial Function), a broader point can be drawn from the statement and acknowledgement of the role Government and policy can play in supporting and facilitating innovation through public-private collaboration and co-design: “the Government Commercial Function has taken steps to support market-driven innovation in public policy through its innovation network, which brings together commercial leaders from across the public sector and wider industry. The network advocates to their customers for greater use of iterative, innovation-friendly competitions and industry challenges as part of policy design and solution identification.”
- Clarity of signal to the market and potential providers is also underlined: “One challenge is that it is not always clear to businesses where the opportunities are when trying to sell innovation to the public sector, and how their innovation capability can map to government objectives. Effective demand-signalling between UK government and the market is essential. To address this, UK Government departments and public sector delivery bodies will, where appropriate, produce a clear overall policy problem statement that describes the priority outcomes, that they want to solve or achieve.”
- To meet the above objective, of course, there is a need for businesses to be able to develop and grow their innovation capacity and respond to opportunities that increase their innovation absorption, especially so when set against a changing and fluctuating environment: “Adapting to changing environments, exploiting new opportunities or overcoming challenges is vital to the health of the UK economy. While the UK is a world leader in taking the first steps at the frontiers of innovation, adoption and the use of innovation by businesses across the economy is relatively low by international standards. This lack of adoption typically leads to lower profits for the businesses, and lower growth and productivity for the economy as a whole.” To help support this, and to ensure that businesses can innovate and respond to opportunities and emerging challenges coherently, “businesses need an easily navigated, agile and responsive innovation system that delivers the right support at the right time.”
- Specific emphasis is on developing and maturing the strength of the innovation ecosystem and the interaction between public and private sector actors. The UK’s research and innovation system has “remarkable strengths across the country”, with “globally significant innovative businesses and thriving clusters of dynamic small and medium-sized businesses in all parts of the UK.” However, as the Strategy makes clear, there are still too few strong innovation clusters, and “too many places [which] are not yet fulfilling their innovation potential, missing out on the good jobs and growth that a thriving local innovation economy can bring, and not enough places are seeing the economic benefits of innovations developed elsewhere through the adoption of those innovations.” The Strategy underlines that “addressing this challenge will be a central part of meeting the government’s objectives for levelling up the UK economy: increasing research and innovation activity in more places, and supporting adoption and diffusion” which, it is intended, will have a major positive impact on the UK’s overall economic performance creating “jobs, growth and productivity gains across the country.”
- The Strategy, importantly, goes on to identify four ‘Pillars’ that will provide the basis and foundation to “achieve our vision of the UK as a global hub for innovation by 2035”. The four Pillars are:

- Pillar 1: Unleashing business – We will fuel businesses who want to innovate.
- Pillar 2: People – We will make the UK the most exciting place for innovation talent.
- Pillar 3: Institutions & Places – We will ensure our research, development & innovation institutions serve the needs of businesses and places across the UK.
- Pillar 4: Missions & Technologies – We will stimulate innovation to tackle major challenges faced by the UK and the world and drive capability in key technologies.

Pillar Four, focusing on Missions, is especially relevant in this context given its focus on “directing innovation through a suite of Innovation Missions” which “will bring the public and private sector together to respond directly to pressing national, and global, challenges.” By definition of course, this principle can be applied to a regional context and setting – indeed, regional policy may or will respond to that national policy environment more broadly. The requirement and need for collaboration and a co-design approach is referenced here, aligning with the challenges taken forward as part of the Challenge North Tyne programme (as highlighted): “Issues like the **climate** and biodiversity crises, **demographic change**, and pandemics pose complex, interconnected challenges. Innovation Missions translate these challenges into tangible problems, and mobilise the energies, insight and resources of government, industry, civil society, and academia behind a shared endeavour to tackle them.”

The Challenge North Tyne programme, of course, focuses innovation activity and effort on tackling complex problems that require collaboration across sectors, on sharing insight with the market and establishing how to overcome barriers to innovation through collaborative solutions in response.

As we have stated and demonstrated in previous reports¹⁰, there is a significant body of evidence relating to the rationale for investing in challenge-led programmes. There is growing evidence of a shift towards ‘transformation-oriented’ innovation policies across the world¹¹. This shift acknowledges that some societal problems are too significant to be addressed by a single organisation or firm, and that collaboration needs to be at the heart of the response to such problems. Such challenge-led or mission-led innovation focuses on themes such as climate change, ageing societies, preventative healthcare, and generating sustainable growth for the benefit of all (inter alia) – as can be seen referred to in the UK Innovation Strategy. As the Institute for Innovation and Public Purpose (IIPP)¹² state, in a paper authored by Mariana Mazzucato, who has written extensively on this subject, “using missions to drive national industrial strategy or innovation policy means focussing less on sectors — from automotives to telecommunications — and more on problems that matter to all.”

In the IIPP Policy Brief setting out a beginner’s guide to Missions, Mazzucato and Dibb state that adopting a mission-led approach to innovation is ‘not business as usual’ and doing so requires a “fundamental reappraisal of the role of the public sector to go beyond the ‘market failure’ framework derived from neoclassical welfare economics to a ‘market co-creating’ and ‘market-shaping’ role. This new role would shift focus from marginal improvements driven by ideas of ‘value for money’, to a notion of public value creation driven by public purpose. The State can grasp its abilities as a market shaper to encourage, enable and provide a sense of direction for these challenges but it also needs to recognise it cannot decide in advance what the best solutions might look like.”¹³

To facilitate the above, a further body of evidence and research¹⁴ supports the role that innovation spillover plays in generating and deriving value: “The richness of knowledge in any locality and the density of local knowledge networks or ‘buzz’ will shape the potential for businesses to benefit from localised

¹⁰ As per the Interim Evaluation Report, Evaluation Research Report and the Challenge North Tyne Evaluation Framework

¹¹ Mazzucato, M. “Mission-Oriented Innovation Policies: Challenges and Opportunities.” *Industrial and corporate change* 27.5 (2018): 803–815

¹² Mazzucato M. and Dibb G., *Missions: A Beginner’s Guide*, IIPP Policy Brief 09, December 2019

¹³ Mazzucato M. and Dibb G., *Missions: A Beginner’s Guide*, IIPP Policy Brief 09, December 2019

¹⁴ We have collated information on a number of key policy developments and foci, presented in the Appendices. This review is not meant to be fully prescriptive or exhaustive; it is included to highlight a fluctuating environment with highlighted items grouped under two key areas, ‘Policy’ and ‘Funding’, at regional and national levels respectively.

knowledge spillovers”¹⁵. Further, “local knowledge is ... a semi-public good that is spatially bounded ... local knowledge exchange is prompt or spontaneous because local businesses are assumed to be more willing to share knowledge and exchange ideas with other local actors as a result of shared norms, values, and other formal and informal institutions that hold down misunderstanding and opportunism”¹⁶. Local mediation of such knowledge may then occur through social interaction, interpersonal networks, or – importantly – through “firms’ links with knowledge creators or brokers including intermediary institutions.”¹⁷

This need to move to ‘something different’ – as broadly expressed by Mazzucato and the IIPP – is further identified in the recently published report ‘Unleashing the potential of the UK’s cities’ from the UK Urban Futures Commission¹⁸. The report notes that we are almost in a new paradigm as the country seeks to recover and position itself for resilience, sustainability and improved productivity:

“Starting with the economy, standard measures of economic success show anaemic rates of growth alongside flatlining productivity and pay over at least the past decade. In many ways, these trends reflect a series of shocks: the global financial crisis in 2008, our departure from the EU and Covid-19 pandemic in 2020 and, most recently, the war in Ukraine and cost of living shock. However, that the impacts of those events have been so deep, and recovery so sluggish, is testament to the UK’s lack of economic resilience in the first place. Our economy immune system has been weak, making us susceptible and sensitive to shocks. That, in turn, is a reflection of our failure to invest in a wide range of the things we know are vital to economic success, from physical and digital infrastructure to innovation and technology to education and skills to health and wellbeing.”

At a macro level, the report authors acknowledge that the world’s challenges are “complex and systemic”, and that a prevailing weaker or subdued economy threatens to increase this complexity and subdue the opportunity of addressing such challenges:

“The world is in fact made up of multiple, interacting complex systems, whose interfaces often serve to multiply and reinforce economic, social and ecological phenomena, whether for good or for ill. We can characterise that world as a nested set of three systems in particular:

- **Economic**, encompassing the financial exchanges between people. When working as it should, the economic system equitably generates income, employment and wealth.
- **Social**, encompassing the non-financial exchanges between people. When working as it should, the social system builds trust, agency and wellbeing for all.
- **Natural**, encompassing the interactions between natural ecosystems and socio-economic systems. When working as it should, the natural system maintains and creates climate stability, biodiversity and security for human and non-human life.

*The UK, like many other countries, is experiencing negative feedback between these systems, adding to their fragilities and stifling their sustained health and growth. As long as the economy continues to flatline, little can be done to improve the nation’s health or insecurity, tackle the climate crisis or restore nature. And without flourishing people and communities, or the stability and security of the planet, any economic gains are increasingly uneven, subdued and precarious”.*¹⁹

¹⁵ Breschi and Lissoni, 2009; Ibrahim et al., 2009; Storper and Venables, 2004, as quoted in [‘Assessing innovation spillovers from the public science system’; Enterprise Research Centre, October 2021](#)

¹⁶ He and Wong, 2012, p. 542 as quoted in [‘Assessing innovation spillovers from the public science system’; Enterprise Research Centre, October 2021](#)

¹⁷ Ibid

¹⁸ https://www.thersa.org/globalassets/_foundation/new-site-blocks-and-images/reports/2023/09/uk-urban-futures-report-2023.pdf

¹⁹ Ibid

The report is bullish in its assessment of the need to invest in and value new approaches that will support and incentivise far greater local ownership and collaboration. This is echoed in a further report from the Centre for Cities²⁰ which underlines the role of local and anchor institutions in their localities and cities²¹:

“Outside the Greater South East, the most significant opportunities for growth lie in the major cities. Although they are presently falling short of their potential, they have significant amounts of clustered new economy activity in their cores and have been successful in organising the firms they have into hotspots. The big cities also possess deep labour pools, research-intensive universities, and robust local institutions in their mayors and combined authorities.”

The aforementioned ‘Urban Futures’ report also identifies the convening role of cities which “are home to a vast array of economic, social and natural assets, and the way they collide and cluster in urban environments gives them enormous potential for innovation and impact.”²² The report’s commissioners, reflecting on the pre-conditions for change and ‘success’, described “cities that were regenerative by DESIGN”:

- **“Dynamic:** *invested with entrepreneurial spirit, brimming with creativity and innovation, and with a healthy appetite for risk and experimentation.*
- **Empowered:** *endowed with powers that reflect their role in the local, regional and national economy, and proudly independent in asserting their unique assets and identity.*
- **Social:** *embracing their social and cultural role as much as their economic function, with places to connect, collaborate and create.*
- **Inclusive:** *where the quality and distribution of economic outcomes is front and centre, and citizens actively participate in the governance of the city.*
- **Green:** *determinedly efficient in their use of energy and natural resources, while promoting the green space and biodiversity needed to adapt to climate risks and boost wellbeing.*
- **Networked:** *led by a diverse range of place actors across sectors, and deeply connected at local, regional, national and international levels.”*²³

To conclude, the inclusion of the above ‘DESIGN’ acronym is deliberate here; it is a thematically neat alignment with the Challenge North Tyne programme given its strong references to creativity and innovation, local empowerment, experimentation, networked connectedness and inclusive collaboration.

Appendix III (page 70) contains a table of relevant policies and initiatives that have informed the discussion above.

²⁰ <https://www.centreforcities.org/wp-content/uploads/2023/09/Innovation-hotspots-September-2023.pdf>

²¹ The Centre for Cities report is naturally skewed towards a city and urban focus, but it is right to reflect that local and regional anchor institutions – for example universities and combined authorities – also have a strong rural/urban-rural focus e.g. North of Tyne Combined Authority - <https://www.northoftyne-ca.gov.uk/news/rural-2/> and Newcastle University’s [National Innovation Centre for Rural Enterprise](#).

²² https://www.thersa.org/globalassets/_foundation/new-site-blocks-and-images/reports/2023/09/uk-urban-futures-report-2023.pdf

²³ Ibid

2. Delivery and management

The Programme has taken a design-led approach to engaging with stakeholders from industry, community, local government and academia in order to build a full and robust understanding of the problems our missions would seek to address and the opportunities for collaboration and change. This involved a process of engaging with a range of stakeholders at the outset of the project to define innovation priorities and, through the mission mechanism, to construct and communicate opportunities for SMEs to respond to. The objective was to frame innovation challenges and opportunities which were unlikely to be recognised or within reach for SMEs working alone. This activity, focused on mission and innovation opportunity definition, formed the first phase of activity in the delivery of the Programme. As a result, two innovation missions were launched in October of 2022, as follows:

- Supporting older people at Home, Work and Play²⁴ (abbreviated to ‘Ageing’ in some places within this report), and
- Delivering Energy Efficient, Net Zero Homes²⁵ (abbreviated to ‘Decarbonisation’ in this report).

In order to recruit businesses onto the Programme, SMEs in the North of Tyne area were invited to come forward with innovative solutions that could deliver impact against these areas. Applications were appraised and successful businesses were invited onto the Programme and offered an initial grant of £5,000. In addition, businesses that expressed an interest but were not awarded the grant were offered the opportunity to receive support through the Accelerator programme (i.e. intense business support to innovate and contribute to Mission objectives). The Accelerator programme started in February 2023 and concluded in September 2023, meaning that all direct support for SMEs on the Programme has effectively ceased at the time of writing this report.

2.1 Progress to targets

The monitoring data captured by North East LEP allows us to understand the number of businesses that have engaged with the Programme along with a number of characteristics of these businesses. Table 1 shows that in all, 130 businesses engaged with the programme, with a majority (74 businesses, 57%) working on the Ageing mission, a further 42 businesses (32%) working on the Decarbonisation mission, and 14 businesses (11%) working on both.

Table 1: Business engagement in the Programme

	Decarbonisation		Ageing		Both		All	
	N	%	N	%	N	%	N	%
All	42	32%	74	57%	14	11%	130	100%

Source: North East LEP Monitoring Data

The monitoring data shows the proportion of beneficiaries that have received supports at different levels of intensity, measured by how many hours of support they have received. Those receiving at least 12 hours of support are deemed them eligible to be claimed as a formal programme output, but it is important the acknowledge that the programme has had an impact beyond this cohort, and across a larger number of businesses. Table 2 shows that 44 businesses that have engaged with the Programme have received at least 12 hours of support, which equates to 34% of all engaged businesses. This means that the original target of supporting at least 40 businesses for at least 12 hours has been achieved. The additional target of up to 60 businesses receiving between 3 and 12 hours of support has also been

²⁴ Mission overview available at <https://challenge.northeastgrowthhub.co.uk/challenges/supporting-older-people-at-home-work-and-play>

²⁵ Mission overview available at <https://challenge.northeastgrowthhub.co.uk/challenges/delivery-energy-efficient-low-carbon-homes>

achieved (65 businesses have received this level of support). A further 21 businesses received up to 3 hours of support.

Table 2: Intensity of support received

Intensity of support	Decarbonisation		Ageing		Both		All	
	N	%	N	%	N	%	N	%
<3 hours	11	26%	10	14%	0	0%	21	16%
3-12 hours	21	50%	35	47%	9	64%	65	50%
>12 hours	10	24%	29	39%	5	36%	44	34%
All	42	100%	74	100%	14	100%	130	100%

Source: North East LEP Monitoring Data

Further analysis of the 120 businesses that engaged with the Programme, which covers the routes through which businesses learned about the Programme, and the age, gender and ethnicity profile of beneficiaries, is provided in Appendix IV (see page 76).

Monitoring data also evidences that a total of 50 Stage 1 grants were issued to a total of 47 businesses (meaning two businesses received two Stage 1 grant awards). The data also shows that seven Stage 2 grants have been awarded. This is considerably fewer than the original target of 40. The key explanation for this shortfall is that, ultimately, the Programme budget was unable to stretch to 40 awards of Stage 2 grants. However, all 48 businesses that received a Stage 1 grant were invited to pitch to a panel of innovation experts with a proposal for Stage 2 funding (in late summer 2023). The majority of Stage 1 grant recipients took up this opportunity, from which 13 businesses were then invited to submit a full application for the additional funding. From this, 12 businesses submitted an application and seven awards were made following a detailed appraisal process.

Monitoring data also indicates that the programme successfully met two additional targets, as follows:

- 10% inclusion of social enterprises amongst the open innovation partnerships. The programme supported 26 businesses that classified themselves as either a social enterprise or a charity (i.e. 20% of beneficiaries)
- 20% inclusion of participating organisations and SMEs from Less Developed localities, Rural or socially deprived communities, and under-represented demographic groups. Monitoring data indicates that 27% of beneficiaries are located in rural locations²⁶, and 3% of beneficiaries are located in the most deprived communities²⁷.

It is the intention of the delivery partners to continue to capture monitoring data. This will include data on the following two targets, which are outcomes that were not anticipated to be achieved during the programme delivery period.

Data in relation to a number of other output and outcome targets have not been captured by the Programme team. These are:

- The project will support 30 enterprises to introduce new-to-market products.
- The project will support 20 enterprises to introduce new-to-firm products.

2.2 Participant characteristics and experience

This section presents evaluation findings in relation to some attitudes and behaviours of Solution Providers relative to innovation, as well as feedback regarding their experience of taking part in the

²⁶ i.e. located in Northumberland

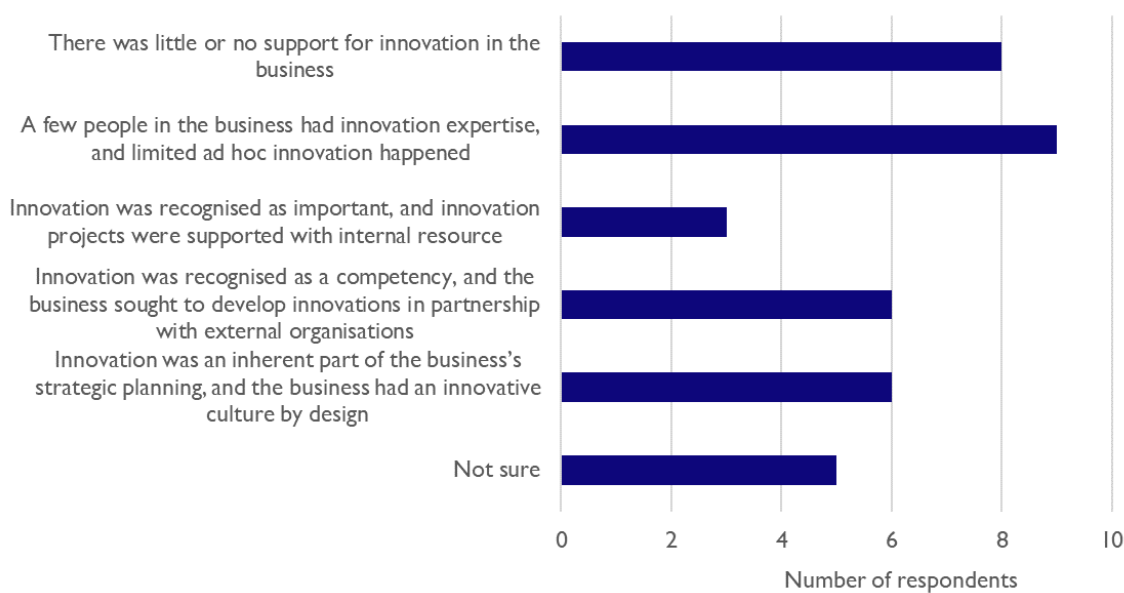
²⁷ Located in Lower Super Output Areas classified as being in the top decline of most deprived locations in the Index of Multiple Deprivation

programme. This section prefaces further exploration of the benefits of participating in the programme, which are set out in section 3 below.

2.2.1 Innovation readiness prior to the Programme

Solution providers were asked to describe innovation in their business before the launch of the Challenge North Tyne programme, selecting one from a list of statements. Figure 2 outlines the responses to this survey question, with eight respondents (22%) saying there was little or no support for innovation and a further nine (24%) indicating that few people in the business had innovation expertise, and when innovation did happen it was limited and ad hoc. On the other hand, six respondents (16%) said innovation was recognised as a competency and the business sought to develop innovations in partnership with external organisations such as vendors, customers or academia. The same number (six respondents, 16%) said innovation was an inherent part of the business’s strategic planning and the business had an innovative culture by design.

Figure 2: Innovation position prior to Challenge North Tyne

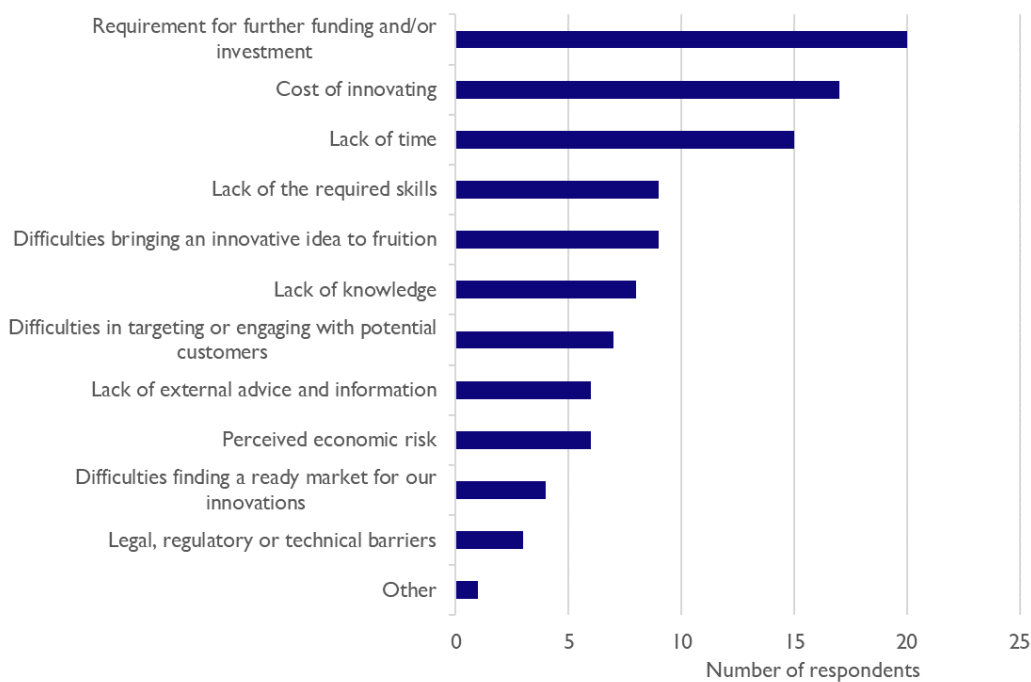


Source: Ortus survey of Solution Providers: Base=37

2.2.2 Innovation constraints

Solution Providers were asked if their organisation faced any constraints in being innovative before the launch of the Challenge North Tyne programme. 17 survey respondents (46%) stated that they faced a lot of constraints, while 12 (32%) said they faced some constraints. Those that said they had faced constraints were then asked what the constraints to being innovative were, and Figure 3 shows that the top three innovation constraints were a requirement for further funding and/or investment (20 respondents, 69%), the cost of innovating (17 respondents, 59%) and lack of time (15 respondents, 52%).

Figure 3: Innovation constraints faced by businesses



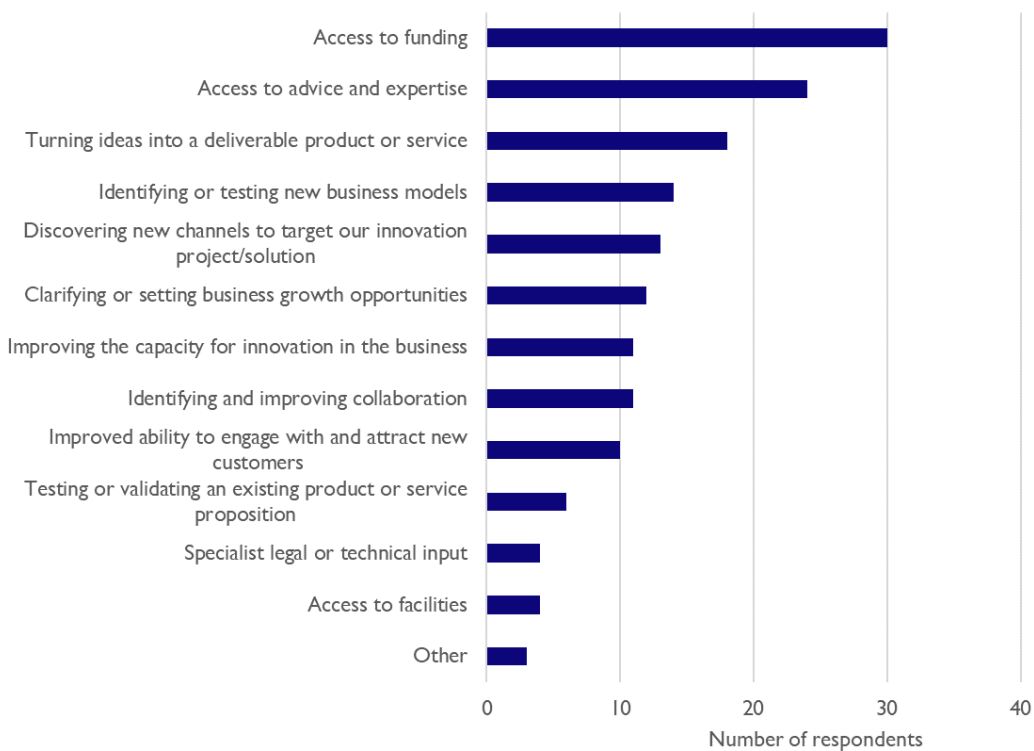
Source: Ortus survey of Solution Providers: Base=29

The six respondents who said lack of external advice and information was a constraint on their businesses' ability to innovate were asked why this was. The most common reasons were not knowing where to look for advice and information (4 respondents), not knowing what advice and information might be available (4 respondents) and not knowing what specific advice and information was needed (3 respondents).

2.2.3 Reasons for engagement with the Programme

Solution Providers were asked what they hoped to achieve or benefit from when they first engaged with the Challenge North Tyne programme. Figure 4 shows the responses to this survey question, with access to funding (30 respondents, 81%) being the most common response, followed by access to advice and expertise (24 respondents, 65%). Fourteen respondents (38%) were interested in 'identifying and testing new business models' through the Programme, which reflects the wider objective within the Programme to not only drive innovation, but also to expand the possibilities for the models through which innovation can be delivered.

Figure 4: Reasons for engaging with Challenge North Tyne

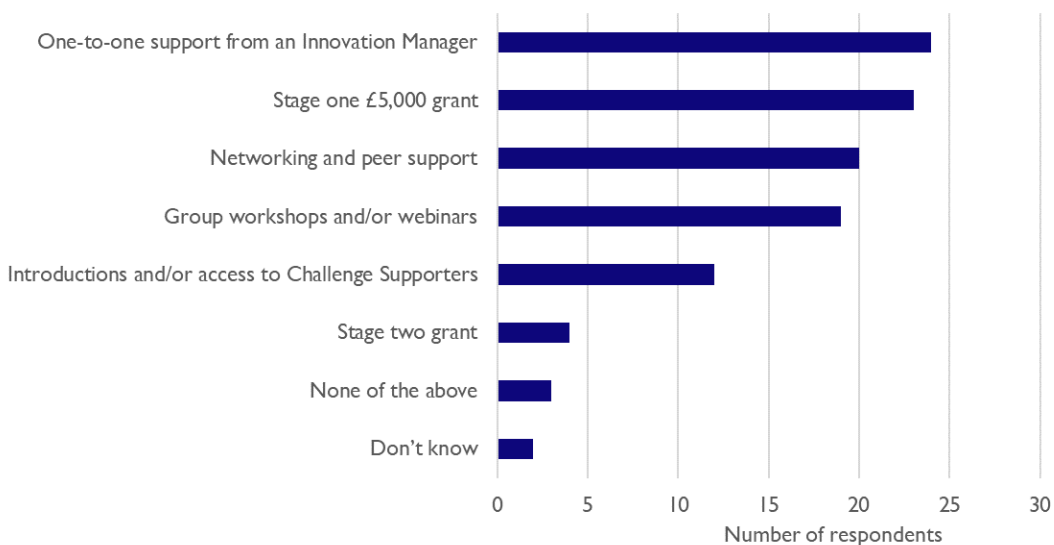


Source: Ortus survey of Solution Providers: Base=37

2.2.4 Engagement with Programme support

Solution providers were asked to select which of the elements of the support on offer through the Challenge North Tyne programme their business had received. Responses are presented in Figure 5, which shows that 24 survey respondents (65%) had received one to one support from an innovation manager, 23 respondents (62%) had received a stage one £5,000 grant, 20 respondents (54%) had engaged in networking and peer support while 19 respondents (51%) had taken part in group workshops and/or webinars. 12 respondents (31%) had been introduced to and/or given access to Challenge Supporters, and 4 respondents (11%) had received a stage two grant.

Figure 5: Support received from Challenge North Tyne



Source: Ortus survey of Solution Providers: Base=37

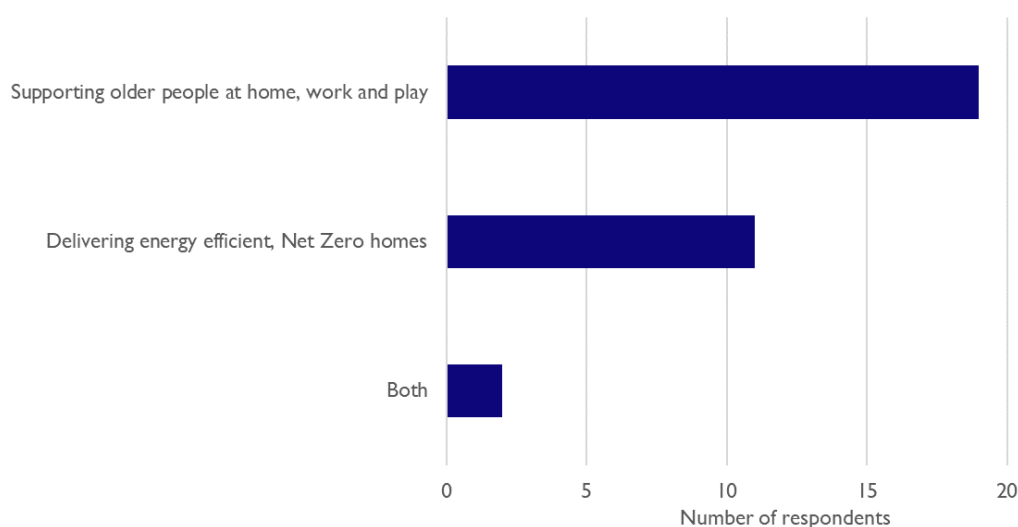
Of those respondents who reported making a successful application for a stage one grant, 19 (83%) said they had made one successful application and 4 (17%) said they had made two successful applications. Funded projects were mostly at the ideation stage, i.e. not considered ‘oven-ready’ (15 projects, 60%). Six projects (24%) were at testing stage, and 4 projects (16%) were at product validation stage; these ten projects were considered ‘oven-ready’.

Of those respondents who reported making an unsuccessful application for a stage one grant, 12 (80%) said they had made one unsuccessful application, while one (7%) said they had made two unsuccessful applications and 2 (13%) said they had made three unsuccessful applications²⁸. Nine unfunded projects (45%) were at the ideation stage, while six (30%) were at the testing stage and two (10%) were at the product validation stage (the status of three projects was unknown). Respondents tended to report that they had not taken their unfunded projects forward (five respondents, 42%). Three respondents (25%) said they had continued to develop their ideas, relying on internal resources and two respondents (17%) said they had found alternate support to help them take their idea forward.

2.2.5 Mission engagement

The majority of Solution Providers responding to the survey (19 respondents, 59%) indicated that they were involved in the supporting the Ageing mission (Supporting older people at home, work and play) with 11 respondents (34%) involved in the Decarbonisation mission (Delivering energy efficient, Net Zero homes). Two respondents (6%) indicated that they were involved in both missions. The survey is therefore reassuringly reflective of the balance of beneficiaries that have engaged with the programme (see Table 1).

Figure 6: Challenge North Tyne mission involvement



Source: Ortus survey of Solution Providers: Base=32

2.2.6 Ease of participation

Survey respondents were asked to rate the ease of getting involved with the different elements of the Challenge North Tyne programme. Table 3 outlines the responses and illustrates that the two elements with the highest ranking for ease of engagement (very easy or easy) were engagement with an innovation manager’ (83%) and the group workshops and/or webinars (74%). The elements that were ranked highest as being difficult/very difficult to get involved with were preparing an application for stage two funding (17%) and engagement with Challenge Supporters (16%).

²⁸ Six respondents had made both successful and unsuccessful applications for a stage one grant.

Table 3: Ease of getting involved with Challenge North Tyne programme

	Very easy	Easy	Fair	Difficult	Very difficult	Don't know / Not applicable
Preparing an application for stage one £5,000 grant funding	4 (13%)	12 (38%)	12 (38%)	2 (6%)	1 (3%)	1 (3%)
Engagement with an Innovation Manager	15 (48%)	11 (35%)	4 (13%)	1 (3%)	0 (0%)	0 (0%)
Group workshops and/or webinars	8 (26%)	15 (48%)	4 (13%)	2 (6%)	1 (3%)	1 (3%)
Networking and peer support	6 (21%)	11 (38%)	9 (31%)	1 (3%)	0 (0%)	2 (7%)
Engagement with Challenge Supporters	5 (16%)	8 (26%)	8 (26%)	4 (13%)	1 (3%)	5 (16%)
Preparing an application for stage two grant funding	0 (0%)	4 (14%)	6 (21%)	5 (17%)	0 (0%)	14 (48%)

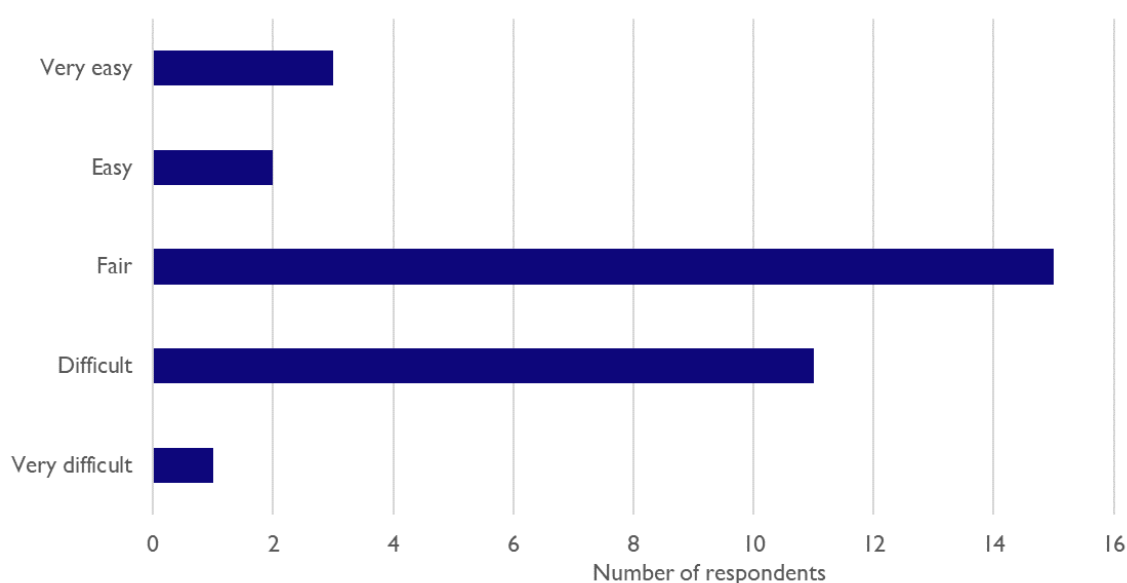
Source: Ortus survey of Solution Providers: Base=32

Respondents made positive comments about their engagement with innovation managers, and the Challenge North Tyne programme was considered effective, informative and helpful for networking. However, some respondents experienced difficulties engaging in events due to busy work schedules and some found the webinars difficult to engage with due to, for example, technological issue and problems with eyesight.

2.2.7 Time spent developing solutions

Thirteen survey respondents (42%) did not know how much time they had spent developing their solution. The others reported spending an average (median) 65 days, though the time spent ranged considerably (from 2 days to over 1,000 days). Only five respondents (16%) said it was easy or very easy to commit this time, as shown in Figure 7.

Figure 7: Ease of committing time to developing solutions



Source: Ortus survey of Solution Providers: Base=32

2.2.8 Effectiveness of support

Survey respondents were asked to rank the effectiveness of the stages of the Challenge North Tyne programme in supporting the development of their innovation project/solution. The stage one funding and engaging with an Innovation Manager were the elements ranked highest (either as 'very effective' or 'effective') with 96% and 89% respectively. The elements ranked lowest (as 'ineffective' or 'very ineffective') were engagement with Challenge Supporters (30%) and stage two grant funding (23%).

Table 4: Effectiveness of the stages of the Challenge North Tyne programme

	Very effective	Effective	Fair	Ineffective	Very ineffective	Don't know / Not applicable
Stage one £5,000 grant funding	17 (63%)	9 (33%)	1 (4%)	0 (0%)	0 (0%)	0 (0%)
Engagement with an Innovation Manager	16 (59%)	8 (30%)	3 (11%)	0 (0%)	0 (0%)	0 (0%)
Group workshops and/or webinars	7 (23%)	9 (30%)	10 (33%)	0 (0%)	4 (13%)	0 (0%)
Networking and peer support	6 (22%)	10 (37%)	9 (33%)	1 (4%)	0 (0%)	1 (4%)
Engagement with Challenge Supporters	5 (19%)	1 (4%)	10 (37%)	5 (19%)	3 (11%)	3 (11%)
Stage two grant funding	4 (15%)	3 (12%)	1 (4%)	2 (8%)	4 (15%)	12 (46%)

Source: Ortus survey of Solution Providers: Base=30

Respondents commented on the value of support from Innovation SuperNetwork. However, some respondents found peer networking less effective because other Solution Providers were at a much earlier stage in their innovation and/or business maturity. Some respondents found it difficult to engage with Challenge Supporters due to time pressures on both sides.

3. Project outcomes and impacts

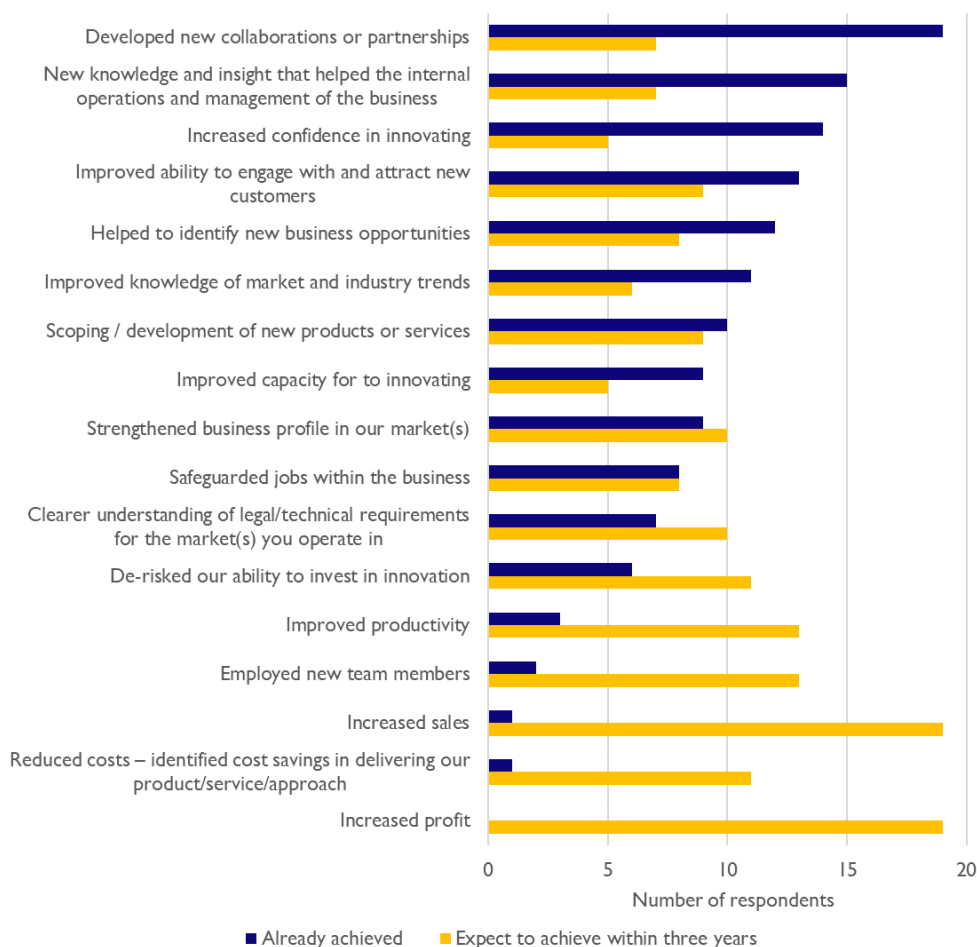
This section presents the evaluation findings with respect to the outcomes and impacts achieved. The key outcome themes identified within the Theory of Change are as follows:

- Organisations engaged in open innovation
- Knowledge and skills developed
- Ideas for products and services tested and new products and services launched
- Market opportunities identified
- Collaborations established
- Private sector investment leveraged
- Growth in open, collaborative mindset and behaviours
- Business growth
- Greater understanding of and role for open innovation in the innovation support ecosystem
- Sustainable model for challenge-led innovation is developed

This section of the report comments on each of these outcome themes, drawing on the two surveys and the range of in-depth consultation undertaken within the evaluation.

As a preface to the presentation of evidence of outcomes, Figure 8 (below) presents the results from a key question in the Solution Provider survey, which asked beneficiaries to indicate whether they had already experienced, or anticipated experiencing within the next three years, a range of potential outcomes and impacts.

Figure 8: Benefits of participating in Challenge North Tyne programme



Source: Ortus survey of Solution Providers: Base=30

In addition and although not captured in the Theory of Change, an important outcome of the early stages of the programme was the identification and definition of relevant challenges and the attraction of Challenge Supporters to engage and support the challenge definition phase and engaging in a co-design process. This theme is covered as the first major outcome area reviewed in the ensuing section.

3.1 Suitable challenges defined and Challenge Supporters engaged

The challenge definition process was designed to respond to a number of critical factors, as follows:

- To build on appetite for solution adoption
- To align the challenges to key NTCA economic and social policy priorities
- To ensure sufficient breadth within the challenge definition to encourage sufficient participants to come forward
- To ensure that challenge definitions meant the programme was differentiated from, or complementary to, other NTCA investment and initiatives

Feedback indicates that the process by which challenges were identified, assessed and selected was well received by the wide range of stakeholders that were engaged in it. The workshops organised by ISN were seen to be both very interesting and very effective in achieving a good outcome, with a diverse range of stakeholders involved and leading to a solution which achieved a consensus.

Furthermore, the process was successful in engaging Challenge Supporters in both helping to define the challenges and, through their involvement in supporting the initial assessment of applications, making themselves available to be introduced to SMEs accepted onto the programme and who were well placed to provide solutions to Challenge Supporter problems. In this way, Challenge Supporters became the 'problem owners' to which Solution Providers were responding.

The extent to which SMEs on the programme directly responded to identified problems did vary, however, as one would expect in a programme with around 50 funded and supported businesses, along with a further 80 that were invited to join the Accelerator element. This factor also meant that engagement with Challenge Supporters by SMEs on the programme was quite varied, with some achieving intense engagement, and others achieving very little engagement (see also evidence in Table 4 above).

Overall, however, the process designed and implemented by the delivery partners to firstly define the targeted challenges and then engage Challenge Supporters in the programme was successful in achieving its intended outcomes.

3.2 Organisations engaged in open innovation

Most respondents to the Solution Providers survey (22 respondents, 69%) had not been involved with innovation support programmes in the past. Those that had experienced other innovation support (nine respondents, 28%) were asked to compare the effectiveness of Challenge North Tyne to these other programmes. Four thought that Challenge North Tyne was more effective or much more effective, while the same number said it was about as effective as other programmes. Similarly, three thought Challenge North Tyne was more impactful or much more impactful on their business, while five thought the impact was about the same. Key differences between Challenge North Tyne and other innovation support programmes that respondents identified included the structure of the programme, the size of the first grant, the expertise of staff and the diversity of the cohort. Respondents contrasted other funding which was not accompanied by additional support.

Most survey respondents who had participated in the Challenge North Tyne (25 respondents, 86%) said they would participate in a similar mission or challenge-oriented programme in future. Respondents who said they would do so suggested that future programmes might better meet their needs by encouraging greater engagement between participants to support collaboration, as well as earlier and more

structured engagement with external Challenge Supporters. Some respondents thought that similar support programmes could be tailored to different stages of innovation, for example distinguishing ideation or embedding a culture of innovation from bringing a new innovation to market.

Survey respondents who said they would not take part in a similar mission or challenge-oriented programme in future gave a variety of reasons. Some were discouraged by their perceived lack of progress in the Challenge North Tyne programme (including respondents who were unsuccessful in achieving funding at stage one and stage two). Some were discouraged by online delivery, and would prefer more face-to-face engagement. Others wanted more engagement with external supporters.

Respondents were given a final opportunity to comment on the support for innovation available to businesses like theirs. Several respondents took the opportunity to comment on the effectiveness of the support they had received through Challenge North Tyne and some respondents suggested that more of this type of support is needed. On the other hand, several respondents commented that a range of support is available, including some duplication, and that it can be difficult for small businesses to find the right support in this landscape (and difficult for them to find the time to try to do so). Some respondents felt that a more targeted approach might be better at supporting their businesses to innovate, including specific sector expertise among innovation managers (e.g. digital technology, creative and culture) and ongoing one-to-one support.

The qualitative interviews reveal that the Programme has been a useful introduction to open innovation generally, and challenge-led innovation in particular.

The design of the Programme, it being a combination of a small grant coupled with the Accelerator support programme, has proven to be highly effective in terms of attracting businesses to the programme, and assisting them on the journey of developing their innovations. Further comment on how the programme supported the development of ideas and innovations is provided in section 3.4 below. In terms of attracting businesses onto the Programme, the interviews provide evidence that the grant was a significant attractor for many participants. The opportunity to acquire a relatively small amount of money to resource the exploration of an idea or development of a product/service, under the umbrellas of each of the challenges, was a very valuable one because in many cases it provided the financial resources required to take an idea forward.

The grants were employed in a range of ways. For some, it was employed to ensure that the development of their innovation could be resourced:

“We were motivated to join the Programme by the attraction of the grant funding (to enable the resource to be allocated to the feasibility study) and the relatively loose strings attached. Of course we were fully committed to the course we had set out in our application, but there was also sufficient flexibility to allow for changes in emphasis or direction in response to how the project evolved and what we discovered along the way”.

And

“We have lots of ideas but limited resources to act on them. This programme allowed us to do that by providing some financial resource and also a structured programme which helped maintain our focus on developing the innovation”

For others, the progression of their idea required the commissioning of a feasibility study to explore options and identify the optimal way to develop their product or service, the specification that is most attractive to clients, and that delivers commercial viability.

“Our motivation was to accelerate into our next phase of development and we saw CNT as an enabler of that, plus £5k to invest in development – specifically, to support a feasibility study which examined the specific emission factors that supported use of the tool in the social housing sector (within residential properties)”

Some participants saw the Programme as an opportunity to provide team members with the exposure to an open innovation programme and its constituent participants, in order to build skillsets, develop experience and build partnerships and relationships:

“The opportunity to access a small amount of funding was important, but so was the opportunity for one of our key staff to attend the Accelerator programme, develop her skills and commercial awareness and explore partnerships and collaborative opportunities”

Some participants identified as a motivator for being involved the fact that in order to be accepted onto the programme, their idea would be assessed and ‘ratified’ by the delivery partners, and in so doing their idea and company would gain kudos (in being NTCA-backed) that would aid their attempts to engage with partners and clients.

Challenge Supporters also commented positively about their involvement and the value of engaging with the programme. Key benefits, with respect to commencing or continuing open innovation initiatives within their organisation, included being able to short-circuit the process of commencing innovation projects, by exposing organisations to potential solutions and the businesses innovating them:

“Innovation onboarding takes time for an organisation like ours, you need to see what is coming on the horizon and have time and support in thinking about how these can address your issues and be onboarded. Involvement in such programmes gives us a chance to encounter more of these solutions with our existing organisational resource.”

3.3 Knowledge and skills developed

As shown in Figure 8, precisely half (50%) of Solution Provider beneficiaries responding to our survey identified that as a result of the programme they had already acquired new knowledge and insight that helped the internal operations and management of the business’ (see Figure 6), whilst around 26% indicated that they expect to do so in the next three years.

To a certain degree, the acquisition of new knowledge and skills is, reasonably enough, tied to the level and depth of participation in the programme and the extent to which new products, services and innovations are tested and realised. It is also of course related to where the participant is starting from – a small number of respondents, for instance, felt that the content was not significantly new to them, for example, “the nature of the content, seemed to stay at ‘level 1’ for the entire course, which meant it was all relevant to certain companies (inexperienced) but only partially relevant to others” [Innovation Services Company]. That being said, it is nonetheless clear from both the survey and the qualitative evidence received via the 1-2-1 interviews, that the majority of programme participants either had acquired knowledge and skills or were expecting to do so in the future.

Developing new knowledge and skills manifested itself in a variety of ways, both at a technical level and also more broadly in terms of business strategy and development, as this feedback attests to:

“We moved them from a lack of awareness of what tech could do. [It was] a Technology eye-opener. It allowed me to strip away the traditional ways in which a business might work in the future. We don’t now need a lot of what we needed in the past. The technical contacts and insight [have been] hugely valuable. Moving into VR I didn’t know much about the tech, so the contacts provided in that sector were very helpful.”

And:

“The process tools that were shared – for example the business canvas for strategic planning at a micro level – were very helpful for sharpening and crystalising thinking. We found it very useful to learn from other participants and receive feedback from them. It was helpful to hear myself explain the business and have questions asked. It created impetus and brought plans forward”.

This sense of opening up a business to a wider audience and assimilate knowledge as a result and, indeed, to use the opportunity to test assumptions and approaches, was felt by a number of participants:

“It is easy to have a pretty closed outlook when working in broadcast as it can be very focused on one element. But sometimes it is crucial to remember that the community aspect is very important - meeting new people,

sparkling ideas, lifting one's head up from the nitty gritty and scanning horizons. Getting in to different environments away from broadcast and advertising was therefore very valuable."

And:

"The opportunities to meet other participants has been very valuable, some in adjacent areas so that was helpful in understanding the space, especially in a complex world. Open data and innovation is even more important in this environment. We had the opportunity to orient and locate [our business] within a new market, to identify what it can do and develop a prototype of the product that delivers that service."

It is also interesting to note the importance of the combination of an open grant in the first stage, allied to a wider programme of support and facilitation, including introductions to 'knowledge holders' whether as intermediaries or sometimes, more directly, as gatekeepers:

"The money was an attractor but it was also as much about exploring whether the business could transition into this space, can we develop connections and links, gain interesting external feedback, and open doors especially with housing associations? Being able to engage with the community that we are looking to work with is key. The 'system' we are trying to infiltrate is complex - so having housing associations involved in the challenge is key to entering that world."

And:

"We were working with [another business which was] on the programme, and their input was very valuable. This meant we learnt an awful lot on what is going on locally in terms of innovation. It also led to me being upskilled in terms of the ability to lead innovation programmes, as it developed my tech knowledge and understanding."

The interviews undertaken for the evaluation provide some evidence of the wider development of and confidence in businesses developing their innovation capacity and how they use this to communicate both internally within the company environment and externally to stakeholders, funders and customers. This is obviously relative to the position from which they start, but regardless, the sense of validating individual approaches is clear. This was typically focused on the individual who participated in the programme, but it also extended in some instances to a wider benefit and deployment through the company and its staff:

"On the soft side – this has delivered a rigour around business planning. Very few people get proper coaching to do it well and to communicate it to third parties, so this has been very helpful. We also learnt about terminology, and the language associated with innovation and support, funding, and pitching etc. There is a well-understood vocabulary in the start-up community and being able to talk this is important, as it builds confidence. We learnt a lot on the pitching side of things – in conversations, being clear that you need to get your concept across and learn how to spend thirty seconds to get someone engaged in a conversation or otherwise lose them. I was previously not used to working with those timeframes and intensity so it built resilience and encouraged me to be persuasive and clear."

And:

"[Company representative] has developed considerably through the programme – her knowledge, skills, confidence, commercial experience. This learning has been disseminated to the other six members of the team so the impacts have been transmitted across the organisation. Our attitudes to innovation have also been influenced, and motivation has been boosted. The innovation pathway was already established but the Challenge North Tyne programme has helped accelerate us along the pathway."

And:

"Being on the programme has also led to enhanced confidence and developed our skills as we have had to explore working with third party software in delivering the project. The project has also supported our wider learning in terms of how to innovate. We do not have a great deal of in-house IT development capabilities, and the project has been helpful in developing their own understanding on the tech side. The sessions on building your proposition

have also been very valuable in terms of our own development as well as producing tangible outputs that they can recycle.”

The sense of validation was not just confined to internal company operations. A number of participants also reflected on the benefits that the programme gave in terms of how participation in Challenge North Tyne validated their position with external stakeholders and within markets:

“Being part of a NTCA-funded programme has provided an attractor to a well-respected engineering firm who are now working with them on the project. It is unlikely they would have shown any interest without the 'rubber stamp' of the programme.”

And:

“From a market point of view, being through the programme and having delivered the project, this has secured our position locally within the housing sector. This means we now have the credibility needed to approach housing associations outside the region, and to investigate other sectors and uses for the tool.”

It is also, of course, interesting to learn of wider and perhaps less expected impacts – those highlighted below give an indication of this, including the offer of help and assistance from a participant for any future programmes, how a company is able to better understand and visualise their role in their community, and even through to collaborating with a Dean Martin impersonator as part of a company’s new service delivery!

“I would also be happy and able to offer others advice as a quid pro quo from or with others. It has helped to reinvigorate some skills, and we acquired some new information, for example, feedback from potential users about how they perceived it as part of our approach to wider market research.”

And:

“The programme gave us a broader community mindedness and helped with a re-adjustment of where we see ourselves in the community and how drama can reach out to people. We learned that we could engage with different age-groups including adult classes. We have more focus on therapy and wellbeing and this gives us a more holistic position on what we can deliver for communities.”

And:

“It will have a lot more impact in terms of future strategy and the process of going through this had a nice growth feel to it. It was a natural organic growth as well, through the experience of laying out different parts of the pitch deck, for example audiences and markets, our USPs etc. It was very interesting to see where we were in comparison to others in a similar space. One unexpected thing was picking up a Dean Martin impersonator on the way, as part of our approach to drama teaching, and getting him into nursing homes as part of the service to support memories and reminiscences with the residents.”

3.4 Ideas for products and services tested/launched

Solution Providers who said they had received a stage one grant were asked what stage of commercialisation their innovation project/solution currently was at. Most were at the testing (seven respondents, 35%) or product validation stages (five respondents, 25%), as shown in Figure 9 below.

The survey results suggest that few participants were at subsequent launch or scale-up stage at the time of the evaluation (this may need to be considered more widely in terms of the timing of the evaluation and, if possible, any further follow-up). The above survey results are borne out from the evidence gathered through the interviews undertaken, for example:

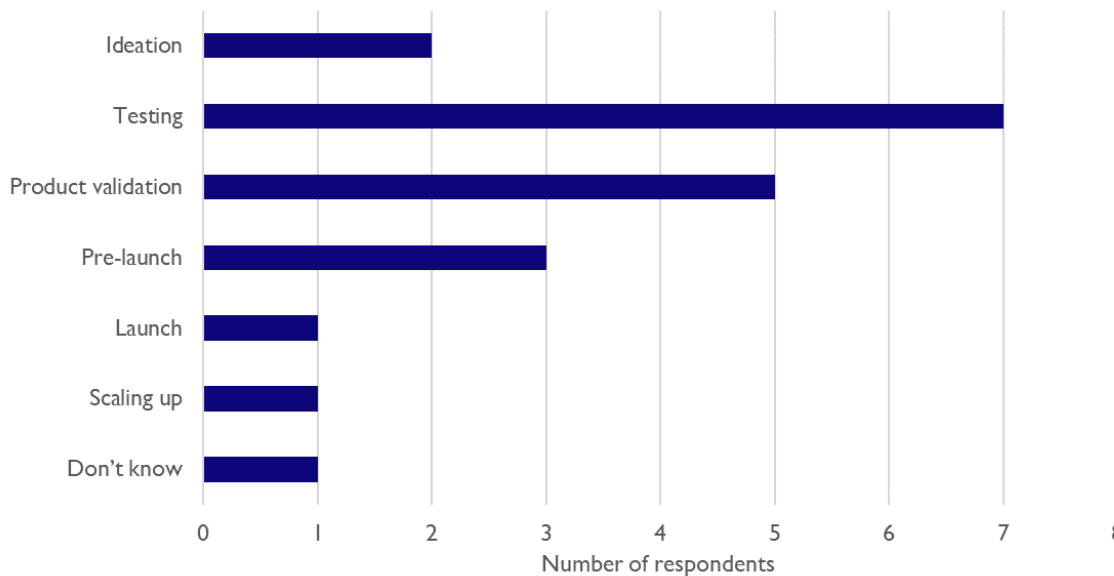
“[The programme] has meant we were in a good position to proceed with end users. It accelerated our process... It has been tangible. We have completed the development of physical and software products and they are ready for use and deployment. We hope to trial them in homes – we are yet to do that, but hope to do so in March

2024. We have to find the right properties and the right people. Getting people to buy into the idea and product, and to instil confidence to buy takes time, but we'll be able to see what happens”

And:

“Our motivation was to accelerate into our next phase of development and we saw Challenge North Tyne as an enabler of that – specifically, a feasibility which examined the specific emission factors that supported the use of the tool in the social housing sector... The funding will allow us to undertake further product development [via an external provider who] will build the Net Zero planning tool on their platform and they will come up with the process for developing the smart meter integration.”

Figure 9: Stage of commercialisation at time of survey



Source: Ortus survey of Solution Providers: Base=20

It is also worth mentioning here that the above company additionally reflected on the importance of using the funding to procure the services of a local supplier: “This means pounds into the local supply chain.”

And:

“Following further review and subsequent development this led to a ‘care home radio product’. In essence, we go into care homes with a recording device and record the stories of and for the residents. We are then looking to branch into other areas. We are engaged with two homes in particular, at the moment providing a free service as it is difficult to record a clean sound without the right equipment so aren’t in a position to charge for this; we have put in another funding bid elsewhere for this.”

And:

“We were awarded £20k. This will be used to develop the marketing material, validation trials and other steps that need to be taken to prepare the product for market.”

The sense of product and service development and testing that would not have otherwise gone ahead without the support and investment was also picked up by participants – exemplified by “the grant helped to de-risk the innovation as we would have struggled to do that without it”, and the quotes below:

“We saw Challenge North Tyne as an opportunity to source funding to undertake a feasibility study, which otherwise may never have happened due to limited funds. [Our] stage 2 funding of £7.5k, with matched support, is enough to see if we can develop a proof of concept, a minimum viable product - an initial version of the training tool that can be tested in the market.”

And:

“It was really important as we wouldn’t have been able to do it without it. It allowed capacity for background research and an audit of similar work elsewhere to inform our approach. This ultimately led to the development of ideas and approaches to develop services around memories and reminiscences. For example, we could send recording of these to relatives of care home residents.”

Importantly too, in one or two instances, the testing phase allowed for a participant to either pivot their innovation and idea or, indeed, to stop any further progress based on the feedback received:

“The project flipped half way through and became about establishing a community facility to dry clothes. This is based on an understanding that drying clothes, particularly in winter time, is a big problem as it can lead to damp and health problems, and uses significant amounts of domestic energy etc. ISN were very supportive of the change of direction.”

And:

“The feasibility study indicated that the product could not be delivered at a price point that would make it viable. We solved the issue of how it could be manufactured, but it didn’t work commercially... It allowed me to fail fast and early and to limit the financial risk associated with doing so.”

The interviews additionally provided insight into the relative ‘newness’ of the innovation that programme participants were developing, whether entirely new to the firm or as a significant adaptation:

“It is new to the firm, it’s a new way of doing things to reach a wider market. We are focusing on a specific area of competency but we are doing it in a different way, for example by reducing carbon footprint of homes. Our development for that was to make heating more efficient and to develop how you do that, and how you reach the market in a particular way.”

And:

“It is a system by which companies and organisations can estimate their carbon emissions and target carbon reduction policies. It is new to firm, having been spun out of an insurance PLC that had developed it. The Challenge North Tyne programme is focused on evolving the tool to be used in the social housing sector.”

And:

“[We’re looking] to develop a training solution in relation to de-escalating aggression and violence, for the protection of vulnerable people. It started from the idea that as people get older, the part of the quality of care they receive is the ability of the carer to de-escalate aggression, frustration and potentially violence. It has turned into having started to talk to people, where there are lots of scenarios where staff need to be good at de-escalation. It is a piece of tech that can train you quickly in the techniques of de-escalation.”

Overall, the interviews confirmed that the Challenge North Tyne programme’s more immediate impact has been focused within a testing and subsequent validation stage. What is encouraging to see is that, even within the two Challenge areas, the scope was broad enough for a range of products and services to be scoped, as the quotations below show:

“The grant was used to explore how to develop a new product for the manufacture and installation of a new housing system. The biggest hurdle was related to the structural engineering aspect of the project, so funding and project was targeted at that.”

“[The grant] provided the financial resources required to pay for materials and labour to implement different solutions for testing... the CNT project and the grant have really opened the opportunity to get excited again, re-engage with our engineers who are doing the development work.”

“The stage one grant paid for the production of a pilot show, which is always a crucial element of the development of a tv show. The grant gave the incentive to push the idea on, allowing us to bring in a presenter and to cover various production costs.”

“We have explored the idea of franchising the business to expand across the UK and refresh the website. It is a new to the firm business model.”

Challenge Supporters also welcomed the exposure that the programme has given them to innovators and their ideas, which in some cases led to partnerships being developed in order to realise those ideas. Part of that role was to help innovators to understand market need, providing crucial feedback and allowing the specification for products or services to be evolved accordingly,

“As end users of the product, we have been able to influence its design.”

“Through a number of mechanisms, the programme has given us access to the ideas and concepts being brought forward by Solution Providers. Our role in the assessment panels gave us a valuable opportunity to review the innovations, which helps us understand what is coming forward from [potential] suppliers”

“The potted summaries provided by ISN covering all the participants and their innovations was very helpful and allowed us to target a small number that were of particular interest to us”

There is also evidence that Challenge Supporter expectations around the stage of development of the innovations being brought forward under the programme did not, to some extent, match the reality of the stage of development in some of the Solution Providers.

“I think we were expecting to see more fully formed ideas which could be actively tested – but many were conceptual and therefore a considerable distance away from this state. It is more difficult for us to assist in the development of concepts than the testing of prototypes, because of the amount of time that needs to be invested in a larger number of innovations, some of which will not be taken forward”.

Finally, the evaluation also generated evidence that Challenge Supporters supported the development of innovations targeted under the programme by bringing Solution Providers met via the programme onto their own open innovation initiatives.

“We ran a design sprint on damp and mould and invited some of the CNT Solution Providers that we had met through the programme to get involved and in that, which was very useful. The programme gave us access to people and businesses that we wouldn’t have otherwise invited”

3.5 Market opportunities identified

The Solution Providers that had successfully applied for the stage one grant were asked about the routes to market that they had already or intended to pursue for their innovations. The most common route was direct to customer (16 survey respondents, 76%). Less common routes included via a distributor or through e-commerce (both three respondents, 14%), via an affiliated partner (two respondents, 10%) and via an agent (one respondent, 5%). Four respondents (19%) were seeking further investment to develop their idea where a specific route to market had not yet been identified.

The depth interviews provide further evidence of how the programme has helped beneficiaries and participants identify and clarify market opportunities. One Solution Provider talked about executing a ‘discovery workshop’ as part of their programme-supported innovation project, which provided the opportunity to explore the development of their existing product into a new market area (social housing). The discovery workshop involved two potential end-user clients (with large social housing asset bases), one of which performed the role of Challenge Supporter in the programme. The workshop elicited some highly valuable feedback regarding the ideas presented to the potential end-users, and the innovator has gone on to maintain the working relationships established at that workshop, meaning that as a result of the programme they now have available to them a potential route to market. At the same time as recognising the value of the programme in facilitating the development of their innovation and presenting this route to market, the beneficiary also commented that they had found it difficult to engage with other social housing Challenge Supporters through the programme, something that would have been incredibly valuable to them now that they have determined the specification of a prototype and have identified the route to market. They acknowledged that the key issue preventing further engagement was not a lack of interest, but a lack of capacity within those other Challenge Supporter organisations.

“The programme afforded us the opportunity to orient and locate [our firm] within a new market, to identify what problem we can solve in that market and to develop a prototype of the product that delivers provides that solution.”

For other participants, engagement in the programme has led to secondary market opportunities. For example, as a result of developing and implementing their innovation, one solution provider has been introduced to market opportunities through an organisation that they met when creating their product. This has led to further innovation and diversification on behalf of the beneficiary, where they are evolving their original idea into a second service which involves the delivery of adult education and training.

Lastly, market opportunities between participating businesses have been generated as a result of the programme. Numerous Solution Providers commented on this occurring as a result of the networking and interaction that was an inherent part of the programme delivery, such as a production company being asked to pitch to create a marketing film for one of the other Solution Providers.

Challenge Supporters also acknowledged their role in assisting Solution Providers to identify and test market opportunities:

“We thought the programme was a useful platform for new SMEs to work with experienced organisations to test concept and potentially route to market, and we were very happy to be part of that.”

3.6 Collaborations and partnerships established

Only three respondents to the Solution Provider survey (9%) had not engaged with any other businesses participating in the Challenge North Tyne programme. Ten respondents (31%) said they had only engaged with other businesses at events organised at part of the programme, while twelve (38%) had engaged with businesses outside the programme and six (19%) had done both.

Fourteen respondents (47%) said they had been part of the development of collaborations or communities with other businesses in the Challenge North Tyne programme. All of these collaborations and communities were expected to continue.

As with the survey results referenced above, the interviews provided further qualitative evidence of the benefit of developing collaborations and partnerships, though it is fair to say that respondents were at different stages of collaboration, with some more nascent and yet to develop into more significant impact, whereas were more fully fledged, as below:

“There are some synergies and connections which are developing including with a couple of other participants in the group.”

And:

“We have also developed new projects on the back of the pilot. For example, we are working with Citizens Advice Bureau Northumberland and Thriving Together, who invited us to become part of a framework to train people up (i.e. join an adult education programme as a delivery partner).”

And:

“Networking has been very powerful. We have met and built relationships with a couple of local companies and these have helped us explore and develop the innovation.”

A number of respondents of course reflected on the ongoing imperative of developing relationships over time, and the effort and investment required to convert into more fully developed collaborative outcomes, including specifically with the Challenge Supporters:

“We have linked up with Challenge Supporters – this has helped in certain respects particularly around identifying requirements and needs. One of the decision makers has been very supportive. However, there is an abiding issue with the majority which is that it is incredibly hard to grab their attention and access their time. Whilst this

is understandable, more progress could have been made with more dedicated time from these. CNT helped with introductions but it has been challenging nevertheless.”

There were indeed a range of opinions on this, verging from a lack of specific focus on facilitating collaboration, through to almost the exact opposite, perhaps highlighting the relative starting position of the companies and, perhaps, the stage at which their innovation and idea may have reached:

“The programme leads talked about collaboration but it was not designed as a collaborative programme. There was not much chance for peer networking in any structured way – what existed was entirely unstructured.”

And:

“Our participation led to the opening up of a network – it would have been impossible to have credibly got this network together without the programme and the validation... it was very important. We generated peer support, contacts with suppliers and partners, but not much so with the Challenge Supporters. Our engagement has been with NICD, Northumbria University and Proto in Gateshead.”

And:

“Working with the Challenge Supporters has been crucial. They have provided key feedback on the development of the tool for the sector, in particular two key challenges: addressing net zero planning – through scenario development, and identifying the emissions factors that are crucial to understanding this – and enhancing accuracy, for example through exploring the possibility of linking smart meter data to emissions data on housing stock.”

One reflected further on how the Challenge North Tyne programme, through its collaboration, has contributed to supporting a nascent cluster:

“The whole north east structure for healthy ageing is the reason this is being built in Newcastle, and this programme is a small but important part of that. So for me, it is a fundamental part of the 'supporting infrastructure' behind the cluster.”

Nonetheless, a number of respondents reflected on how the facilitation and targeting of collaboration opportunities might be enhanced or improved:

“Some of the content seemed more fitted to the needs of start-up or early stage businesses. Innovation programmes need to think about how they stimulate community and place-based innovation from within, in order to maximise the value that remains post-project. They must think about how to structure programmes to be more equitable, which means designing them to reflect the specific circumstances of businesses that are targeted... CNT could have mapped the projects and articulated the content of each better. From there they could have identified links between different projects and innovations and provided a basis for collaboration and partnership, rather than simply leaving it to either the participants or the ISN staff based on their understanding and knowledge which, whilst impressive, will always be limited and not available consistently to all participants”

And, in a similar vein: *“There was little sense of a collective effort towards the mission goal - it didn't feel that you were connected to the wider mission. I felt that it was largely up to the individuals to drive forward their project as a singular effort. I haven't yet developed any lasting relationships or collaborations but I accepts it is too early to conclude that this will definitely not happen.”*

Generally, however, respondents were able to identify opportunities for collaboration, acknowledging perhaps that the benefits and outcomes may be felt more tangibly over the medium to longer term, as evidenced by the following statements:

“I did make some contact with people that were not in the same field, but were nevertheless developing a product to the markets; it was helpful to share processes, what they did next, and how they have approached things. There was a shared experience of external approval.”

“We met a couple of people who showed interest in what we do, but it is idling at the moment but there is anticipation for the future in terms of collaboration. One could be a user of the product – whether it transpires in terms of adding value to their proposition we will need to see.”

“The programme did put us in contact with Connexions who work with schools, and we have spoken at two of their events. It gave us access to a whole bunch of people onto other courses and we were also able to use this opportunity to target outputs for the BFI-funded programme that we are currently delivering separately. It also gave us further inroads into schools, which can be particularly difficult to initially get past gatekeepers. It has been about cultivating relationships and has led to new opportunities and new potential delivery, for example, PGCE drama training for teachers.”

Challenge Supporters also experienced positive outcomes regarding the development of partnerships and collaborations, though their engagement with Solution Providers throughout each stage of the programme (from initial application appraisals, through to the updates provided by the delivery team, then meetings and workshops to review and provide feedback on specifications and prototypes, to involving Solution Providers in their own innovation development initiatives:

“Involvement in the programme prompted internal expert collaboration on organisational priorities around meetings with solution developers, which enabled internal collaboration and definition of priorities and how to address them, as well as prompting new thinking and building collaborations with solution developers.”

“It was very useful for us to be involved as we have built relationships with SMEs that will be carried forward”

3.7 Private sector investment leveraged

Other than for businesses that received Stage 2 funding, the evaluation did not routinely gather quantitative evidence regarding the total additional investment leveraged through participation in the programme, primarily due to the complexity of the issue and the related difficulty in finding the opportunity to cover the subject in an already complex questionnaire. It is therefore not possible to provide a robust estimate of the proportion of beneficiaries that have generated additional private sector investment, nor the quantum of investment that this amounts to.

However, the depth interviews did cover this theme to an extent, and these reveal two key findings. Firstly, all seven Stage 2 grant recipients were required to match the second grant amount, meaning that private investment was leveraged in most of the companies receiving a Stage 2 grant. Secondly, at least one recipient of the Stage 2 grant received funds from a potential customer for their product in order to match the grant, evidencing support from the marketplace for that innovation. This is perhaps an unusual mechanism but provides further evidence of the value of the programme, because the confidence of that customer in the product was sufficiently high for it to allocate funds to its development. This confidence was underpinned by the presence of the participant on the Challenge North Tyne programme, providing the customer with reassurance that not only had the innovation been externally assessed, but that its development was being supported through a targeted, intense support programme which was delivering the innovation outcomes it intended to deliver.

Two of the Stage 2 grant recipients expressed significant ambition with respect to raising finance in the future. One firm, which is developing a product to help elderly people stay safe in their homes for longer, aims to rise £2.5m in the next year, leading to the creation of over 20 jobs, whilst another (operating in a similar market) is seeking £300k in the next year which will support around 5 jobs.

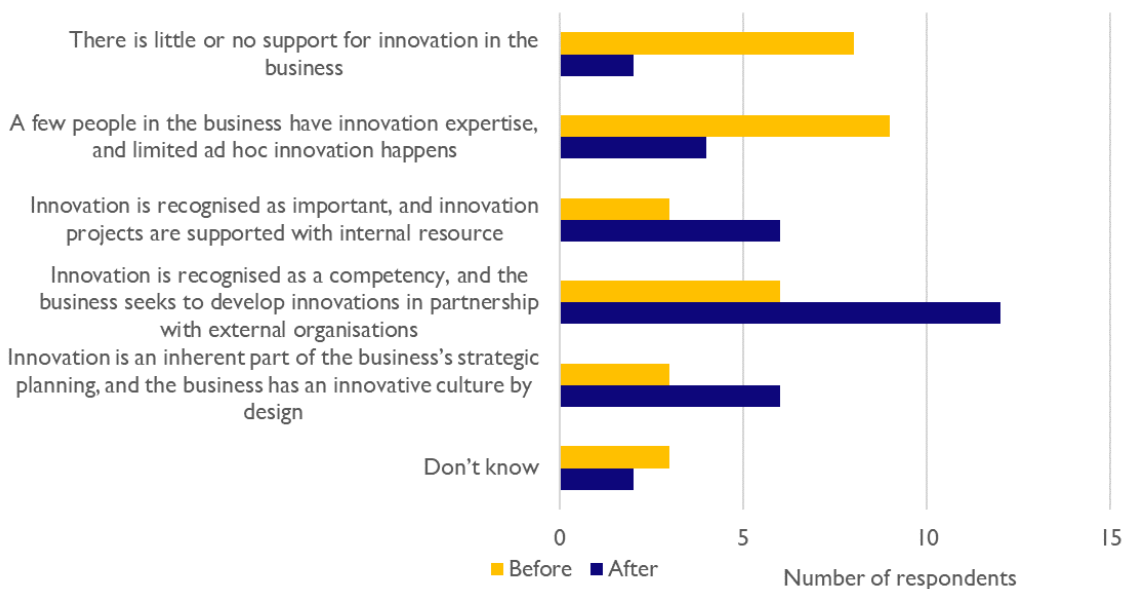
Programme quarterly reports indicate that the total private sector match achieved through Stage 2 grant awards was £170,000. A total of seven grants were awarded in Stage 2, amounting to an investment of £88,333 direct via programme funding.

3.8 Growth in open, collaborative mindset and behaviours

Solution Providers were asked what effect of the Challenge North Tyne programme had had on their ability and capacity for innovation. Seven survey respondents (22%) said that their ability and capacity for innovation had grown significantly, and fourteen (44%) said it had grown to some extent. Ten (31%) said their capacity was about the same, while one (3%) thought it was too early to tell.

Solution Providers were asked to indicate their current innovation position, at the end of the Accelerator support process. Compared with an earlier question about innovation within the business before involvement with the Challenge North Tyne programme, there is a clear shift in attitudes towards innovation among participating businesses.

Figure 10 Innovation position of businesses before and after participating in the Challenge North Tyne programme



Source: Ortus survey of Solution Providers: Base=32

Figure 10 shows that the most selected response after the programme (12 respondents, 38%) is that 'innovation is recognised as a competency, and the business seeks to develop innovations in partnership with external organisations'. This compares with six respondents (19%) before participating in the programme. Similarly, the number of respondents reporting that 'innovation is an inherent part of the business's strategic planning, and the business has an innovative culture by design' rose from three (9%) before the programme to six (19%) after. Meanwhile, fewer respondents reported that 'there is little or no support for innovation in the business' or that 'a few people in the business have innovation expertise and limited ad hoc innovation happens' after participating in the programme (respectively, two and four respondents, 6% and 13%) than before (respectively, eight and nine respondents, 25% and 28%).

The qualitative interviews also provide evidence of how the programme has reinforced or enhanced open innovation mindsets and behaviours. Some Solution Providers were experiencing an open innovation (challenge-led) innovation support programme for the first time, and in these cases it is clear that the programme has improved understanding and knowledge around the key concepts and how to manage an open innovation project.

In other, more experienced Solution Providers, the programme has reinforced existing understanding whilst providing specific tools and techniques to support the process of innovation:

"I've been involved in and indeed led open innovation projects before so the process and concepts are very familiar to me. However, some of the process tools that were shared were new to me and I found them very interesting"

and useful, such as the business canvas for strategic planning at a micro level. This really helped me to sharpen and crystallising thinking.”

Challenge Supporters were also asked their thoughts on whether the Challenge North Tyne Programme has contributed to an increase in awareness of open innovation approaches. Most of the respondents were very positive about this element of the programme as illustrated by the comments below:

“Yes, by involving and consulting the end users of designs.”

“Absolutely, our observation is that this has happened both within our organisation and within programme participants”

“Yes. What we need now is a consistent approach undertaken across the wider North East. ... We need to work more broadly to ensure the region is getting the funding it needs to deliver the transformations we aspire to.”

“Yes – [the] workshops and process increase awareness, particularly for SME/new ventures.”

There were also a number of positive responses from the Challenge Supporters in terms of whether the Challenge North Tyne programme has contributed to an increase in adoption of open innovation approaches:

“Yes, it has facilitated 'idea generation' with a true potential output bias”

“Yes. Helps keep the benefits of open innovation in the spotlight.”

“Yes – [the Programme] built profile and directly helped those who applied.”

3.9 Business growth

When considering the impact of the programme on business growth, it is important to recognise that the beneficiary cohort included many start-up and early stage businesses, some of which are pre-revenue.

The Solution Providers survey asked respondents how much their turnover had increased as a result of joining the Challenge North Tyne programme. Nineteen respondents (59%) said they had seen no increase. Five (16%) said turnover had risen by up to 10%. Respondents were more likely to believe that joining the programme would result in increased turnover in the future – just six (19%) said they did not expect turnover to rise in the next three years, while eight (25%) thought turnover would rise by up to 10% and five (16%) thought turnover would rise by up to 100%.

Six respondents (19%) reported that they had recruited new employees as a result of joining the Challenge North Tyne programme, with three reporting they had recruited part-time staff (less than one FTE), two reporting they had recruited one FTE and one reporting that they had recruited two FTEs. Three of these new FTE positions were in senior management, professional or technician level jobs and therefore contribute to the North East LEP’s Better Jobs target.

25 respondents (78%) said they expected to recruit new employees within the next three years as a result of joining the Challenge North Tyne programme. Ten respondents (31%) expected to recruit fewer than one FTE, while thirteen respondents (41%) expected to recruit between one and five FTEs and two respondents (6%) expected to recruit more than five FTEs, with 32 new jobs expected between them. Respondents suggested that 27 new jobs would be created in senior management, professional or technician level roles.

Those beneficiaries that have contributed to the qualitative interviews also present a positive picture of current and future growth. Of the fifteen solution providers interviewed, only one of the interviewees had decided, as a result of the feasibility study conducted through the Challenge North Tyne programme, to cease development of their product. This was as a direct result of the outcome of the study, which demonstrated that whilst a manufacturing process for creating the product was identified, the commercial elements of the proposition were not viable.

Otherwise, there is evidence of current and planned future job creation, as well as (and often tied to) predicted increases in revenue as products and services are launched and begin to generate revenue. Across the interviewees, all products and services were yet to be formally launched, confirming the medium/long-term nature of innovation development and the need to support businesses through the various stages of development. This is one key area for consideration by policy makers, as many of the participants (even those receiving Stage 2 grants) posed a key question about what support might be available to help them through the ensuing stages of development, testing and launch.

Within the cohort of products and services being developed by programme participants, there are numerous which appear to have significant opportunity to achieve scale. Unsurprisingly, for such companies, the predictions around future growth are both comparatively sizeable and also comparatively formalised (also linked to stage of development, where in order to take the product forward, they are needing to develop detailed business plans and forecasts to support funding acquisition activities). One firm is predicting an annual turnover of around £1m from their new product within the first year post-launch, whilst another is forecasting turnover of around £3.5m within three years of launch. Further funding and investment are important to the achievement of these targets in both cases.

As mentioned above, external investment is being sought by some participants and at comparatively significant levels (in some cases, seven figures). The participants were clear that achieving such investment would lead to considerable employment creation.

Determining the level of attribution (how much of the current and predicted increases in employment, turnover and other financial gains) for a programme such as this can be challenging, because the programme is often the conduit to accelerated development. However, the qualitative interviews provide evidence that in a majority of cases, the idea or innovation would have remained undeveloped without the support of the Challenge North Tyne programme, and that this is entirely down to the resource constraints faced by those businesses. Therefore, in many cases, attribution can be assumed to be 100%.

However, there are also numerous examples of businesses that believe they would have developed their innovation even without the support of the programme, but in all cases it was stated that development would have taken longer and potentially been less successful. A common response was that development has been accelerated by about one year. We conclude that there is some deadweight present (i.e. some of the impacts would have occurred without the programme) but this is limited.

The programme has reduced innovation risk in a number of ways; by reducing the level of internal resource required to take the initial steps, by providing a 'rubber stamp' of the idea which external parties value, by providing access to external organisations (e.g. Challenge Supporters) that are able to provide key insight and feedback regarding product/service design and by improving skills and knowledge regarding innovation processes, meaning they are likely to be more successful.

Interviews also indicated that the programme suffered limited 'displacement' effect, by virtue of the fact that similar and alternative support programmes were not available to participants, meaning they reported that they were not able to find similar support elsewhere. This result, and the findings above in relation to attribution, drive the assumptions employed in the Value for Money assessment in section 3.15 below.

3.10 Greater understanding of open innovation and its role in the support ecosystem

The evaluation evidence indicates that for many involved in the programme, from Solution Providers through Challenge Supporters and into the delivery partners and funders, the level of understanding of open innovation – what it is, how it operates and to implement it – has grown considerably.

For Solution Providers, many had not engaged in innovation support prior to the programme, let alone an open innovation programme. Part of the key learning for these businesses, therefore, was around the concept of open innovation, within the specific context of a challenge-led programme:

“It was quite clear from the Accelerator content that we were involved in an open innovation programme and what that meant, which was helpful as we’d not been involved in anything similar before.”

Challenge Supporters also welcomed the opportunity to engage in an open innovation programme and commented on the benefits of that element of the programme design:

“We’ve been involved in many Accelerator and other open innovation programmes and are very supportive of that approach, so we were very happy to be involved. A key element for us was the opportunity to build our own internal understanding of this approach, and how best to adopt it within our organisation.”

Whilst Solution Providers were not well placed to comment on the role of open innovation within the wider innovation ecosystem, Challenge Supporters and the delivery partners and funder were able to do so. The group workshop at the end of the evaluation process was instructive in this particular theme, and this (in combination with interview evidence) identified that these parties believed that as a result of the Challenge North Tyne programme, there was now both a greater understanding of the concept of open innovation and the role it might play within the innovation ecosystem going forward. For example, one of the programme delivery partners felt that the workshop itself, and the opportunity it afforded to hear of participant experiences, had elevated their own understanding of the benefits of open innovation. Furthermore, there were positive comments made about how future investment in open innovation support programmes, such as this, could help achieve policy goals, address societal challenges and stimulate business growth across the region. This feedback is borne out with the evidence, gathered through desk research, from other innovation programmes and approaches and from key commentators.

“The focus that a challenge-led approach provides is very important both for the achievement of wider, societal goals and the delivery of innovation outcomes that contribute to those goals.”

“We can very much see the potential for a greater role for open innovation support moving forward, as part of a wider portfolio of support that strikes the balance between maximising wider impact on businesses and focuses on specific challenges or missions.”

3.11 Sustainable model for challenge-led innovation is developed

There are numerous dimensions to the question of whether the model employed in Challenge North Tyne is sustainable. No model for support can be sustainable unless it is first proven to be effective. Then, there needs to be untapped current and future demand for the model. Lastly, there needs to be support from the key actors for the model.

The evaluation evidence indicates that overall, the programme has been very successful in achieving its stated aims and objectives; it has met its quantitative targets regarding outputs, has generated wide ranging benefits for programme participants and has delivered a positive economic impact (see section 3.14 below). Therefore, the evaluation concludes that the model has been a successful one relative to the aims and objectives set out at the outset.

The two challenges that the programme addresses are long-term and ongoing in nature. It was of course never the intention that the Challenge North Tyne programme would result in either being completely resolved; rather, the challenges were set to provide a focus and framework for programme delivery and to stimulate innovation that contributes to societal goals. There is plenty of scope to continue to operate challenge-led innovation programmes aligned to achieving these goals. However, the programme operated in a spatial area which contains a comparatively small market when it comes to demand for business support, due to the scale of the economy. As acknowledged by the programme through its design and funding application phase, this presents a challenge for any business support programme, but is particularly acute for a programme which is as focused as this.

There are merits in applying even greater focus in challenge setting in the future, including the opportunity to put in place problem ‘owners’ for each challenge set (whilst that happened to a degree in this programme, the delivery partners acknowledge that it simply was not possible to partner up each SME, or small groups, with a partner/problem due to the scale of the programme and the level of resource available). This would also mean smaller groups of SMEs within challenge teams, as the focus of innovation would be even more specific. Uncertainty over whether a sufficient number of high quality ideas and innovations could be brought forward under any future challenge-led programme would therefore be a considerable risk that would need careful mitigation and management. This could be through the allocation of discreet resource to develop the challenge, acknowledging that such processes may fail to identify a suitable challenge that can be met through the regional SME base.

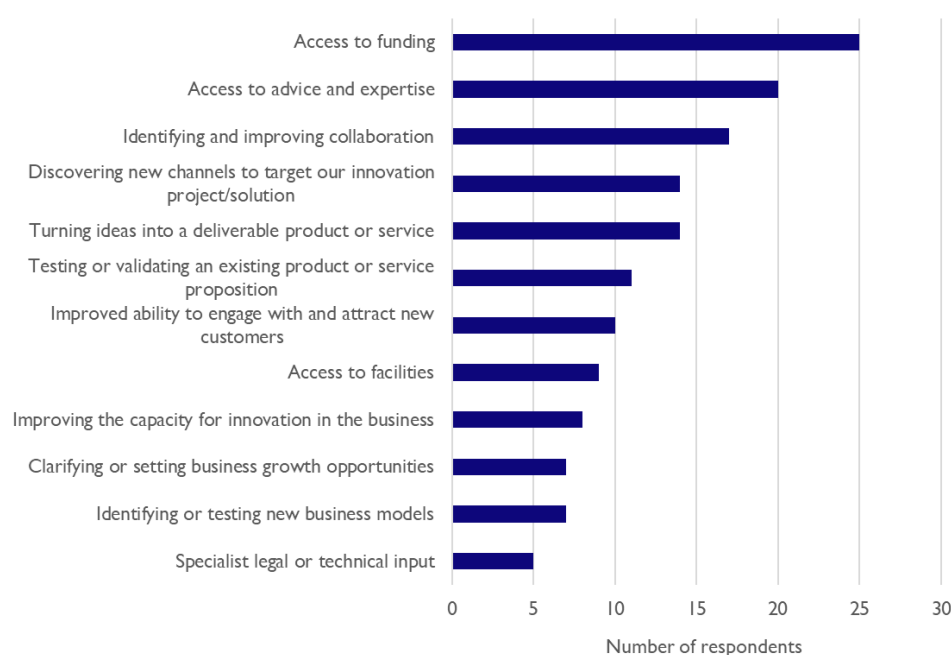
That said, based on the success of this programme, there is evidence of clear support for the model employed here. The group workshop and discussions with delivery and funding partners indicate a growing interest in the model and its future deployment, within the wider innovation support ecosystem. The model is by definition selective and focused (based, as it is, on two Challenge areas), and is not designed to deliver very high volumes of outputs (e.g. number of businesses receiving support). It should be considered as a complementary and additive programme to others that can upskill larger volumes of SMEs in the area of innovation capability and capacity (although it is important to acknowledge that the challenge-led model does achieve this outcome).

The evaluation concludes that, whilst there are a number of key lessons to be learned from the Challenge North Tyne programme that could influence future challenge-led programme design, there is a consensus that such a model can play an important role within the wider innovation ecosystem, and that this should be encouraged.

3.12 Future support needs

The Solution Provider survey asked about what further support they needed in relation to their innovation project/solution. Figure 11 shows that access to funding (25 respondents, 81%), access to advice and expertise (20 respondents, 65%) and identifying and improving collaboration (17 respondents, 55%) are the areas where support is most commonly needed.

Figure 11 Further support needs



Source: Ortus survey of Solution Providers: Base=31

Seventeen respondents (59%) said they needed further support with innovation more generally. This included access to funding and support with bid writing. Support with protecting intellectual property was also requested. Some respondents wanted further opportunities for collaboration. Some respondents wanted support with prototyping and product development, including subsidised 'maker space' facilities.

The qualitative interviews provided insightful feedback regarding how the Challenge North Tyne programme was designed and delivered, and how improvements could be made in the future. The key points are as follows:

- The ISN team were extremely approachable, professional and went 'above and beyond' in supporting beneficiaries. This included extending informal support beyond the end of the programme, making connections and providing introductions for partnership and collaboration. That said, feedback indicates that a more formal and structured approach to partnership and collaboration development may be helpful in the future. For example, numerous beneficiaries indicated that they never really got to grips with the range of businesses on the programme and the nature of their ideas and innovations. An information pack could perhaps be developed, and one suggestion was that a 'speed-dating' type event early on in the programme could help rapidly identify potential synergies and collaborative opportunities.
- The support sessions (workshops and events) were broadly very well designed, professionally delivered and contained valuable tools and insight. They involved a combination of delivered content with the opportunity for participants to discuss concepts and how they relate to their business and innovation with their peers. However, one of the features of the participant group was their diversity, particularly with respect to both the maturity of their business (often aligned to their experience of running a business) and the maturity of their innovation. More experienced participants commented that some of the delivered content was more relevant to the more inexperienced participants, as it covered concepts and processes which were familiar to the more experienced participants. This meant that content was, to some, somewhat redundant, thereby reducing its value. On a related point, a number of participants thought that, for them, the balance of time spent on delivered content versus time for discussion and consideration could be improved (with less time dedicated to the former, and more time dedicated to the latter). Whilst it is important to acknowledge that there is no one model that would suit all participants (considering the diversity in terms of experience and learning styles), this leads the evaluators to believe that – in order to account for variance with the beneficiary cohort – there could be some merit in segmenting programmes according to the experience level of participants, or organising similar future programmes in some other way to put participants on a more suitable 'track' according to their existing level of knowledge and understanding.
- The programme was clearly targeted at bringing forward innovations that contribute to addressing to two stated challenges. There were a larger number of participants pursuing innovations under the Ageing challenge, which is instructive. At least one participant (where the owner is based outside of the region) has established their business in Newcastle in order to be physically located within a cluster of businesses and organisations within the Ageing theme, which demonstrates the value of having a recognisable specialism within a particular field, driving place- and sector-based growth. One participant also provided the following comment regarding development of future Ageing-related open innovation programmes:
 - *"We need to recognise that in ageing, networks are key because successful solutions often require inter-operability. So future programmes regarding ageing should maximise the opportunity for collaboration. This may apply more or less to other sectors/markets, but it is crucial for healthy ageing."*
- One participant was keen to express the need to design and deliver support initiatives in collaboration with local communities. This is particularly important when the intended solutions and outcomes affect those communities directly. Unfortunately such innovations, where they

have a social as well as economic impact, often fall foul of the ‘traditional’ appraisal techniques²⁹, meaning they lose out when compared to innovations developed with according to primarily commercial objectives. This comment provides further evidence of the value of the programme when compared to other, more ‘traditional’ innovation support:

- “[Typical] Innovation programmes need to think about how they stimulate community and place-based innovation from within, in order to maximise the value that remains post-project. Providers must think about how to structure programmes to be more equitable, which means designing them to reflect the specific circumstances of businesses and communities that are targeted.”

3.13 Negative consequences of engagement in the programme

Any business support programme requires beneficiaries – and typically those in senior or leadership positions in beneficiary businesses, particularly those that are small or early stage – to commit time and effort to engage in that programme. As a result, there are always going to be costs associated with that commitment, especially in the form of opportunity costs (i.e. the potential foregone profit from an activity not undertaken because a preference is made to invest in an alternative activity). The Solution Provider survey investigated such impacts arising from the Programme.

When asked if they had experienced or expected to experience any negative impacts from participating in the Challenge North Tyne programme, very few Solution Providers reported such negative impacts. Where they were reported, they focused on the fact that investing time in the Challenge North Tyne programme meant there was more limited time available for other work (nine respondents, 30%). Such an outcome should not be seen as a reflection of the nature or design of the programme; instead, it is a typical outcome from any business support programme. However, the design of this programme does mitigate such opportunity costs. One respondent commented that while lack of time for other work was an issue, this was because micro-businesses often have little ‘slack’ resource and in their case, the first grant was valuable in helping offset the loss of income generating activity.

On a different theme, a small number of respondents (five, 17%) indicated that they were struggling to identify an opportunity to implement their innovation project or solution. Increased operating costs were expected to be experienced in the future by four respondents (13%), alongside lower profits and reduced productivity (both two respondents, 7%).

It is also important to acknowledge the direct steps taken by the team that designed to programme to avoid negative impacts. Specific steps taken included:

- Streamlining the Stage 1 funding application process to reduce effort of submitting SMEs.
- All of the Accelerator support activity provided was optional for SMEs to attend (with exception of three 1-2-1s over course of programme to monitor progress).
- Funding for the SME innovation projects was non-matched, provided upfront at the beginning of the Accelerator and could be used on a wide range of activities, including covering employees’ time on project delivery.
- Funding was provided to enable SMEs to take on additional resources in order to undertake innovation activity they would not otherwise complete.
- SMEs were encouraged to advise their Innovation Managers if innovation projects needed to be altered and could submit a request for a change of activity if a better way of achieving the innovation outcome was identified or a dead-end was hit during development.

It may be worthwhile undertaking some further work, outside of this evaluation, to understand the relationship between programme design and some of the negative financial impacts commented on above (recognising of course that these were identified by a small proportion of participants).

²⁹ This point should be considered in context with the earlier comments regarding Insight North East’s paper on the development of a framework to support Inclusive Innovation.

3.14 Economic impact

The evaluation is required to explore and evidence the economic impact arising from the programme and assess the cost-effectiveness in light of its intended outcomes and impacts. This and the following sections cover those requirements.

3.14.1 Impact on employment

At the time of the evaluation, the monitoring and reporting systems and procedures, including quarterly reporting to NTCA, did not yet capture formal outcomes and impacts – these are due to be collected from the end of the 23/24 financial year. Therefore, the key source of data on economic impacts is the Solution Provider survey. Recognising that the target audience for the programme has largely been small and micro businesses, and given the uncertain and medium-term nature of innovation development and launch, the potential scale of any current and future impacts may be limited. That said, for such businesses, relatively small absolute levels of growth can have a transformative and significant effect on the individual business. So even comparatively small impacts can be very important, particularly within innovation active businesses.

It is fair to conclude that for the majority of participants, their ambition is to generate some form of business growth through their innovation project. This is not universally the case, nor is it always the primary goal (e.g. some businesses are focused on other goals which are more aligned to societal or community impacts).

The survey provides evidence that indicates that for a minority of beneficiaries, job creation is both an ambition and an outcome that the programme is helping to deliver. Amongst the Solution Provider survey respondents (32 responses completed all relevant questions), the results indicate the following:

- 5.5 jobs have been created to date
- A further 45 are expected to be created in the next 2-3 years
- The total of jobs created or expected across the survey respondents in the next 2-3 years is therefore 50.5, based on a survey sample of 25% of beneficiaries³⁰. Evaluation guidance³¹ indicates that there are drawbacks to aggregating survey sample data to estimate the effects across the full population of beneficiaries, due to small sample sizes and potential confirmation bias amongst respondents. However, doing so provides a guide to the potential aggregate impacts of the programme.

Therefore, the evaluation concludes that as a result of the Challenge North Tyne programme, an estimated of between 5.5 and 22 FTE jobs (gross) have been created to date, which is predicted to rise to between 50.5 and 205 FTE jobs (gross) in the next 2-3 years.

3.14.2 Impact on GVA

An important measure of an economy's wealth is GVA. The impact of the Challenge North Tyne programme on GVA can be estimated based on the number of gross FTE jobs created (22, and up to 205). Because of the diversity of businesses, technologies and sectors present within the participant group, there is no clear rationale for utilising GVA per employee data for a particular type of job. We know that some of the jobs created (2 out of the current 5.5) are classified by participants as being 'senior management, professional or technician level jobs'. As a result of this, the GVA estimates have utilised average weekly earnings data for the 'Associate professional and technical occupations'

³⁰ It is important to acknowledge that such forecasts may be subject to optimism bias, meaning they are potentially at the upper end of future growth expectations.

³¹ E.g. for programmes such as ERDF, see

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/915448/ESIF-GN-I-034_ERDF_Summative_Assessment_Guidance_Appendices_v4_updated.pdf

occupational classification in the North East. This is to support an analysis of the salary impact of the programme.

In addition, the analysis seeks to estimate GVA impact through the use of a job-level estimate of GVA, then using the estimates for job creation to scale those impacts. Using ONS GVA data (by industry and region³²) and dividing that by ONS jobs estimates (drawn from the Business Register and Employment Survey), it is estimated that each additional job generates average GVA per annum of £49,069). As we are not able to limit the estimate to a particular sector, the figure used is for the all industries in the North East in 2021 (but at 2022 prices).

On the basis of an estimate of between 50.5 and 205 jobs that are estimated to be created as a result of the Challenge North Tyne programme, the **total annual GVA (gross)** created by the programme is estimated at between £2.48 million and £10.1 million.

BIS guidance³³ suggests that when estimating the impacts of public sector investment, it is important to consider the extent to which benefits generated persist over time. Where support has developed the capacity of a business it may enable the organisation to sustain or continue to achieve further benefits in the future. BIS suggests that individual enterprise support projects may generate benefits within one year but that they may persist for up to three years in total.

It is assumed, therefore, that the annual gross GVA impacts of the Programme will persist for three years in total (the first year, plus a further two years). Taking into account persistent effects, the total gross GVA impact of the Programme is estimated at between £7.4 million and £30.2 million.

Calculation of the Net Present Value (NPV) of the GVA benefit stream over the 3-year persistence time period requires this gross total figure to be discounted back utilising an appropriate rate. HM Treasury Green Book guidance has been followed which recommends discounting by 3.5% in order to determine NPV. Once this is applied, the Net Present Value of the total gross GVA impact is between £7.2 million and £29.2 million.

3.14.3 Net additional impact

Public sector investment should bring about change that would not otherwise happen or which would only happen on a smaller scale, or take longer to achieve. This is referred to as additionality.

There are a number of factors that affect the additionality of an intervention:

- **Leakage effects:** This refers to the extent to which any outputs or outcomes generated by the project are lost outside of the target area of the North of Tyne or whether any ineligible beneficiaries are supported.
- **Displacement effects:** This refers to the proportion of project outputs/outcomes that reduce outputs/outcomes elsewhere within the target area. For example, if by supporting one business to start trading, it takes market share away from another business in the region.
- **Multiplier effects.** Public investment may lead to further economic activity, for example, as local businesses spend money with local suppliers and employees spend wages in the local economy.
- **Deadweight effects.** This refers to the proportion of outputs/outcomes that would have happened anyway in the North of Tyne area even without the public investment.

3.14.3.1 Leakage effects

The eligibility criteria for Challenge North Tyne was such that no businesses located outside of the programme area (i.e. that covered by North of Tyne Combined Authority) were accepted onto the programme. We therefore conclude all businesses supported are based within the area. Whilst there is

³² Regional GVA by industry and region (2020)

³³ BIS RDA Evaluation: Practical Guidance on Implementing the IEF (2009)

no direct evidence that jobs have been created outside of the programme area, this does need to be considered as a potential outcome. The median leakage effect recommended by BIS³⁴ for business development and competitiveness projects delivered at the regional level is 3%. Therefore, we have applied a leakage factor of 3% to the programme impacts.

3.14.3.2 Displacement effects

Evaluation evidence suggests that there are unlikely to be any major displacement effects as the profile of businesses supported is such that, given they are micro or small businesses, they operate primarily on a regional basis (i.e. focused on local markets or working on local productions). The evaluation has not captured evidence in relation to location of key markets or competitors, and therefore any estimation of displacement can only draw on qualitative insight. Given the nature of the support provided, the profile of the target audience (SMEs) and the scale of business opportunities that have arisen directly as a result of the support, and the lack of alternative comparable support within the North of Tyne area at the time of the programme, we assume displacement to be low.

Therefore, we have applied a displacement factor of 20% to the Programme impacts, which is at the lower end of displacement factors recommended by BIS for business development and competitiveness projects delivered at the regional level.

3.14.3.3 Multiplier effects

There will be knock-on effects in the regional economy as businesses increase their spending with suppliers and employees spend wages on goods and services locally. The evaluation has not captured evidence in relation to location of supply chains, and therefore any estimation of multipliers can only draw on qualitative insight and benchmarks from similar programmes and activities. Given the nature of the support provided, the profile of the target audience (SMEs) and the scale of business opportunities that have arisen directly as a result of the support, we assume displacement to be very low. However, the extent of multiplier effects will ultimately depend upon the extent to which business sales increase and the opportunities for spending with locally based suppliers increases.

Meanwhile, the project is having a relatively strong local employment impact compared to its modest targets, with a total of between 50.5 and 205 FTE jobs already created, or planned to be created during the next 12-36 months. These employees will go on to spend some of their wages in the regional economy. This suggests that income multiplier effects may be relatively strong.

As supply chain multiplier effects are likely to be relatively strong, given the qualitative evidence indicates that a reasonable proportion of expenditure in relation to product/service development has gone into the local supply chain. As a result, we suggest that the combined multiplier effect is likely to be mid-range. Therefore, we have applied a combined multiplier effect of 1.51, which BIS suggests is the mean average combined multiplier for business development and competitiveness projects at the regional level³⁵.

3.14.3.4 Deadweight effects

There is likely to be a degree of deadweight in the programme, as a significant number of businesses reported that, even without the support, they would have gone ahead with their innovation at some point in time. At the same time, these businesses also indicated that positive business impacts from the development of their innovation may well have arrived in the future, but that the Programme had an accelerating effect on this impacts. We estimate that on average, impacts occur around one year sooner than they would have done in the absence of the support.

The BIS estimate benchmark for deadweight effect for business development and competitiveness projects at the regional level is 50%. However, based on the qualitative interview responses and the fact

³⁴ BIS Research to Improve the Assessment of Additionality (2009)

³⁵ BEIS Research to Improve the Assessment of Additionality, 2009, Table 7.2, Page 28

that the accelerating effects is around one third of the impact time period being studied, the evaluation uses a deadweight factor of 33% when estimating net impacts.

3.14.3.5 Total Net Additional Impact

The assessment of net additional impact, set out in Table 5 below, shows that the gross employment impact of the programme is 51 FTE jobs, and the net additional employment impact is 40 FTE jobs.

The gross GVA impact of the programme (including persistent effects and discounting) based on the survey response sample is £7.18 million, and the net additional GVA impact (including persistent effects and discounting) is £5.63 million as shown in Table 5 below.

Table 5: Actual gross and net additional impacts for employment and GVA (Survey Sample)

		Measure	Adjustment
Employment impact (FTE) Reported by survey respondents	Gross impact	51	
	Deadweight	34	33%
	Displacement	27	20%
	Leakage	26	3%
	Multiplier	40	1.51
	Net additional	40	
GVA impact (£m) Included persistent effects and discounting	Gross impact	£7,176,800	
	Deadweight	£4,808,456	33%
	Displacement	£3,846,765	20%
	Leakage	£3,731,362	3%
	Multiplier	£5,634,357	1.51
	Net additional	£5,634,357	

Source: Ortus Economic Research Analysis

However, if the survey results are aggregated to represent the full population of beneficiaries, then the impacts are magnified. Table 6 indicates that the gross new jobs created across all beneficiaries is estimated at 205 (161 net additional jobs) and that the GVA impact of the programme (including persistent effects and discounting) is estimated to be £29.16 million, and the net additional GVA impact (including persistent effects and discounting) is £22.89 million as shown in Table 6 below.

Table 6: Actual gross and net additional impacts for employment and GVA (Aggregated)

		Measure	Adjustment
Employment impact (FTE) Reported by survey respondents	Gross impact	205	
	Deadweight	137	33%
	Displacement	110	20%
	Leakage	107	3%
	Multiplier	161	1.51
	Net additional	161	
GVA impact (£m) Included persistent effects and discounting	Gross impact	£29,155,751	
	Deadweight	£19,534,353	33%
	Displacement	£15,627,483	20%
	Leakage	£15,158,658	3%
	Multiplier	£22,889,574	1.51
	Net additional	£22,889,574	

Source: Ortus Economic Research Analysis

3.15 Value for Money

It is good practice to measure the value for money of public sector investment in terms of:

- Cost effectiveness as measured by costs per net outputs, and
- The return on investment (ROI).

3.15.1 Cost effectiveness

To estimate the cost effectiveness of the project, the cost per net job created has been calculated by dividing the total expenditure defrayed to the end of the Programme (£879,523.40, made up of £712,856.40 in NTCA grant and £166,667 in private match³⁶) by the number of net additional jobs forecast to be created (between 40 and 161).

Table 7: Cost per net output (forecast)

Output	Challenge North Tyne (cost per net job)	RDA business development and competitiveness interventions ³⁷
Jobs created – lower estimate (40)	£22,184	£21,510 ³⁸
Jobs created – upper estimate (161)	£5,461	£21,510 ³⁹

Source: Ortus Economic Research Analysis

The assessment shows that the cost per net job arising from the Challenge North Tyne programme is between £5,461 and £22,184 compared to an average across similar business support interventions of £21,510. If the programme achieves 3-year job creation at the upper end of the estimated range, then value for money achieved can be considered to be comparable to similar support programmes. However, what this assessment overlooks (along with the wider formal assessment of economic impact), is the increased awareness of, capacity for and intent around future open innovation projects and the positive impacts that they may generate.

3.15.2 Return on investment

In accordance with government guidance, the return on investment (ROI) delivered by Challenge North Tyne is estimated based on the net additional GVA impact (including persistent benefits) (between £5.6m and £22.9m) divided by the total public sector expenditure anticipated to the end of the Programme (£712,856.40 in NTCA grant).

The final outturn in terms of return on investment is between 7.9:1 and 32.1:1 i.e. for every £1 of public sector investment, at least £7.9 of net additional GVA is generated (rising to £32.1 on the upper estimate of impact).

3.16 Summary of outputs and outcomes

Table 5 sets out a summary of the performance of the Challenge North Tyne Programme against key output and outcome targets, based upon monitoring data and survey evidence collated to date (end December 2023).

³⁶ Figures sources from original Business Case

³⁷ Impact of RDA Spending. BIS (2009)

³⁸ Adjusted for inflation to 2022 prices

³⁹ Adjusted for inflation to 2022 prices

Table 8: Summary of Programme output and outcomes to end December 2023

Output name and reference	Target	Achieved to date
001 Direct jobs created	45	From 5.5 to 22 already created From 50.5 to 205 expected in next 3 years ⁴⁰ (gross)
003 Direct jobs safeguarded	25	Not available
005 Number of enterprises receiving support	100	130 (130%)
005.1 Number of enterprises provided with financial support in the form of a non-repayable grant	50	47 (94%)
005.3 Number of enterprises receiving non-financial support (12+ hours)	40	44 (110%)
005.4 Number of enterprises receiving non-financial support (3-12 hours)	100	65 (65%)
005.5 Businesses introducing new-to-market products	30	Not yet available in monitoring data
005.6 Businesses introducing new-to-firm products	20	Not yet available in monitoring data
10% inclusion of social enterprises ⁴¹ amongst the open innovation partnerships	10%	20% (26/130)
Inclusion of participating organisations and SMEs from Less Developed localities, Rural or socially deprived communities, and under-represented demographic groups.	20%	27% in rural ⁴² communities 3% in most deprived communities

Source: Ortus Economic Research Analysis of Monitoring and Evaluation data

⁴⁰ Note these estimates are based on survey responses

⁴¹ Businesses describing themselves as 'Social enterprises' or 'Charities'

⁴² Located within Northumberland County

4. Conclusions and lessons

This section presents a summary of the evaluation and the evidence that has been gathered throughout the research process. Whilst the evaluation has attended to the standard 'Green Book' requirements, which seek to quantify the economic benefit arising from an investment or programme, it also considers the wider impact of the Challenge North Tyne programme, both to participants (Solution Providers and Challenge Supporters) and also the wider innovation and business support ecosystem.

As such, the evaluation covers ground which other similar exercises do not, simply because the nature of the programme is such that it has the potential to deliver a wider range of impacts that extend beyond the direct participants. This section summarises the findings of the evaluation by referring to a number of key questions posed at the outset of the evaluation, within the project brief.

4.1 Impacts

Key question 1 - What tangible and non-tangible impact is the project delivering for the participating organisations and the wider innovation ecosystem?

The tangible impacts evidenced in this evaluation include:

- **Innovation development.** Many Solution Providers have moved through development stages and are continuing to pursue their innovation. Some have been directly supported by Challenge Supporters in making this progression. The support of the ISN team in delivering content, transferring skills and knowledge, building confidence, providing one-to-one support and playing a mentoring role has been instrumental in supporting this progression.
- **Business growth.** This report contains a full exploration of the economic impacts arising from the programme, and provides both 'gross' and 'net' estimates. The evaluation feedback indicates that at least 5.5 FTE jobs (gross) have been created as a result of the programme, with a further 45 predicted in the next three years (gross). These impacts related only to respondents to the Solution Provider survey, and if they are representative of the population of beneficiaries then the total impact could be as much as four times as large. Turnover and profit impacts are anticipated to follow in the medium term.
- **Investment.** The programme has led to an increase in the level of private investment acquired by participating businesses in two ways. Firstly, the seven businesses that were awarded Stage 2 grants have been required to match this investment from their own or other sources. It is estimated that this amounts to at least £170,000. Secondly, it helped participants to progress their innovations, many are now well placed to move to the next round of development, often requiring additional investment funding. Examples include businesses which are forecasting raising sums of around £300,000 and £1 million pounds in the next year in order to fund further development and launch.

Intangible impacts have been experienced by Solution Providers, Challenge Supporters and Programme delivery partners and funders, as follows:

- Solution Providers point to an increase in knowledge and expertise in relation to innovation management, increased confidence in their ability to achieve positive outcomes from innovation projects, and the development of sustainable partnerships and collaborations. They also indicate that the focus that the challenge element of the programme requires and encourages from the outset is very important in terms of supporting targeted expenditure of their own time and resources.
- Challenge supporters identify positive outcomes with respect to their own internal capacity and capability to manage innovation projects, insight into the range of ideas and innovations being explored by Solution Providers which helps them onboard innovation much more efficiently, and

providing the opportunity to stimulate internal collaboration and apply focus to organisational priorities within the context of the challenges.

- Delivery partners and the funder have benefited from the opportunity to continue their learning and development with respect to the design and delivery of challenge-led innovation programmes (building on their culture of self-learning), as well the opportunity to explore the challenge-led model and learn how it might be deployed in the future.

4.2 Most valuable elements

Key question 2 - Which elements of the programme delivery provide greatest value for participating organisations and the wider ecosystem?

Solution Providers have given clear feedback that the combination of a small grant (which is relatively flexible in terms of its deployment) coupled with targeted and structured support is a powerful and effective combination and initial attractor to the programme. The grant is key because working capital in small, often new businesses is typically very scarce. Given the inherent uncertainty within the innovation process, having flexibility around the precise deployment of the grant funding was seen as very important, as it allowed innovators to adapt to feedback and manage risk and uncertainty. Elements of the support were tailored to individual need also, which meant that whilst the ‘delivered’ content was common across the cohort, the specific needs, stage of development and organisational maturity of each beneficiary could be accounted for and responded to. The grant was seen as the mechanism that ‘fired the starting gun’ on many of the innovations in the cohort, taking them from the realm of idea to active innovation project.

Solution Providers have also pointed to the benefit of experiencing the programme with a group of like-minded individuals, committed to open innovation and sharing a collaborative mindset. The programme also provided a range of opportunities for Solution Providers to share ideas, gently challenge each other and encourage one another in pursuing their innovation goals.

For the Challenge Supporters, the most valuable elements included the opportunity to be made aware of ideas and innovations within the cohort, considering these in the light of their own organisational objectives (aligned to the challenge areas) and identifying potential partners and suppliers that they could support. The programme has also helped them develop relationships which may never have materialised without the programme.

For the wider ecosystem, the key value comes from having delivered the programme and the experience and learning that this has created. ISN have now delivered two challenge-led programmes, of differing scale and focus, and – as a ‘learning-focused organisation - have identified numerous ways in which future programmes might be evolved and adapted from the current model. The ecosystem is also now generally more aware of challenge-led initiatives, their design and purpose, the nature and scale of impacts that can arise and how they might fit into the wider innovation support system in the future.

4.3 Risks

Key question 3 - Are the risks and rewards of participating in the programme felt equally between Solution Providers and Challenge Supporters?

This question is best responded to through, first, a consideration of the risks faced by Solution Providers and Challenge Supporters, and also the potential rewards on offer to each group.

For Solution Providers, the risks of engaging in the programme are essentially related to opportunity cost and the use of scarce human resource. The programme was designed to limit the need for working capital, which means that it is safe to assume that for all Stage 1 grantees, financial resource requirements were limited (or zero). However, as many of the businesses are small, early stage or start-up businesses,

the key risk is that they explore their innovation through investing time and energy into its development, with the inherent risk that the innovation fails and that investment is wasted.

Later on in the programme, for the Solution Providers that received Stage 2 grants, financial risks are then incurred (and also increased for the funder, as the grant was significantly higher than in Stage 1), as they were asked to provide matched funding equivalent to the amount of grant. One participant acquired this match from a potential client, meaning that their own financial resources were not required. However, this is an exception and others would have sourced the match from their own resources. The nature and scale of risk increases considerably at this stage. However, the potential rewards are also increased, as the innovation moves towards launch through a process of refinement and validation which increases the likelihood of commercial success. In this way, the increased risk is balanced by a greater chance of financial reward. Furthermore, as Solution Providers moved through the programme, the evaluation evidence suggests that they acquire sustainable benefits, such as increased experience and knowledge in relation to innovation development and heightened confidence. These benefits mean that future risks are minimised, whilst potential future rewards may also be increased.

For Challenge Supporters, the investment made in the programme is primarily time and human resource, which means as for Solution Providers, risks are primarily related to expended effort on innovations which do not progress to launch. The evaluation did not explore whether significant financial investment is involved in either the support of Solution Providers through the programme, or in stages of development which follow. However, it is potentially the case that Challenge Supporters have or will expend financial resources in supporting innovation development that arises out of the programme.

The potential rewards for Challenge Supporters do differ from Solution Providers, however. Challenge Supporters, being 'problem owners', are seeking a solution to some form of challenge that their organisation is facing. Within the context of the two challenges operating within the programme, there is also a secondary social or environmental benefit to the challenge solution. Whilst it is conceivable that a programme such as this might support commercial gain on behalf of the Challenge Supporter, this was not the case with the Challenge Supporters interviewed as part of the evaluation. The Challenge Supporters was typically seeking a solution which contributed to some goal related to net zero (typically related to energy efficiency or carbon reduction) or ageing (such as helping elderly people to be safer in their homes), through which cost savings may occur but this was not stated as a desired objective. The rewards, therefore, come from the contribution that an innovation might make to an organisational goal, such as improving energy efficiency in social housing stock.

Given the differences in risks and rewards faced by Solution Providers and Challenge Supporters, it is difficult to provide a direct answer to the question. However, when it comes to commercial rewards and economic growth, it would appear that the potential rewards are greater for Solution Providers through a programme such as this. The social rewards, on the other hand, are more likely to be greater for Challenge Supporters – but this is directly tied back to the nature of the challenges defined within this programme.

4.4 Relationships

Key question 4 - Are the Challenge Supporter and Solution Provider relationships critical to the realisation of measurable economic impact and intangible benefit? If so, can these relationships be measured in economic impact terms?

The evidence collated within this evaluation indicates that, within a challenge-led programme, the existence of a Challenger Supporter-Solution Provider relationship would appear to accelerate and increase the potential for economic impacts. That said, the absence of direct relationships that have been instigated within the funded timetable of the programme does not necessarily mean that economic impacts are absent. This is because, first, the programme leaves a legacy of contact and awareness between Solution Providers and Challenge Supporters that may lead to future relationship development;

and second, because economic impact, delivered through the commercialisation of an innovation brought forward by the programme is not ruled out by the absence of a Challenge Supporter relationship. One of the most valuable elements of the programme is therefore the encouragement of such relationships, but other economic (and wider) impacts can occur even when these relationships either do not materialise or take longer to evolve.

On the intangible benefits, those related to partnership and collaboration are to some extent reliant on the presence of Solution Providers and Challenge Supporters, because some of the most valuable relationships are between such organisations. However, other relationships have developed within the Solution Provider cohort, such as between organisations that are actively or have plans to collaborate, or supplier relationships where the products or services of one beneficiary are procured by another.

Certain intangible benefits, however, are delivered direct from the Accelerator process and content, and therefore are not connected to the Solution Provider-Challenge Supporter relationship.

It has not been possible, within this evaluation, to discern the economic value of the Solution Provider-Challenge Supporter relationships that have emerged through the programme. This is in large part due to the small number of such relationships that were available for examination by the evaluation, but also (and primarily) due to the fact that the tangible benefits of such relationships are yet to be realised (given that most economic impacts will flow from the launch of innovations to the market, which is in the future for all but a small handful of the businesses that engaged with the programme).

4.5 Communications and engagement

Key question 5 – To what extent do communications, engagement and relationship management contribute to success of challenge-led/mission-oriented innovation programmes?

These elements of programme design and delivery are crucial to the success of any business support programme, and Challenge North Tyne is no different. There are some key conclusions to draw about such elements of the programme based on evaluation feedback. Firstly, the role of ISN as key delivery partner has been regularly and consistently praised by beneficiaries. Communication regarding the organisation of the programme, its stages and Accelerator content (events, workshops, showcases, etc) was seen as clear and effective. The Challenge Programme Director and Innovation Managers delivered programme content professionally and expertly, and provided excellent support in their interaction with programme participants.

Engagement with the programme was good, though some participants inevitably found the organisation of events (timing, location) did not suit them as well as others. This was often the case when participants have other responsibilities, such as managing or working in another business which provides their main income. Participants were often asked to operate outside their comfort zone, in particular when asked to prepare and deliver pitches, but even then the feedback was positive and included specific comments about how worthwhile those elements were for the nervous few.

Perhaps the most important element of the three within the question is relationships management, particularly in an open innovation (challenge-led) programme. The delivery partner focused specific effort on match-making within the Solution Provider cohort and between Solution Providers and Challenge Supporters, and the Accelerator design was such that opportunities for networking and relationship development were built into the sessions. The Innovation Managers built strong relationships with the Solution Providers they were supporting, offering support, guidance and suggestions regarding the development of innovations, overcoming specific challenges and signposting to other organisations for support and/or relationship exploration.

It is undoubtedly the case, therefore and based on evaluation feedback, that all three elements of communication, engagement and relationship development made a positive contribution to the success of this programme, and should form the spine of any future challenge-led programmes.

4.6 Comparison with other approaches

Key question 6 - How does the Challenge North Tyne approach compare to similar challenge-led/mission-oriented projects/best practice in terms of setting mission criteria⁴³?

The IIPP Policy Briefing sets out five criteria for the development of missions (challenges). These are set out in the table below, along with the evaluation conclusions regarding the extent to which the Challenge North Tyne programme responds to these criteria.

Criteria ⁴⁴	Conclusions
<p>Be bold, inspirational with wide societal relevance: Missions should engage the public. They should make clear that through ambitious, bold action, solutions will be developed that will have an impact on people’s daily lives</p>	<p>The Challenge North Tyne programme certainly met the criteria that it should be bold and engaging of a wide audience. It is the second explicitly challenge-led innovation project to run in the North East in recent years, and is therefore considered somewhat trailblazing. The identification and definition of the challenges meant that the programme engaged with issues which had important societal value and were sufficiently large and diffuse to be beyond the reach of any individual organisation to resolve. This drives collective effort and collaboration, since solutions require coordinated effort and relationships between solution providers and problem owners.</p>
<p>Set a clear direction — targeted, measurable, and time-bound: Missions need to be very clearly framed. While enabling long-term investments, they need a specific target that can either be formulated in binary ways (as clearly as whether man has reached the Moon and returned back safely) or quantified (as clearly as whether a certain percentage reduction in carbon emissions against a baseline has been reached across manufacturing).</p>	<p>The programme itself was clear in its direction and objectives. The ‘offer’ to prospective programme participants was also clear and succeeded in attracting a sufficient number of applicants to achieve the targeted programme outputs. However, the challenge definition stage, for a programme such as this which aimed to engage a relatively large number of SMEs in its delivery, necessitated a sufficiently loose definition of each mission such that the volume of participants was sufficiently high, particularly given the target audience (SMEs) and scale of the North of Tyne economy. So whilst one might argue that the programme did not respond to the IIPP criteria around specific targets for the challenges, the programme design was entirely appropriate given the wider economic and social goals.</p>
<p>Be ambitious but realistic: Mission objectives should be set in an ambitious manner (taking risks), centred on research and innovation activities across the entire innovation chain,</p>	<p>Again, the nature of the programme means that a certain amount of flexibility within the challenge definitions was required, meaning that explicit objective with respect to the two challenge areas</p>

⁴³ With reference to the IIPP Policy Brief – Missions: A Beginner’s Guide (2019)

⁴⁴ See Mazzucato M. and Dibb G., Missions: A Beginner’s Guide, IIPP Policy Brief 09, December 2019.

Criteria⁴⁴	Conclusions
<p>including the feedback effects between basic and applied research.</p>	<p>would not have been appropriate. The approach here was to establish the broad challenge areas, work with partners and Challenge Supporters to frame specific problems within them, and provide the environment and structure through which collaboration and partnership might evolve in order to address those problems. Where Solution Provider-Challenge Supporter relationships evolved, the evaluation evidence indicates that challenge objectives quickly became very focused on the ways in which the specific innovations could solve specific problems. However, the scale of the programme and the resource available meant that it was not practical or possible to pair up each Solution Provider with a specific problem owner. Nor, in fact, was it desirable given the wider objective of increasing the innovation capability and capacity of SMEs in the North of Tyne. Therefore, the programme comprised a blend of specific mini challenges that fell under the two challenge umbrellas, alongside a number of innovations which can contribute to the achievement of the wider challenges, but are doing so without reference to a specific problem owner.</p>
<p>Encourage cross-disciplinary, cross-sectoral, and cross-actor innovation: Missions should be framed in such a way as to spark activity across, and among, multiple scientific disciplines (including social sciences and humanities), across different industrial sectors (e.g. transport, nutrition, health, services), and different types of actors (public, private, third sector, civil society organisations).</p>	<p>This criteria has very definitely been met by the Challenge North Tyne programme. There is considerable evidence that the Solution Provider cohort is cross-sectoral, that relationships and collaborations have been stimulated which are cross-discipline and that actors occupying different positions in the value chain have developed relationships as a result of the programme.</p>
<p>Involve multiple, bottom-up solutions: Missions should not be achievable by a single development path, or by a single technology. They must be open to being addressed by different types of solutions.</p>	<p>As the response to the third criteria above demonstrates, the evaluation concludes that this criteria has also been met by the Challenge North Tyne programme. A wide range of solutions that can make a contribution to overall challenge achievement and success have been encouraged and developed through the programme. There is diversity amongst the solutions, in terms of the solution which they provide, the technology they employ, the potential for societal and economic impact and the scale of growth that they may deliver. The Ageing challenge area in particular requires solutions which are often inter-operable, which means that numerous parties are required to develop and implement them. This itself</p>

Criteria ⁴⁴	Conclusions
	demonstrates the inherent success of the programme in meeting this criteria. As referenced earlier, dependent on the design of future challenge programmes, consideration may need to be given to wider ‘community’ involvement to satisfy or address more fully an approach to inclusive innovation.

4.7 Lessons learned

Key question 7 - What lessons can be learnt regarding the benefits of challenge-led approaches to open innovation and to support the development of a blueprint for further investment in challenge-led innovation?

Key lessons arising from the evaluation related to programme delivery and impact can be summarised as follows:

- Strategic alignment.** The two Challenges are appropriately aligned with regional strategies and needs, and it is crucial that this continues for future programmes. Future commissioning of regional challenge programmes might consider engaging further with key/additional intermediaries to support the co-design approach to challenge definition. This could include, for example, stakeholders like Insights North East, Net Zero North East England, National Innovation Centres etc alongside industry or sector focused Challenge Supporters to blend in relevant research, data and evidence. These stakeholders should be encouraged to do so by North East Mayoral Combined Authority and partners to support levels of engagement. Further consideration can also be given to drawing in out-of-region expertise too as part of this where this may support additional insight and experience drawn from other localities/regions.
- Scope of Challenges.** There is a balance to be struck between having a challenge defined that is wide enough in scope to attract a broad cross-section of stakeholders (both Challenge Supporters and Solution Providers) and one that is more specified. However, further consideration may need to be given to provide more clarity and focus on challenge definition, bringing it closer to market need or adoption in particular areas. A positive benefit of the wider scope of Challenges is having a range of ways and approaches to respond to said Challenge, but this wider coverage of solutions may come at the expense of subsequent adoption and direct buyer or commissioner engagement.
- Challenge exploration.** A number of respondents felt that the programme may have benefited from further opportunities to explore the challenges as a group dynamic - some Solution Providers felt that their journey was more individual and less ‘community’ shaped. This may or will be down to how a programme like Challenge North Tyne manages resources (space and time specifically) but as a general point, facilitating group-based development of ideas may be beneficial (the caveat being that participants in these types of sessions need to be well matched).
- Solution providers and segmentation.** A strong outcome from the Challenge North Tyne programme was the broad range of Solution Providers specifically in terms of sector, innovation capacity and maturity etc. This undoubtedly provides the opportunity for a range of perceptions, ideas and inputs to be provided, facilitated and responded to. However, feedback from respondents does show that this breadth can impact on the nature and type of content and support delivered (i.e. adopting a common denominator approach or erring towards more entry level or new adopter innovation support as opposed to more innovation scale-up). Further, it may also hinder the level of engagement from Challenge Supporters, and may make it harder to

drive forward more aligned (and perhaps equitable) collaborations which are seen to be key to developing an innovation ecosystem and also providing better scope to embed innovation adoption. Further consideration should also be given to a size/maturity segmentation of solution providers - a greater number fall within the early-stage, micro-business category (their inclusion is to be supported and applauded), but increasing the engagement of more small to medium-sized enterprises is likely to provide a widening of the innovation supply chain and its capacity.

- **Solution provider support and investment.** The Challenge North Tyne grants (especially the Stage 1 grants) and the wide scope to utilise this small investment to develop and test ideas without needing to demonstrate a specified return on investment was widely applauded. Further consideration may be needed in terms of marginally uplifting the level of grant support, particularly where this is accompanied with a further refined approach to challenge definition, as per the above. A further point here is the above segmentation of solution providers is likely to lead to better matching between and across participants, optimising subsequent support.
- **Communications.** Awareness of the Challenge North Tyne programme would appear to be strong and the level of broad engagement across different sectors would attest to this. It is important that programmes like Challenge North Tyne are visible throughout delivery to a wider audience beyond participants as this will encourage awareness of support, recognition of success, and advocacy of the role that such programmes play in making the region more innovative. Where reasonable investment and time allows, challenge programmes should draw on a range of short and longer form content and channels to get relevant messages across.
- **Challenge Supporters.** Feedback received through the consultation clearly indicates that Solution Providers valued the engagement of Challenge Supporters where this happened; however, where possible, this engagement (group and critically 1-2-1) may need to be ramped and scaled up to drive greater outcome and value for all parties. This of course raises the question of capacity and priority, part of which comes a) in Challenge definitions being scoped in more detail in terms of market focus - see above, and b) linking Challenge Supporters more effectively to Solution Providers where there is the potential fit for a stronger collaboration or outcome, based in part based on the Solution Provider's relative state of readiness. Achieving these goals requires additional resource up front, but the evidence suggests that innovations are accelerated and have greater potential when these relationships exist, the additional investment is likely to pay off.
- **Links to broader business and innovation support ecosystem.** Numerous respondents felt that the provision of more directed 1-2-1 support would have been valuable. This is not a criticism of the quality of what was provided, which was valued in most cases. It is more a reflection of how a Challenge programme needs to balance as a group dynamic and focus whilst recognising that individual participants may require specified support to help them on their respective innovation journeys. Given this, knitting the wider innovation ecosystem and landscape into programme delivery is deemed to be key and will drive further outcomes over the longer term.
- **Acknowledging social value and impact.** The opportunity to make an impact at the societal level is commonly stated as a motivator for involvement in Challenge-led programmes. This element is often overlooked by programme funders, as funding decisions have a tendency of relying on formal appraisal processes. Whilst the Green Book has recently been revised to include consideration of social (public) value, this is an emerging area and one where funders might apply their own effort and focus to determine how to build this into their investment programmes. For delivery partners, the challenge is to build content which supports the achievement of such outcomes through programme participation.

In addition, this evaluation represented an opportunity to reflect on the approach to evaluation of Challenge-led innovation programmes (and open innovation support programmes) more generally. The key lessons are as follows:

- For Challenge-led innovation programmes in particular, co-design of the evaluation approach is key, in order that the full range of potential impacts are mapped out and anticipated from the very start of an initiative.
- An evaluation partner should be commissioned once the programme has been awarded funding and in advance of challenge scoping. Advice on evaluation methodologies could even be acquired at the Business Case stage.
- Early commencement of an evaluation process would allow for engagement with stakeholders and partners that are involved in challenge scoping, to understand their expectations of the programme and how they might best engage with evaluation throughout the process. This is particularly important if some stakeholders are only involved early on, and/or if the delivery period happens some time after the initial challenge scoping (as the quantum of time elapsed can affect the quality of evaluation evidence).
- Where feasible, evaluations should be designed with sufficient time and resource to properly engage with the wider innovation ecosystem in order to explore the ecosystem wide effects. This could be conducted through the convening of a group to observe and monitor such impacts from pre-delivery to post-delivery, for example.
- Ideally, the evaluation timetable should include a longer tail-end evaluation post programme delivery and investment to enable a more robust assessment of outcomes (and to test whether forecasts around post-delivery growth have been borne out in reality).
- One important output of this evaluation is the summary of desk research which was conducted to inform the development of an evaluation framework. This asset (reproduced in the Appendix of this report) could be kept current as new research and approaches are generated, and could be employed at the outset of any relevant evaluation in order to inform its design.
- Evaluation design in relation to Challenge-led programmes should carefully consider whether to attempt to capture the social, as well as economic impact of those programmes (and if so, how that might be done).

5. Appendix I - Desk research paper

5.1 Introduction

Because of the mission-led nature of the Challenge North Tyne programme, the evaluation of the programme needs to take a non-traditional approach to assessing the impact and value of the programme. Whilst there are some specific, measurable outputs, outcomes and impacts identified within the Project Briefing and Logic Model (which therefore align to a traditional, Green Book approach), the evaluation is also required to consider a number of other indicators of effectiveness and success. For example, the ITT highlights the need to capture the degree of systemic change and the achievement of intangible innovation goals that can be realised through mission-led innovation activity. The challenge-led nature of the project is by definition centred on openness and collaboration, with beneficiaries (solution providers) working closely with challenge supporters to advance ideas and develop solutions which address the two challenges around which the programme is based.

Given the requirement to ensure that the evaluation captures evidence of the performance of the programme against its laid down target, whilst also assessing the collaborative elements and the impact on the wider ecosystem, it is essential that the evaluation study is primed from the start to cover all requirements.

The first task for the evaluation, therefore, will be to establish an evaluation model and framework which are suitable for a programme such as this and that can elucidate the required insight. The second task will be to deliver a methodology in order to capture the required evidence and undertake the assessment.

There are three key inputs to the process of developing the model and framework process;

1. A review of programme documentation and evidence collated to date
2. Consultation interviews with key stakeholders focused on ambitions for and requirements of the evaluation
3. A literature review exercise.

The literature review is focused on the principles and methodologies for evaluating challenge-led innovation programmes⁴⁵. During proposal development, our team reviewed a small number of such papers and included within the proposal a number of comments drawn from such material. This paper builds on and expands that approach. The literature review is not designed to be exhaustive. It has focused on literature which comments on approaches to evaluating challenge-led innovation programmes and/or carries out such evaluations. This document highlights key findings from the literature and implications for the development of the evaluation model and framework.

5.2 Key findings from the literature

5.2.1 Introduction

The Challenge North Tyne programme focuses innovation activity and effort on tackling complex problems that require collaboration across sectors, on sharing insight with the market and establishing how to overcome barriers to innovation through collaborative solutions in response.

Existing literature can inform the development of a suitable evaluation model. There is a significant body of evidence relating to the rationale for investing in challenge-led programmes, reviewing examples of such programmes and identifying the challenges associated with evaluating them. However, there is a

⁴⁵ A number of terms are used within the literature to refer to such approaches, including 'mission-led innovation', 'open innovation' and 'transformational innovation' programmes.

scarcity of published literature and reports which present results of evaluation studies which are similar to that being initiated in relation to the Challenge North Tyne programme. This summary, therefore, draws lessons from what does exist and draws conclusions about how these should influence the evaluation.

There is growing evidence of a shift towards ‘transformation-oriented’ innovation policies across the world⁴⁶. This shift acknowledges that some societal problems are too significant to be addressed by a single organisation or firm, and that collaboration needs to be at the heart of the response to such problems. Alternatively called challenge-led or mission-led innovation, such policies focus on themes such as climate change, ageing societies, preventative healthcare, and generating sustainable growth for the benefit of all (inter alia).

As the IIPP⁴⁷ state (in a paper authored by Mazzucato, who has written extensively on this subject), “using missions to drive national industrial strategy or innovation policy means focussing less on sectors — from automotives to telecommunications — and more on problems that matter to all.”

5.2.2 The need to change the emphasis and focus of appraisal and evaluation

In another paper, Mazzucato⁴⁸ describes how government investment in transformational actions (such as those seeking to address societal challenges) should be considered as separate and very different from the traditional market failure-led approach to intervention. Interventions led by Market Failure Theory (MFT) have an established set of tools through which they can be evaluated., usually consisting of ex-ante and ex-post exercises focused around cost-benefit analysis, identifying market failures and identifying policy tools to address them and then making a quantitative assessment of the value of the outcomes that flow from the intervention. This is a “limited toolbox for evaluating policies and investments that aim to address societal challenges, because doing so represents a static exercise of evaluation of an intrinsically dynamic process. By not allowing for the possibility that government can transform and create new landscapes that did not exist before, the ability to measure such impact has been affected, with economists often resorting to an analysis of the public sector as an inefficient private one”. The implication is that if the toolbox available to drive an evaluation of such interventions does not contain the appropriate indicators, then the ability of the investing organisation to know whether they are creating something new or simply operating in existing spaces (i.e. to assess their additionality). Another important dimension, it is argued, is to ensure that evaluations make an **assessment of the ‘absorptive capacity’ of organisations involved in the transformative action, from the investing body through to the beneficiaries and including all stakeholders and other actors.**

In the IIPP Policy Brief setting out a beginner’s guide to Missions, Mazzucato and Dibb state that adopting a mission-led approach to innovation is ‘not business as usual’ and doing so requires a “fundamental reappraisal of the role of the public sector to go beyond the ‘market failure’ framework derived from neoclassical welfare economics to a ‘market co-creating’ and ‘market-shaping’ role. This new role would shift focus from marginal improvements driven by ideas of ‘value for money’, to a notion of public value creation driven by public purpose. The State can grasp its abilities as a market shaper to encourage, enable and provide a sense of direction for these challenges but it also needs to recognise it cannot decide in advance what the best solutions might look like.”⁴⁹ When it comes to evaluation, this paper recommends that a new analytical framework for policy appraisal and evaluation is required, one that can capture the dynamic aspects of mission-led policies. Such frameworks need to go well beyond the traditional cost-benefit analysis approach (CBA – enshrined in HM Treasury’s Green Book, for example)

⁴⁶ Mazzucato, M. “Mission-Oriented Innovation Policies: Challenges and Opportunities.” *Industrial and corporate change* 27.5 (2018): 803–815

⁴⁷ Mazzucato M. and Dibb G., *Missions: A beginner's guide*, IIPP Policy Brief 09, December 2019

⁴⁸ Mazzucato, M. *Building the Entrepreneurial State: A New Framework for Envisioning and Evaluating a Mission-Oriented Public Sector* (January 2, 2015). Levy Economics Institute of Bard College Working Paper No. 824, Available at SSRN: <https://ssrn.com/abstract=2544707> or <http://dx.doi.org/10.2139/ssrn.2544707>

⁴⁹ Mazzucator M and Dibb G., *Missions – A Beginner’s Guide*, IIP Policy Brief 09, December 2019.

in order to capture spill-over effects and structural changes to the economy that result from mission-led policy interventions. In a similar vein, Kattel et al⁵⁰ state that if CBA calculations are the main basis for an appraisal of a proposed mission-led policy intervention, then this would stop most missions at inception.

Writing a blog for the Creative Research and Innovation centre (CRAIC) at Loughborough University focused on what is being learnt from challenge-led approaches to funding R&D, Christina Roseberg⁵¹ states that the evaluation of relatively new interventions requires combining summative elements ('what has been achieved?') with formative ones ('why is this the case, and what can we learn from this process?'). She also suggests that understanding the design and implementation becomes as important as assessing the outcomes. **This requires combining methods that explain the 'what' but also the 'how' and 'why', with a toolbox of quantitative and qualitative measures.**

5.2.3 Guidance on designing an evaluation

A 2022 paper from the Stockholm School of Economics⁵² seeks to establish a framework for the evaluation of Mission-Driven Innovation (MDI) policies. For example, they suggest that there are (at least) three important evaluation steps in relation to summative assessment of such policies, as follows:

- "(D) If and how the targeted overarching sociotechnical system/field demonstrates improved performance, such as capabilities (system functions and interactions like knowledge sharing), transition processes, and outcomes.
- (E) If and how the targeted overarching sociotechnical system/field exhibits structural changes, such as a change in the types of innovations, new forms of cross-sectorial collaborations, or new networks constellations in the system, because of the Mission-Driven Environments (MDE);
- (F) If and to what extent there is measurable impact on the societal level in terms of mitigating the failure addressed and reaching the MDE's "vision" or "mission."

These align well with the thinking set out in the ITT for the evaluation. When considering summative evaluations, the paper suggests focusing on evaluation steps D, E and F set out above;

- "Summative and attribution-oriented evaluation steps aim to assess outcomes and the degree to which an MDE reached its goals. This implies a "working backwards" approach, where observable changes are reviewed, followed by an analysis of whether they can be linked causally to an MDI intervention/activity. Here we suggest evaluating whether and how the targeted sociotechnical system(s) demonstrates improved performance (formative/summative evaluation Step D) and whether the system exhibits any structural changes that facilitate reaching the vision (summative evaluation Steps E and F)."

The paper also identifies challenges which are relevant to the proposed evaluation, including that systemic changes take a significant time to come about, meaning that unless a longer term ex-post evaluation is undertaken, evidence of such impacts is likely to be challenging to acquire.

- "Ideally, such evaluations should be conducted ex post the current MDI initiatives because systematic change often takes years to accrue. As such, these types of evaluations instead should be conducted by the policy actor or external evaluators working on their behalf."

In developing an evaluation model for MDIs, the authors make the following recommendations, which we believe are relevant to, and can be built into the evaluation of Challenge North Tyne programme:

⁵⁰ Kattel, R., Mazzucato, M., Ryan-Collins, J., Sharpe, S. (2018a). The economics of change: Policy appraisal for missions, market shaping and public purpose. UCL Institute for Innovation and Public Purpose, Working Paper Series (IIPP WP 2018-06).

⁵¹ <https://craic.lboro.ac.uk/essays/what-are-we-learning-from-a-challenge-driven-approach-to-funding-rd/>

⁵² Essen, A., Krohwinkel, A. and Wennberg, K. (2022), Assessing Whether Mission-Driven Innovation Makes a Difference: Mission Impossible? Developing a Guiding Framework for the Evaluation of Five Mission Driven Environments for Health in Sweden, SSE Working Paper Series in Business Administration, No 2022:2

- As well as taking an attribution-oriented approach (i.e. to assess an intervention's outcomes and establish whether and to what degree the intervention reached its end goals), the evaluation should include a contribution-oriented approach. Such an approach focuses on questions of 'contribution', specifically to what extent observed results are the consequence of the policy, programme or service. Building in a contribution-oriented approach would allow the evaluation to assess whether the programme has created conditions that stimulate developing and applying new technologies and on whether the "overarching sociotechnical system" seems to adjust and become more prone to stimulate innovation. The contribution-oriented approach could focus on whether the 'bottlenecks'⁵³ that prevented innovation and collaboration in the two identified challenge areas have been addressed, and to what extent.
- Evaluating whether and how the sociotechnical system exhibits any structural changes could focus on specific changes in the innovation *direction*, analysing whether organisations engaged in the programme are shifting their R&D investments and broader innovative activities and processes towards topics prioritised relative to the Challenge North Tyne programme's vision.
- Whilst successfully evaluating whether the programme has had any impact at the societal level is no doubt challenging, it should not be ruled out. It is true that a full evaluation of such changes would need to be performed ex-post and after a sufficient period to allow changes to be adopted. However, we suggest that the evaluation of Challenge North Tyne should investigate whether the 'green shoots' of such changes are emerging. These would be evident in shifts in behaviour and activities of not only the beneficiary companies, but also in other stakeholders related to the two missions.

Rohracher⁵⁴ comments on attempts that have been made to evaluate strategic innovation programmes (SIPs) in Sweden, where these programmes are transformative by nature and focused on societal challenges. The paper outlines that a key goal of such types of evaluation is to capture both direct and tangible and indirect and less tangible societal effects of projects or policies. It cites Wiek⁵⁵, which focuses on distinguishing different levels of such effects. "First-order/direct effects may comprise 'usable products' as an output of a project (products, services, action plans, etc.), 'enhanced capacity' (acquired knowledge, understanding, organisational learning, anticipatory competence, etc.), or 'network effects' (networks created or expanded, trust, and accountability). Projects or policies may, however, also have second-order/indirect effects as an impact or outcome. These comprise structural changes and decisions, such as policies, solutions implemented, shifting norms and discourses, or the creation of new organisations and new institutional frameworks." **Such effects should be mapped into the evaluation model/framework for the Challenge North Tyne programme.** This paper also emphasises the importance of **combining formative evaluation elements with summative elements**, in order to deliver a broader and more holistic assessment. It is also important to deliver an assessment with dual purposes in mind; **evaluation of the programme and policy learning**. The early-stage consultation interviews for the Challenge North Tyne programme evaluation reinforce the importance of this second element, given the investment marks a new approach to innovation policy for the funder.

A briefing paper produced by Cambridge Industrial Innovation Policy⁵⁶ captures international implementation lessons arising from a roundtable discussion involving international academics and policy makers, held to identify the challenges and international best practices in designing and implementing

⁵³ Typically, these are the market or other failures that have led to the design of the policy or programme

⁵⁴ Harald Rohracher et al, Mission incomplete: Layered practices of monitoring and evaluation in Swedish transformative innovation policy, *Science and Public Policy*, Volume 50, Issue 2, April 2023, Pages 336–349, <https://doi.org/10.1093/scipol/scac071>

⁵⁵ Arnim Wiek et al, Toward a methodological scheme for capturing societal effects of participatory sustainability research, *Research Evaluation*, Volume 23, Issue 2, April 2014, Pages 117–132, <https://doi-org.manchester.idm.oclc.org/10.1093/reseval/rvt031>

⁵⁶ See <https://www.ciip.group.cam.ac.uk/reports-and-articles/the-challenges-of-challenge-led-research-and-innovation-agencies/>

challenge-led research and innovation agencies (including the process of evaluating their effectiveness). The discussion was organised in response to the need for evidence to support the implementation of the Advanced Research and Invention Agency (ARIA). The event and subsequent briefing identified four lessons regarding selection of an evaluation system that is fit for purpose:

- **“Traditional metrics not compatible.** The panel identified that traditional innovation and investment evaluation metrics are not compatible with challenge-led R&I agencies that are long term, high risk, and high reward by design. The House of Commons similarly requested ‘bespoke Government scrutiny arrangements’ to ensure ARIA has sufficient operational independence while ensuring the £800 million allocated budget is well-justified when spent.
- **Monitor how the private sector is affected by missions after completion.** An important indicator for challenge-led R&I agencies is the change in private sector investment behaviours as a result of public sector investments made by the challenge-led agencies. This is preferred to private sector co-investment, which may skew R&D from the revolutionary to the evolutionary. Instead, mission agencies should monitor subsequent private sector investment behaviours. Examples of investment behaviours include private sector spending and business case framings.
- **Evaluate missions with technology visioning instead of corporate-style phase-gates.** Corporate phase-gates, often idiomatically referred to by the trade name “Stage Gate(TM)”, are designed for the private sector, which faces cash-flow and shareholder constraints, and may reject challenge-led technology visions prematurely. In comparison, challenge-led R&I agencies’ objective is radical innovation. Hence, any evaluation processes will need to be more flexible and adaptive to technology discovery, and should avoid being stifled or constrained by overly prescriptive or standardised decision-making processes and criteria designed for incremental innovation. However, members of challenge-led agencies still need to understand the working principles of corporate phase-gates to ‘translate’ technologies which are eventually commercialised through the private sector.
- **Lengthen the time horizon of evaluations.** Technology implementation is a lengthy process. Patience and policy space are required to let technology vision actualise. For example, the Internet took 30 years to be scaled up from the ARPANET.”

The key takeaways from this article appear to be that any evaluation should **look to the long term to identify impact, to move away from traditional metrics, and to ensure that the evaluation closely monitors private-sector impact.** On this final point, we suggest that the evaluation should **include a focus on the internal measures of success employed by the private sector challenge participants (beneficiaries),** both as an exercise to understand and map these, and also to support an assessment of progress against them.

5.3 Lessons from evaluation studies

As mentioned in the introduction, evaluation evidence regarding challenge-led innovation programmes is scarce. Certainly it has proven very difficult to identify resources which align perfectly with the goals of the Challenge North Tyne evaluation. However, other reports have been identified which offer lessons from attempts to undertake evaluations of challenge-led initiatives, and the last two papers reviewed in this summary focus on such attempts. Seus⁵⁷ sets out a number of lessons taken from the evaluation of FONA, the German framework progress to promote sustainability research. The purpose of this evaluation was two-fold – accountability for the delivery of the programme, and to identify key learnings regarding the implementation of such policies. The paper identifies a number of challenges associated with the evaluation, including:

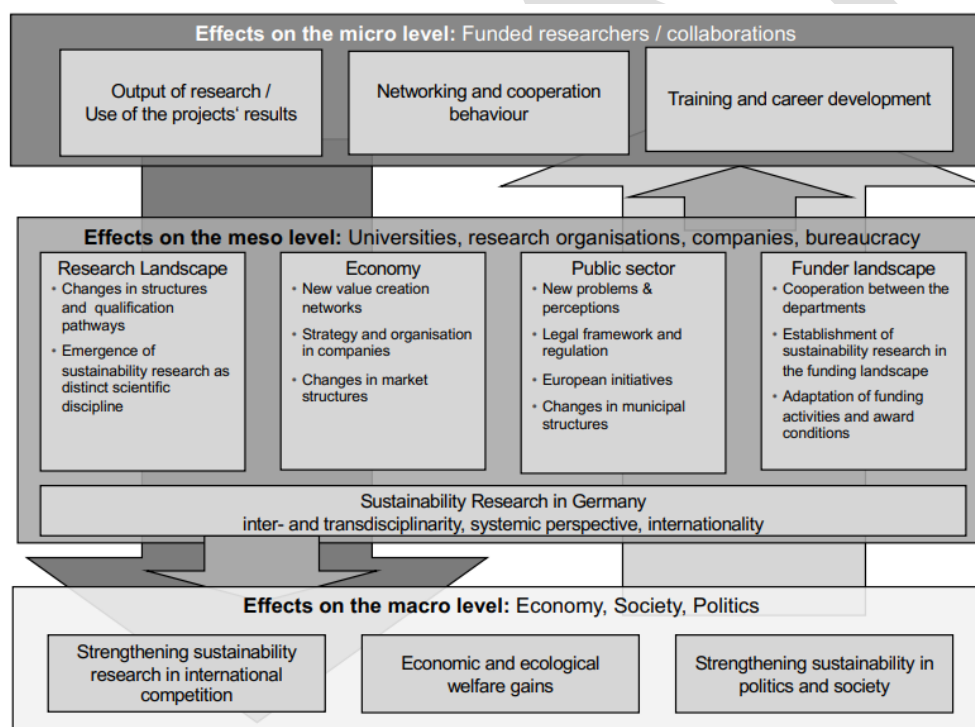
⁵⁷ Seus S. and Buehrer S., How to evaluate a transition-oriented funding programme? Lessons learned from the evaluation of FONA, the German Framework Programme to promote sustainable research, fteval Journal, July 2021 Vol 52 pp.10-18

- The versatility and complexity of the FONA framework, meaning data collection and aggregation would be difficult.
- The elements of sustainability research covered by the framework represent a new way of perceiving and doing scientific research, which raises questions about the criteria used to evaluate the quality of these new research collaborations and their results.
- FONA-funded research has effects not only on the science system, but in other societal spheres also – and there was no agreed methodology for capturing evidence of these wider societal impacts.

Whilst these challenges resonate somewhat with the details of the Challenge North Tyne programme, they are perhaps more relevant to an evaluation which seeks to assess progress against the goals of the challenge addressed, rather than the impact on those participating. However, when considering how to address these challenges, the authors identify a number of responses that can be considered when designing the Challenge North Tyne programme evaluation, including;

- Delivering a **multi-level analysis of the programme implementation and delivery.**
- Combining **qualitative and quantitative data and reactive (surveys, consultations) and non-reactive (desk research, secondary analysis, non-reactive observation) methods.**
- Systematically covering **both impact levels (Figure 12) see and various impact dimensions.**

Figure 12: Overview of expected impacts from FONA



Source: Fraunhofer ISI (in Seus 2021)

This final point is instructive, as it emphasises the need to **evaluate impact at different levels across the ecosystem** within which FONA operates, and this is also a lesson that can be adopted for the Challenge North Tyne evaluation.

Lastly, a report published⁵⁸ by the consultancy firm IPE Tripleline, which reflects on challenges faced when evaluating two innovation funds related to 'grand challenges', and provides recommendations on

⁵⁸ IPE Tripleline, Evaluating Grand Challenges and Innovation: Approaches, Lessons and Reflections

how evaluators might respond to these challenges to better assess transformational innovation policies. The first point made was that the evaluations employed a 'utilisation focus', defined to mean taking the time to understand who would use the evaluation and how. In practice, this meant working in close collaboration with the principal stakeholders, to ensure that "evaluation outputs met the evidence needs of those who had commissioned the evaluations, that recommendations were useful and actionable and that, whilst independent, the evaluation was 'owned' by all those involved in the programmes including people responsible for future funding and programme design decisions. The approach also kept parties engaged and willing to accept uncomfortable findings. A utilisation approach should arguably be a feature of any successful evaluation".

The evaluations followed a 'Theory of Change' approach (TOC) to examine which aspects of the programmes worked, and why. **Using the TOC approach meant that a focus on why outcomes were achieved could be implemented alongside an assessment of whether they were achieved or not.**

The evaluation implemented fairly standard methodologies for evidence collection, including desk research, stakeholder interviews, online surveys of applicants and beneficiaries, programme/project data analysis, case study development, programme adaptation mapping and timeline description, observations from attending events and 'bootcamps', key interventions discussions (designed to identify which elements of the programmes had delivered the most transformative impacts) and comparative analysis.

The report provides an extensive and helpful list of recommendations for evaluators of similar interventions, including the following:

- "Remind policy makers and programmers of international commitments to the aid effectiveness agenda where countries and donors focus on results and results get measured. This can be done in the inception report and in the final report.
- Be prepared to plug the gaps in data and think creatively about how to do this. For example, the HIF evaluation took a representative sample of project completion reports and assessed each against the original proposal, developing a typology of innovation type, rating achievement against original aims, the nature and quality of monitoring and evaluation (M&E) and beneficiaries reached (definitions, numbers).
- Include an assessment of the quality of M&E systems and processes within the evaluation remit. Assess systems and processes at multiple levels: e.g., donor, fund manager, grantee.
- Look at how M&E data is being used (or not) to aid learning, adaption and ongoing innovation. This point is relevant to both project and programme levels.
- Assess if and how evidence of successful innovations is disseminated and if and how it being taken up at scale. Innovation for the sake of innovation is meaningless unless its utility is demonstrated and replicated, and assessed again in other contexts.
- Keep a focus on the organisations/businesses who are the intended end beneficiaries of the innovation and see how clearly they have been defined, measured and articulated by the fund: who are they intended to be and who are they actually?
- Remember the potential gap between theory and practice / design and the reality of implementation, and the different potential causes of low achievement.
- Recognise the value of theory-based evaluation as a tool to unpick weaknesses of design (e.g. assumptions) compared to weaknesses in implementation.
- Ask whether the programme adequately considers pathways to impact at scale for promising innovations, and the quality and quantity of support it provides for 'life after the grant'. Support for scaling can take many forms and will be different for different types of organisation - follow on funding, signposting to follow on funding; business incubator support, mentoring, sufficient grant timescales, requirement to develop a scaling plan and so on.
- Look at what has happened to innovations after the end of the grant, for example through an online survey of former grantees, and develop a typology or framework for assessing outcomes

- Include on the evaluation team expertise in the specific innovation / programme approach who has seen it applied in different settings and can understand and interrogate its use and application.
- Design the methodology to test how effectively capacity in the technique is being built, tracked and embedded.”

5.4 Conclusions

The desk research summary presented here covers a rapid literature review exercise carried out to inform the development of the evaluation model/framework in relation to the Challenge North Tyne programme. Key conclusions, to be considered when the evaluation model/framework is developed, include the following:

- There appears to be very little published evaluation evidence regarding UK-based challenge-led innovation programmes and their impact on participants, stakeholders and the wider innovation ecosystem. This presents a problem, in that there are not pre-tested models that can be learnt from and adapted, but also an opportunity for the evaluation study to fill an important gap in the evidence base.
- The evaluation should seek to understand long-term impact. Clearly this is challenging given the need to deliver the final evaluation in January 2024. In response, the evaluation should consider how it can lay the groundwork for longer-term evaluation of the Challenge North Tyne Programme (should that be commissioned in the future) and also identify lessons learned for any future evaluation of similar programmes.
- Whilst the literature firmly points to the need for a new approach to appraisal and evaluation in order to adequately capture the impact of challenge-led programmes, the context within this particular evaluation will operate cannot be ignored. The evaluation must strike a balance between delivering a traditional assessment (as per Green Book), whilst also capturing evidence of the wider benefit of the programme. These could include, inter alia, structural changes and decisions (such as policies), solutions implemented, shifting norms and discourses, changes in attitudes and behaviours, learning (about the principles of the challenge-led approach, how it might play a role in the wider support landscape around innovation and/or its ability to deliver impact), the creation of new partnerships, joint-ventures and organisations and new institutional frameworks, and so on.
- Following on from the point above, the benefits must be assessed at multiple levels within the innovation ecosystem (beneficiaries, challenge supporters, programme stakeholders and then the wider innovation ecosystem). This should include organisations not directly involved in delivery but that operate in the wider ecosystem and have a ‘stake’ in the approaches being used to achieve positive economic outcomes through innovation.
- Lessons from evaluations that have been delivered are numerous, and emphasise the need to ensure the evaluation assesses the match between the reality of delivering the programme, and the intent as set out in the Business Case (and any difference between, and the reasons and effects of any differences).
- Where possible, the evaluation should design and capture evidence against a number of additional metrics and variables which support the assessment of the wide impact of the programme and complement the traditional metrics aligned to the Green Book approach. Amongst other things, this should capture an understanding of the internal measures of success used by beneficiaries and challenge supporters, and evidence of progress against these. Across the evaluation, the evidence should seek to explain not only the ‘what’, but also the ‘why’ and the ‘how’.
- The use of the Theory of Change as a tool to evaluate impact and performance is recommended based on the practical experience of others who have executed evaluations of challenge-led

programmes. That does not mean discarding the existing Logic Model; we suggest a complementary approach.

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6. Appendix II – Surveys

6.1 Solution Provider Survey

It was agreed at the outset of the evaluation project that two surveys of Solution Providers would be undertaken – one at the end of the Accelerator support delivery period (in order to capture fresh and current perspectives on the value of that support) and one once the Stage 2 grants had been administered. Ideally, the evaluation would be able to gather data on impact at a later date, in order to allow sufficient time for the full value of the Programme to be captured and capitalised upon by Programme beneficiaries, and also to capture additional data from Stage 2 grant recipients. However, it was agreed with the client that a second survey was unlikely to be effective in gathering additional data, in part because evaluation feedback has indicated that it would take longer than an additional three months for tangible benefits to be achieved, and in part because of the smaller number of Stage 2 grant recipients compared to the original plan. For these reasons, the second iteration of the survey was not implemented. Instead, evaluation feedback in the later stages of the Programme was drawn entirely from the depth interviews.

The Solution Provider survey was sent out to 111 Solution Providers, resulting in 37 full responses to the online survey. The majority of respondents (87%) indicated that their business directly employed between zero and four full time equivalent (FTE) employees. Nearly one quarter (24%) reported that their business had been active for over 20 years and 8% were from new businesses that had been active for less than twelve months.

The results of the survey are distributed throughout the report, according to theme.

6.2 Challenge Supporter Survey

The Programme has engaged with a number of Challenge Supporters throughout the process of establishing Missions, recruiting Solution Providers and delivering the Accelerator support.

Challenge Supporters were invited to provide feedback via an online survey. The number of responses achieved (nine) is too small to draw any meaningful conclusions from the quantitative data collected. However there are a number of interesting points coming out on the qualitative side. These are distributed throughout the main body of the report, aligned with relevant themes.

7. Appendix III - Policy Context

Policy Context – Regional	
<p>Mission Zero Coalition – The Future is Local report⁵⁹</p>	<ul style="list-style-type: none"> • “‘There is clearly a role for national coordination and direction-setting on net zero’ the Mission Zero report stated; ‘But to achieve a place-based, place sensitive, locally-led transition to net zero, government must place its trust in local leaders and communities to deliver. If it does this, government can galvanise the ambition of communities and ensure that every corner of the country feels the economic and social benefits of action on climate change.’” • A range of policy recommendations are made in the report, including: <ul style="list-style-type: none"> ○ “Introduce a Local Net Zero Charter to agree responsibilities and enhance partnership between the UK government, devolved governments and regional, city and local authorities.” ○ “Develop a local Net Zero Delivery Framework to enable collaboration between UK Government and local and regional authorities, using The Local Net Zero Forum.” ○ “Simplify and enhance the Net Zero funding and financing landscape to support local and regional authorities with longer-term certainty, while also enabling effective public-private partnerships that can unlock inward investment.”
<p>Insights North East⁶⁰</p>	<ul style="list-style-type: none"> • The launch of Insights North East (INE), a new project led by Newcastle University and delivered via a core partnership with the NHS, North of Tyne Combined Authority, Newcastle City Council, and Northumbria University. INE is a demonstrator illustrating how anchor institutions can collaborate to maximise the potential for university research to inform place-based policy-making and practice, ensuring that future research agendas are demand-led and shaped by the needs of the North East. Specific policy areas covered of relevance to Challenge North Tyne includes the Transition to Net Zero, Inclusive Economic Growth and Health and Wellbeing. • An initial policy insight paper from INE focused on Inclusive Innovation⁶¹ and includes several recommendations and observations that are relevant including: <ul style="list-style-type: none"> ○ “... early stage ‘touchpoints’ for communities of place and interest involvement, and the degree to which inclusive growth beneficiaries can have agency in the leadership and management of the intervention.” ○ “Ensure the intervention is as aligned and connected as possible to wider city/city-region strategic priorities with strong links to local innovation, enterprise, skills, infrastructure and community eco-systems.” ○ “... promote core inclusion and sustainability driven standards (e.g. Real Living Wage/good work pledge, net zero/low carbon solutions, circular economy/supply chain procurement); and proactively curate activity (e.g. tenancies, local testbeds/living labs, access and animation) to drive and assure inclusion impacts.”

⁵⁹ https://missionzerocoalition.com/wp-content/uploads/2023/09/PPP-Mission-Zero-Network-Report_923-Web.pdf

⁶⁰ <https://insightsnortheast.co.uk/>

⁶¹ https://insightsnortheast.co.uk/news_story/inclusiveinnovation/

<p>North of Tyne Business survey⁶²</p>	<ul style="list-style-type: none"> • On behalf of Newcastle City Council, North Tyneside Council, Northumberland County Council and Advance Northumberland, North of Tyne Combined Authority (NTCA) commissioned Ortus Economic Research and QA to conduct a survey aimed at SME businesses to understand their recent experiences of operating in the North of Tyne and perspectives on the challenges and opportunities lying ahead. Key findings include: <ul style="list-style-type: none"> ○ “Despite the mixed expectations of performance over the next 12 months, businesses reported a varied but ambitious set of goals varying from introducing new products and services, and entering new markets, to adopting new technology and reducing carbon emissions.” ○ “The most common business ambition for the next 12 months was to work towards reducing carbon emissions and environmental impacts (47% of businesses), followed by introducing new products and services (43%).”
<p>North of Tyne Corporate Plan published⁶³</p>	<ul style="list-style-type: none"> • Publication of the NTCA’s Corporate Plan, with commitments made to the following: <ul style="list-style-type: none"> ○ Create sectoral growth and innovation programmes, including digital growth, innovation, and healthy ageing economy. ○ Invest in collaborative open innovation approaches to industrial research, and accelerating commercialization. ○ Creating support eco-system for SMEs to grow and decarbonise, resulting in locally anchored job opportunities for all, at all skill levels.
<p>NICA Launching City of Longevity First Global Conference⁶⁴</p>	<ul style="list-style-type: none"> • The National Innovation Centre for Ageing (NICA) launched a new global initiative to promote healthy ageing and longevity in the urban environment. The City of Longevity project is the first of its kind and aims to create an inclusive, accessible, and equitable urban environment that supports the older population while enabling younger people to thrive as they age. • The project was unveiled at the inaugural City of Longevity Global Conference on July 6th in Newcastle. The conference brought together critical partners, experts, and thought leaders from around the world to discuss interventions that can extend the healthy lifespan for all. • The City of Longevity is a concept that embraces the transition from an ageing society to a longevity society and further considers the role of cities as proactive actors in suggesting and supporting healthier lifestyles for residents and visitors through day-to-day touchpoints. Strongly focused on people (residents, visitors, tourists) engagement as the key driver for co-designing the future, the City of Longevity will also explore how to tackle the cumulative effects on the urban environment from a life-course perspective in urban planning and design, and advise how to leverage data to measure the impact and success of any interventions.

⁶² <https://www.northoftyne-ca.gov.uk/wp-content/uploads/2023/05/North-of-Tyne-Business-Survey-2022-23.pdf>

⁶³ <https://www.northoftyne-ca.gov.uk/wp-content/uploads/2023/06/NTCA-CORPORATE-PLAN-2023-1d.pdf>

⁶⁴ <https://uknica.co.uk/blog/2023/06/06/nica-launching-city-of-longevity-first-global-conference-6th-july-2023/> and https://issuu.com/nationalinnovationcentreforaging/docs/col_brochure_-_2023_-_issu_spread

Policy Context - National	
Urban Futures commission report⁶⁵	<ul style="list-style-type: none"> • “A great many of the UK’s great cities are hives of activity, hubs of culture, mechanisms of delivery, envied around the world. Yet so much of their potential remains untapped. There is huge scope for them to add dynamism to our economies, cohesiveness to our communities, redemption to our environment. The long-term dividends from doing so are enormous. The practical question is - how it is to be done?” • This report “seeks to provide practical and implementable answers to that question” and is the culmination of 12 months’ work and “presents a very different lens on city regeneration than any of its predecessors. We have sought to understand what cities are, what we need them to be, and how we can get there. The cities of tomorrow need to be regenerative – that is to say, capable of replenishing natural and social capital every bit as much as economic and financial. This will need a new model of local development, putting local investment and asset accumulation and local citizens and stakeholders front and centre in its design and delivery.”
Mission Zero Coalition - Mission Retrofit report⁶⁶	<ul style="list-style-type: none"> • Decarbonising the built environment, as the Net Zero Review set out, remains one of the greatest challenges to Britain hitting Net Zero. The Mission Retrofit report is the first of two reports that focuses specifically on decarbonising existing buildings, with a second report on new buildings to be published in October. • “The Net Zero Review set out a ten-year mission for energy efficiency and buildings. This report, Mission Retrofit, aims to go further, by establishing the parameters of what a national mission might be, and how the mission might operate. It has set out the challenges and opportunities to decarbonise existing homes and buildings, and has outlined potential policy recommendations that can deliver better, cheaper, faster retrofit and insulation across the UK.”
Centre for Cities - Innovation hotspots: Clustering the New Economy report⁶⁷	<ul style="list-style-type: none"> • “Innovation Hotspots: Clustering the New Economy mapped 344 nationally significant hotspots of innovative businesses across the UK, and found that they typically comprised a wide range of related activities rather than one particular industry. Hotspots specialised in a single sector are rare, which suggests that most ‘new economy’ businesses, irrespective of their sector, benefit from the advantages offered by a local area or neighbourhood.” • “Clustering occurs because there are benefits to co-location – especially among complex, knowledge-intensive activities – which come from related businesses sharing infrastructure and access to workers and credit. Co-location also allows the development of robust supply chains and knowledge spillover effects rooted in the exchange of knowledge within and between firms.”
Making Innovation Matter How the UK can benefit from spreading and	<ul style="list-style-type: none"> • “There is opportunity to realise greater returns on the UK’s R&D investment through a concept to consumer approach to innovation; focusing on key challenges and incentivising all stakeholders to collaborate as part of a cross-sector, cross-discipline innovation supply chain to take ideas from concept to application at scale. By better

⁶⁵ <https://www.thersa.org/reports/uk-cities-unleashing-potential>

⁶⁶ https://missionzerocoalition.com/wp-content/uploads/2023/09/MZC-Mission-Retrofit-Report_FINAL.pdf

⁶⁷ <https://www.centreforcities.org/publication/innovation-hotspots-clustering-the-new-economy/>

<p>using innovative ideas BEIS/DSIT Research Paper⁶⁸</p>	<p>understanding Innovation Diffusion and Adoption and proactively exploring potential solutions, Government can act as force-multiplier and deliver the vision of the UK as a global leader in innovation with associate benefits for productivity, output and quality of life.”</p> <ul style="list-style-type: none"> • “Inspire stakeholders and communities to address key innovation challenges in an open and inclusive way, giving them freedom to experiment, with Government taking more of the lead by setting concrete direction.” • “... drive collaboration at all levels, including leadership and skills development. • “Broaden the diversity of participation and perspectives and build trust.” • “Develop a more joined-up ‘supply chain’ approach, with cross-sector fertilisation of ideas and technologies, and place-based specialisms, creating ‘hubs’.”
<p>Nesta: a policy plan for decarbonising homes⁶⁹</p>	<ul style="list-style-type: none"> • “..the UK needs a stronger set of policies focused on replacing boilers with heat pumps and other low-carbon heating systems. This policy plan should have four key elements. 1. Committing to phase out gas boilers by 2035 or earlier, while also providing clarity on the future role of hydrogen for home heating. 2. Making low-carbon heating affordable for all, most importantly by reducing the cost of electricity relative to gas. 3. Supporting a rapid increase in the number of skilled heat pump installers. 4. Better planning for electrification and low-carbon heating systems. These four measures should be implemented immediately as a ‘Plan A’.” • “However, it is reasonably likely that they will be insufficient to increase the uptake of low-carbon heating rapidly enough to help the UK catch up with other countries. Therefore, the UK government and devolved governments should also begin developing plans for more powerful policy levers, which can be deployed in the next few years if the uptake of low-carbon heating fails to accelerate sufficiently. These additional policies may include: giving energy retail companies mandatory targets for installing low-carbon heating each year; more radical financial incentives for low-carbon heating, including larger subsidies and energy cost guarantees; shifting to an Energy Service Company-style model for selling heat and energy together.”
<p>Funding Context - Regional</p>	
<p>UKSPF calls - innovation⁷⁰</p>	<ul style="list-style-type: none"> • Funding calls were published for the first round of UKSPF funding with investment decisions, including on innovation support programmes, to be made within coming weeks. • Delivery programmes will typically run to 2025. It will be interesting to see how such programmes may accommodate or support wider innovation capacity development and adoption across businesses, and to what extent this may include any reference to challenge style interventions (if any) in this delivery timeframe.

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https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1151335/making_innovation_matter.pdf

⁶⁹ https://media.nesta.org.uk/documents/Policy_plan_for_decarbonising_homes.pdf

⁷⁰ <https://www.northoftyne-ca.gov.uk/ukspf-funding-opportunities-and-calls-for-proposals/>

Investment Fund approval⁷¹	<ul style="list-style-type: none"> • The North of Tyne Combined Authority has been given the green light for £100 million of investment over the next five years, according to a recent Government assessment. • “The ‘thumbs up’ from Whitehall comes as the NTCA has passed the first of its ‘Gateway Reviews’, unlocking £20 million of central Government funding per year until 2027-28.” Following the agreement of the new £4.2 billion North East Devolution Deal – which was announced last year and comes into effect in May 2024 – the NTCA will continue to receive this money until the establishment of a new ‘North East Mayoral Combined Authority’. After this point, the funding will be folded in to the new region-wide investment fund.
Funding Context - National	
UKRI Creating Opportunities Evaluation Development Funding call⁷²	<ul style="list-style-type: none"> • This specific call has now ended but there is the potential for similar approaches to be funded in the future with confirmation of further rounds of investment – this may be of relevance when considering longitudinal evaluations of any potential future challenge programmes given the need to evaluate impact over a longer timeframe • “The UKRI Creating Opportunities Evaluation Development Fund is aimed at enabling the research and innovation community to undertake small-scale evaluation activities to identify solutions for spreading opportunities and reducing disparities in economic, health and social outcomes for people and places across the UK by using robust counterfactual impact evaluation methods. The overarching objectives are to: <ul style="list-style-type: none"> ○ generate causal evidence on what works to spread opportunities and reduce spatial disparities in outcomes for people and places across the UK ○ accelerate the development of innovative and ethical methods for robustly testing and evaluating interventions ○ build the capacity of the research and innovation system to forge interdisciplinary collaborations and lasting partnerships with local communities (including those with lived experience) in designing and delivering robust research trials and related evaluation activity ○ provide actionable evidence that responds to the needs of decision makers and informs policy or practice at a local, regional, national or international scale.”
UKRI Creating Opportunities Trial Accelerator Fund call⁷³	<ul style="list-style-type: none"> • This specific call is coming to a close (October 2023) but there may be potential future calls that regional partners could collaborate on targeting specific challenge areas that meet the call criteria and thematic areas: <ul style="list-style-type: none"> ○ “sustainable economic growth and innovation: addressing long-standing regional economic disparities and delivering solutions that focus on sustainable, inclusive growth and innovation ○ Place-based health inequalities: identifying sustainable and cost-effective solutions to address spatial disparities in population health

⁷¹ <https://www.northoftyne-ca.gov.uk/news/gateway-review/>

⁷² <https://www.ukri.org/opportunity/creating-opportunities-evaluation-development-fund/>

⁷³ <https://www.ukri.org/opportunity/creating-opportunities-trial-accelerator-fund/>

	<p>across the UK; the term “health inequalities” is used to refer to varying definitions of inequality and inequity, including the unfair and avoidable differences in health across different groups</p> <ul style="list-style-type: none">○ community connectedness: strengthening civic engagements, relationships, trust, and local pride to reduce the social and economic marginalisation of groups and areas.”
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8. Appendix IV - Additional beneficiary characteristics

Table 9: Key communication channels

Channel	Proportion of all beneficiaries
Event	34%
Recommendation	33%
ISN Marketing	9%
Other	4%
LEP Existing Client	1%
Internet	11%
ISN Existing Client	7%
LEP Recommendation	1%
All	100%

Source: North East LEP Monitoring Data

Table 10: Beneficiary legal status

Legal status	Proportion of all beneficiaries
Community Interest	10%
Company (including building societies)	5%
Limited Company	63%
Non-profit body or mutual	5%
Sole proprietor	11%
Partnership	5%
None of the above	1%
All	100%

Source: North East LEP Monitoring Data

Table 11: Key Contact - Gender most identified with

Gender	Proportion of all beneficiaries
Male	66%
Female	31%
Prefer not to say	3%
All	100%

Source: North East LEP Monitoring Data

Table 12: Beneficiary age

Age	Proportion of all beneficiaries
25 to 34	11%
35 to 44	21%
45 to 54	23%
55 to 64	23%
65 +	17%
Prefer not to say	5%
All	100%

Source: North East LEP Monitoring Data

Table 13: Ethnicity identified with by >= 51% of business owners/partners/directors

Ethnicity	Proportion of all beneficiaries
Non-BAME	77%
BAME	20%
Prefer not to say	3%
All	100%

Source: North East LEP Monitoring Data

