Summative Assessment of Greater Innovation for Smarter Materials Optimisation

March 2023

HATCH

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Executive Summary

i. Hatch was commissioned by Lancaster University to undertake a Summative Assessment of the Greater Innovation for Smarter Materials Optimisations (GISMO) project. GISMO is required as part of its grant funding requirements to complete a Summative Assessment for the project prior to closure.

ii. The £4.4m GISMO project aimed to support SMEs in the Cheshire and Warrington sub-region increase their readiness to undertake R&D and encourage more 'innovation active' SMEs through smart material use. The project was delivered over a three year period between 2020 and 2022 with the Grant Funding Agreement approved in 2019.

iii. The evaluation explores the extent to which the project has followed the approach set out by its logic model to deliver impact. This is consistent with the requirements of the ERDF programme, the Department of Levelling Up, Housing and Communities (DLUHC, previously Ministry of Housing, Communities and Local Government) guidance on the preparation of the Summative Assessment[1] and other associated guidance.

iv. The assessment draws on a variety of information including:

- Analysis of GISMO project performance, monitoring data and project documents;
- Consultations with external project stakeholders and delivery staff;
- In-depth beneficiary consultations;
- Case studies undertaken with input from beneficiaries.

Project Relevance and Consistency

v. The rationale for public sector intervention centred on market failures, including asymmetric information, positive externalities and economies of scale, leading to SME under-investment in innovation and R&D. Overall, the rationale for public sector investment in the project was good and it aligned with local stakeholder perspectives on the needs of the local economy. Some delivery consultees expressed the view that a more in-depth demand analysis was necessary at the project design stage given the University's limited experience of direct delivery in Cheshire and Warrington. This would have helpful in ensuring that more realistic output target were set.

vi. Since the GISMO project launched in 2020, there have been considerable changes in the political and economic landscape, including the Covid-19 pandemic, EU Exit and price inflation, which led to a protracted period of increased uncertainty. GISMO remained strategically relevant, given heightened focus on innovation led economic growth, by both local and central government. However, the willingness and capacity of SMEs to engage in specialist technical innovation was impaired in the face of persistent economic uncertainty, leading to lower levels of demand for the project's services.

vii. The project had to respond to exceptional conditions brought about by the Covid-19 pandemic, which compromised the efficacy of the engagement and delivery strategies originally envisioned. The project team made persistent efforts to recalibrate its approach. This led to

[1] European Union, Summative Assessment Guidance: ESIF-GN-1-033, July 2022

significant changes relative to the original project design, both in terms of how GISMO sought to engage beneficiaries and its support delivery model. Considering these difficulties, the GISMO project was actively monitored and reviewed and a Project Change Request to extend project activity to June 2023 was initiated. However, the decision to suspend the processing of the PCR was taken in August 2022 as on reflection, the rate of improvement was not deemed sufficient in meeting the University's long term needs. Instead, the University engaged with DLUHC to agree a set of revised targets.

Progress against Contractual Targets

viii. Throughout the project's lifetime, financial and output performance significantly lagged the profile set out in the Grant Funding Agreement. This reflected the disproportionate impact the Covid-19 pandemic had on GISMO, given its niche nature and its supply chain driven open innovation delivery model that relied on prime manufacturer engagement. The impact of the Covid-19 pandemic was compounded by staffing difficulties. Key amongst them was long periods of sickness absence by the Project Administrator, a post that remained vacant after their departure from the University. This was one of the factors contributing towards some of the project administration hurdles GISMO faced. In consultations, delivery staff noted that these may have contributed towards lost opportunities to deliver C1 support as well as deliver and/or capture C26 support.

ix. The project team was pro-active in responding to the engagement and delivery challenges GISMO faced. However, the success of the different mitigation measures pursued varied. It was almost 1.5 years into project delivery before GISMO's design was re-calibrated to an extent that better reflected the needs of SME within this new economic climate.

x. The GISMO project largely met the revised targets agreed with DLUHC towards the end of the project. The expenditure target was revised to £2.53m (57% of the original budget), of which 90% was defrayed as of Q4 2022. Meanwhile, the project achieved 97% of its revised enterprises supported (C1/C4) output target as of Q4 2022 and was on track to meet it by project closure according to the most recent forecasts. As of Q4 2022, GISMO met its revised enterprises cooperating with research institutions (C26) output targets. However, only a third (33%) of its revised job created in supported enterprises output target was met as of Q4 2022, reflecting the fact that the fact that the majority of support was delivery in 2022 and there is a time lag involved in employment impact realisation. The project also supported enterprises introduce new the firm (C28) and new to the market (C29) products, in line with its commitment to DLUHC to maximise more impactful outputs where possible.

Delivery and Management Performance

xi. The assessment concludes that the GISMO project made significant efforts to re-calibrate its engagement and delivery model, while attempting to maximise the support offered to businesses, against a backdrop of unprecedented challenges posed by the Covid-19 pandemic:

- GISMO struggled to put in place formal external governance structures, as it struggled to engage local stakeholders whose focus shifted on supporting SMEs deal with the aftermath of the Covid-19 pandemic. However, the project team made persistent efforts to build good relationships with the Cheshire and Warrington LEP and other business support providers (e.g. Made Smarter) in the area. As a result, external consultees were

complimentary about the relationship build between GISMO and the Cheshire and Warrington LEP.

- Initially, engagement activities included contacting potentially suitable businesses, identified by compiling a database using Beauhurst and publicly available company information, and delivering online seminars. These engagement strategies did not prove particularly effective. As such, a telemarketing campaign was commissioned, which was extremely successful in generating a pipeline of potential leads. Using insights from the telemarketing campaign, GISMO's offer was refreshed and rebranded as a 'Materials MOT' to make its message more accessible. Despite these efforts, the project did not achieve its desired level of market penetration, with consultees highlighting its limited progress in reaching companies that are not aware that smart materials innovation could be relevant to their business.
- The project team made efforts to engage prime manufacturers in order to deliver the supply chain driven open innovation model originally envisioned. In the meanwhile, delivery activity focused on supporting SME with their individual smart materials needs. The original mechanism for C1 support delivery was technical workshops. However, a more ad-hod approach to C1 output delivery became necessary, as technical workshops were not well-suited to remote delivery and as such, efforts to adapt them translated to one-way seminars. Although two prime manufacturers were engaged, their interest could not be sustained amidst protracted lock downs. As such, in the summer of 2021, it was decided that the delivery model would exclusively focus on supporting SMEs with their individual needs based on the refreshed 'Materials MoT' service offer.
- The delivery obstacles brought on by the Covid-19 pandemic were compounded by staffing and project administration challenges. Staffing difficulties included delays in recruiting key technical staff, difficulty recruiting a 'Chemistry and Hydrogen' Innovation Fellow and long periods of sickness absence, especially by the Project Administrator, a post that remained vacant after their departure from the University. This contributed towards the project administration difficulties GISMO experienced, which resulted in delays in signing and approving paperwork. Other aspects of project administration that proved challenging included having a relatively less experienced team, establishing Gross Grant Equivalent (GGE) values given the project's multifaceted nature and administrative burden placed on SMEs. Measures to address these challenges included staff training, prefilling the eligibility forms shared with potential beneficiaries and working with sister projects to establish menu of GGE values. In autumn 2022, a fast-track process for contract approval was introduced, enabled by having a better defined diagnostic approach to support delivery.

Outcomes, Impacts and Value for Money

xii. In-depth consultations with five beneficiaries suggest that the businesses supported were overall satisfied with the support received through GISMO, despite the challenges the project experienced. The project achieved an average satisfaction rating of 4 (out of 5). Consultees commented positively on the tailored support they received and the staff's responsiveness to their evolving needs. They also indicated how the project has strengthened their links to the University. More generally, some reflected on how their understanding of working with universities has improved because of this experience.

xiii. However, consultees did discuss the delays in the delivery of support and their impact. Namely, the delays meant that the delivery of support had to be compressed within a tight timeframe, which limited the beneficiaries' ability to pursue follow-on support. Some recognised that Covid-19 might have played a role in this.

xiv. Beneficiary consultations confirm that as most of the delivery occurred during the last year of the project, only a preliminary assessment of outcomes and impacts is possible at this point in time.

Outcomes

xv. The emerging evidence suggest that GISMO supported beneficiaries to make progress towards addressing their key innovation barriers and objectives. Businesses discussed how the technical support and independent testing enabled them to make progress towards validating new products and/or improvements to existing products. As such, they reported feeling more confident in their ability to promote their products, diversify and access new markets. Some beneficiaries have or intend to invest in new equipment and materials as a result of participating in GISMO.

Impacts

xvi. The Summative Assessment drew on evidence from beneficiary consultations to provide a qualitative assessment of impact, given that the limited population of businesses supported by GISMO meant that establishing robust economic impact estimates would be difficult.

xvii. Beneficiaries indicated that they expect to experience an increase in turnover and employment in the future. This can be seen to be the result of GISMO to an extent as, on average, half of the expected impacts cited were attributed to the support received. Moreover, three of the five consultees indicated they intend to continue operating in the Cheshire and Warrington LEP area, highlighting the scope for local benefit retention.

xviii. A cost efficiency analysis has been carried out as a second-best alternative to value for money assessment. GISMO was benchmarked against four ERDF projects of similar nature, of which two were delivered during the Covid-19 pandemic period.

xix. The cost per output figures across GISMO's output indicators were notably higher than those of most comparator projects. This reflects the impact of the obstacles faced, largely due to Covid-19, on GISMO's ability to deliver value for money, with its engagement and delivery strategy having to be significantly re-focused whilst trying to maximise delivery. Furthermore, the high cost per job created (C8) figure can also be attributed to the fact that a large share of impacts will be realised post project completion due to the majority of GISMO activity occurring in 2022.

Recommendations

xx. The evaluation identified the following recommendations for the grant recipient, those designing similar interventions and policy makers:

- **Recommendation 1:** The original project design responded to GISMO's rationale and aligned with local stakeholders' perspectives on the needs of the local economy. While GISMO's experience is tainted by the Covid-19 pandemic, with project kick-off coinciding with the UK entering its first national lockdown, discussions with delivery staff

highlighted the importance of extra layers of due diligence at the design stage (e.g. in-depth demand analysis), especially when there is not a local delivery partner involved or significant experience of delivery locally, to ensure there is a potential pipeline of suitable leads as soon as the project starts. The importance of an in-depth demand analysis is becoming increasingly important for future projects, as a pro-longed period of economic uncertainty appears to have impacted SMEs capacity to engage with certain types of specialist innovation support projects.

- **Recommendation 2:** Given GISMO's specialist nature, upfront investment in marketing to both sustain a pipeline of high quality leads and increase market penetration was necessary. Telemarketing proved an incredibly successful avenue of generating suitable leads. With the benefit of hindsight, delivery staff suggested that it should have been integrated into the programme from the get-go. Moreover, a consultee recommended that a two-tiered marketing approach could have been helpful in terms of targeting businesses not yet aware of the potential benefits of smart materials adoption.
- **Recommendation 3:** Establishing goodwill with local stakeholders and intermediaries was frustrated initially by the loss of the local delivery partner (SGC) and then by the challenges posed by Covid-19 pandemic. While local stakeholder input was requested during the project design stage, external consultees did suggest that they would have liked to be more actively engaged in the design of the project. A more collaborative approach at the project design stage would have been helpful in setting in motion external governance structures, and in turn embedding the project in the business support landscape more organically.
- **Recommendation 4:** Some of the project administration challenges GISMO faced were inherent to the project, such as the long periods of sickness absence by the Project Administrator (a post that was not filled once vacant) and the fact that the original delivery model became unfeasible, in turn impacting other project processes. Nevertheless, GISMO’s experience provided some valuable lessons that can be more widely applied. A consultee suggested that having a pool of administrative support project’s can draw upon would ensure more effective project administration practices. This would also create a clearer demarcation of roles, allowing delivery staff to concentrate on supporting beneficiaries with their needs.
- **Recommendation 5:** Beneficiary suggestions for improvement included having a more structured approach to delivering support, including setting out key milestones and the timeframes within these will be achieved, and having a more well-defined conclusion to project, as part of which recommendations and next steps would be considered. Better integration of aftercare into the delivery model would also be useful in term of creating avenues of long term collaboration with the University, as per GISMO’s original objectives.

1. Introduction

1.1 Hatch was commissioned by Lancaster University to undertake a final Summative Assessment of the Greater Innovation for Smarter Materials Optimisation (GISMO), a £4.4m ERDF-funded project focused on SME innovation through the use of smart materials. The project was designed to be delivered over a 3-year period from 1st November 2019 until 31st December 2022 (as outlined in the original Grant Funding Agreement).

1.2 GISMO's overarching objective was to support Cheshire and Warrington SMEs operating in local priority growth sectors of chemicals, energy, healthcare, life sciences and advanced engineering accelerate their pace of innovation through the use smart materials. There was a particular focus on SMEs located in or near the Cheshire and Warrington Science Corridor.

1.3 The purpose of conducting a Summative Assessment is to gain an independent understanding of the project performance, impacts and value for money, in addition to exploring the mechanisms through which these impacts have been achieved and insight into what and why delivery approaches work. This includes reviewing any examples of best practice, challenges experienced and lessons which can be applied in future projects.

1.4 The Summative Assessment is structured to address to the ERDF Summative Assessment Guidance and the requirements of the brief, as indicated below.

Evaluation Approach

1.5 The Summative Assessment adopts a **Theory of Change approach** (which relies on the logic model and self-reported methods including consultations and a beneficiary survey) which is consistent with the requirements of the ESIF Programme, the Department for Levelling Up, Housing and Communities (DLUHC, previously Ministry of Housing Communities and Local Government) guidance on the preparation of the Summative Assessment and other associated guidance.

1.6 DLUHC have provided guidance on the preparation of the Summative Assessment which states that the report must cover the following five themes. These were also tailored to the project context and all strands of research were synthesised to clear and well evidenced conclusions and lessons tailored to internal and external audiences.

- **Relevance and consistency:** a review of project design and context which fully and critically explores all aspects of the project's intervention logic and market failure rationale.
- **Progress against the project's contractual targets**: considering performance against expenditure profile, output targets and horizontal principles and identifying the factors which explain performance.
- **Experience of delivering and managing the project:** analysis of the effectiveness of project implementation to build a picture of how the project was delivered and managed, identifying what has worked well and less well.
- **Analysis of outcomes and impacts attributable to the project**: providing an initial summary of project impacts, harnessing qualitative insights from SME beneficiaries and setting out the extent to which additionality is being achieved.

- **Cost effectiveness and value for money:** modelled using self-reported data from the beneficiary survey to provide a clear quantitative assessment of the return on investment (expected and actual) associated with the project

1.7 These requirements were met through an evaluation methodology which has used a combination of quantitative and qualitative research methods. The evaluation drew on a variety of relevant information, data and qualitative insights including:

- **A review of background documentation:** and approved project logic model, submitted as part of the ESIF bid, to understand in detail and assess its continued relevance.
- **Detailed analysis of the project monitoring data:** captured by the team (including claims data, in addition to beneficiary monitoring data) and via beneficiaries to assess performance against financial and output targets.
- **A review of delivery context:** encompassing consultations with delivery partners and project stakeholders, capturing perspectives on project design, delivery and the mitigation of challenges, governance and impacts.
- **Beneficiary consultation:** including in-depth interviews with a sample of beneficiaries. This will explore beneficiary motivation for seeking support, views on experience and quality of intervention, outcomes, impacts (actual and expected), attribution and views on how the project could evolve better to meet their needs and support growth ambitions.

1.8 The GISMO Summative Assessment primarily relied on a qualitative assessment of impact, on beneficiary consultation insights, as our evaluation scoping concluded that a robust quantitative assessment was not feasible. The reason for this is that the project supported a limited number of businesses. As such, it would be challenging and resource intensive to secure a response rate to a beneficiary survey that is high enough to ensure that impact estimates lie within a reasonable margin of error. Achieving a sufficiently high response rate is especially important in the case of impact assessment based on self-reported evidence given the limitations associated with this approach, including the potential for businesses to incorrectly recall or misreport the changes in business performance and the contribution of support. To assess value for money, the Summative Assessment carried out a cost efficiency analysis of GISMO, as a second-best alternative.

1.9 This is supplemented by a small number of case studies which provide additional qualitative insight that explores in more detail the complexity of the mechanisms through which business support can generate and sustain impacts.

Dissemination of the Summative Assessment

1.10 Dissemination of the Summative Assessment's key findings is essential for transparency and accountability purposes, in addition to ensuring that the findings are drawn on to inform the remaining delivery of the project, and the design, delivery and strategic direction of future projects.

1.11 As a minimum, the full Summative Assessment report needs to be shared with DLUHC. In the GISMO Summative Assessment plan, Lancaster University has indicated that the findings of the Summative Assessment will first be reported to the Project Management Board, while they will also be shared with the Project Advisory Board and along the chain of command at the University.

1.12 Beneficiaries and stakeholders will be notified when the findings (including a summary) of the Summative Assessment are published on the project's webpages. The University's press, broadcast and social media channels will also be used to disseminate the summative assessment findings. The University will seek opportunities to share findings at academic and industry conferences as well as other networks and knowledge exchange fora.

Structure of the Evaluation Report

1.13 The Summative Assessment report is structured around the following topics:

- **Section 2: Project Context,** this considers the project logic model, alongside the economic and policy context in which the project was designed, including the nature of market failure, project objectives and rationale for the delivery approach. We also consider the changes in economic and political environment which may have impacted the projects continued relevance and delivery rationale.
- **Section 3: Progress Against Contractual ERDF Targets,** this considers the progress with project implementation in terms of performance against expenditure profile, output targets and horizontal principles.
- **Section 4: Delivery and Management Performance,** this provides a more qualitative analysis of the implementation of the project, the project's delivery performance and consider the challenges and achievements in terms of different elements of project delivery.
- **Section 5: Beneficiary Outcomes,** this sets out the progress that the project has made towards the outcomes set out in the project's logic model by drawing on evidence from beneficiary consultations.
- **Section 6: Impacts and Value for Money Assessment,** this discusses the early impacts emerging as a result of the support provided by GISMO by drawing on beneficiary consultation evidence as well as a value for money assessment based on a cost efficiency analysis.
- **Section 6: Conclusions and Recommendations,** this section synthesises the evaluation findings drawing on evidence from all research strands, outlining the conclusions that can be drawn and emerging recommendations to inform the remaining delivery period.

2. Project Context

2.1 This section reviews the economic and policy context in which the Greater Innovation for Smarter Materials Optimisation (GISMO) was designed and explores the nature of the market failure it was seeking to address, the project objectives and rationale for the delivery approach adopted. It includes critical analysis about the appropriateness of the project design, given its objectives.

2.2 It then reviews changes in the economic and policy environment which may have impacted on the delivery of GISMO, assessing the continued relevance and consistency of the project in light of any changes that have occurred during its delivery period.

2.3 The analysis in this section has been informed by:

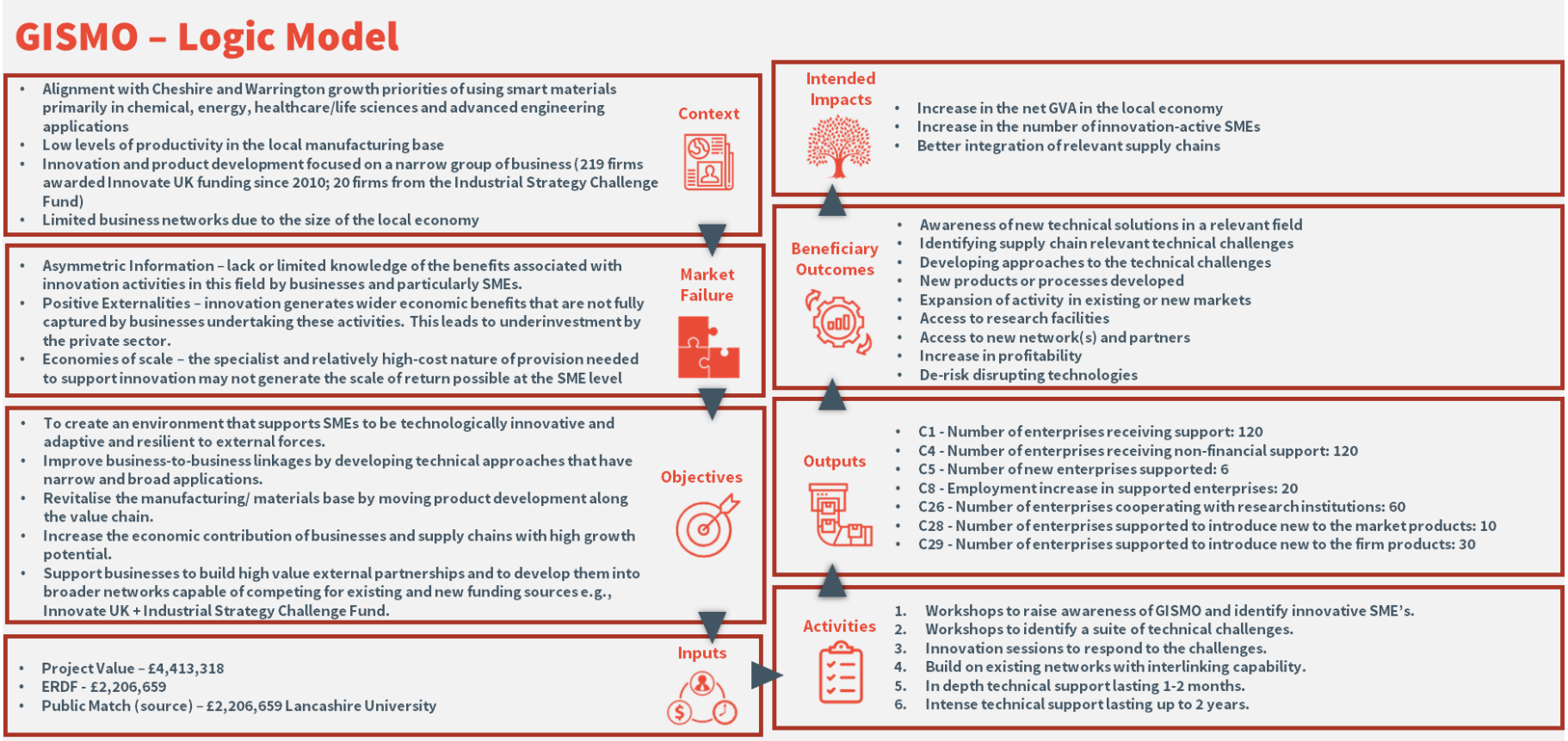
- A review of background documents for the project, including the project's original ESIF application form and other internal project management and delivery documents
- Desk-based analysis of relevant social and national policy documents and socioeconomic data
- Interviews with members of the project management and delivery team (a full list of consultees is provided in Appendix A).

2.4 This section draws on GISMO's ESIF application form and logic model and as such reflects the project's original expectations and vision. Since the funding agreement was signed, there have been changes in the way the project has been delivered in practice. These changes and the rationale are analysed further in sections 3-5.

Project Logic Model

2.5 The intervention logic underpinning the original need for GISMO is presented in Figure 2.1. The model traces the project's original rationale to its intended outcomes in a sequential manner.

Figure 2.1 GISMO – Logic Model



Source: Hatch, drawing on GISMO Full ESIF Application Form & GISMO Summative Assessment Logic Model

Strategic Context

National Level

2.6 GISMO was delivered under ERDF Priority Axis 1 of the 2014-20 programme: Promoting Research and Innovation. Specifically, it addressed Investment Priority 1b: Promoting Business Investment in Research and Innovation.

2.7 The project was designed to directly support the **UK Industrial Strategy** (2017), which included four grand challenges, and investment in the Eight Great Technologies identified in the **'Smart Specialisation in England'** paper. The project's focus area – Smart Materials – was positioned as a cross-cutting theme that was applicable to all four grand challenges and Eight Great Technologies.

Regional and Local Level

2.8 The GISMO project was designed to align with multiple growth priorities identified in the **Cheshire & Warrington Strategic Economic Plan** (Refreshed July 2017) through its focus areas of:

- research and development support of smart materials for the healthcare and life science technologies.
- research and development of smart materials to support engineering industries.
- smart Materials research and development support to the chemicals and energy industries.

2.9 The project also responded to the SEP's objective of working with HE providers to help SMEs capitalise on the region's innovation assets and strengths. The SEP recognises that innovation and product development is focussed on a narrow group of large primes as the inherent risks of high costs inhibit investment in 'disruptive innovation' from SMEs.

2.10 The **Cheshire and Warrington ESIF Strategy** also acknowledged the key sectors' potential to growth further and faster. The strategy commented on the science asset wealth of Cheshire and Warrington, but recognised that developing innovation in SMEs and investment in complex eco-systems were needed to unlock and maximised their potential.

2.11 Similarly, the strategic priorities of providing connectivity and unlocking the potential of key science and innovation assets was identified in the **Wave 3 Science and Innovation Audit (SIA) for the North West Coastal Arc** region and the **Wave 2 SIAs for Greater Manchester and Cheshire East**. These studies also highlighted the importance of Material Science asset in the North of England.

Project Need and Rationale

2.12 The ESIF Application Form traced the need for GISMO around:

- **Increasing productivity in Cheshire and Warrington** – productivity levels in the sub-region have been slipping and many key sectors the region underperform against the national level.
- **Revitalising the regional manufacturing base** – by moving increasingly up the value chain and stimulating the creation of SMEs that can strengthen local supply chains.

- **Increasing opportunities for networking** – the SME base is large and diverse (e.g. spatially, sectorally, technologically). As such, the business support offer has been spatially bespoke but fragmented and opportunities for improved business-to-business linkages, shared learning/good practice, and delivery efficiencies have not been maximised.
- **Facilitating access to high quality facilities** – the ESIF Strategy provides anecdotal evidence of a shortage of high-quality facilities required to support innovative growth locally, despite the existence of significant facilities in neighbouring regions.
- **Increasing the number of innovation active SMEs** – according to the 2017 Science and Innovation Audits undertaken in Greater Manchester and Cheshire East and the Liverpool City Region, despite the existence of a number of innovation active primes within the region, opportunities did not cascade down through the SME supply chains and connectivity between the academic institutions, primes and SME supply chains was underutilised.

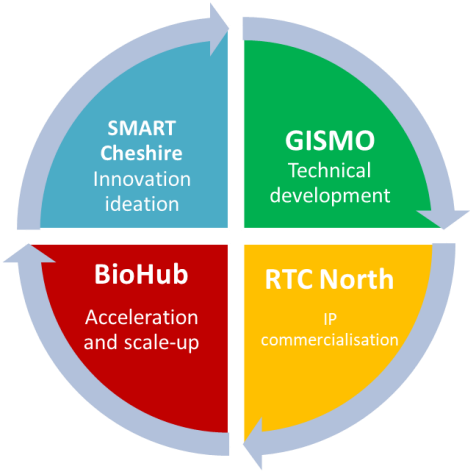
2.13 In terms of existing provision, closely aligned initiatives identified at the time included:

- **Biohub** – an accelerator and scale-up programme targeted at companies in the life sciences and medical technology sector. This ERDF-funded project would run and operate the BioHub Incubation facility at Alderley Park Site (formerly AstraZeneca). It focused on faster commercialisation of R&D and de-risking of companies to reduce failures, use capital more efficiently and support the growth/scale-up of SMEs.
- **RTC North** – one of Europe's leading technology transfer companies specialising in commercialising new products and services, supporting the protection and commercialisation of intellectual property and working with individuals and businesses to create innovative and vibrant economies.
- **SMART Cheshire** – a programme run from Manchester Metropolitan University (MMU) Business School, providing workshops and group sessions to help businesses fin-tune their ideas.

2.14 The target areas[2] and the technical support provided by GISMO was deemed complementary to this suite of initiatives. The project intended to operate a dynamic system whereby companies would be provided with a mixed and complementary offering across these initiatives to exploit their integrated client support potential (as shown in Figure 2.2Figure 2.2).

[2] These included use of materials in energy, chemistry & processing, advanced engineering and life sciences & healthcare.

Figure 2.2 Aligned Business Support within Cheshire and Warrington



Source: GISMO Full ESIF Application Form

Market Failures

2.15 The GISMO project was designed to address the following forms of market failure:

- **Asymmetric Information** – lack or limited knowledge of the benefits associated with innovation activities in this field by businesses and particularly SMEs.
- **Positive Externalities** – innovation generates wider economic benefits that are not fully captured by businesses undertaking these activities. This leads to underinvestment by the private sector.
- **Economies of scale** – the specialist and relatively high-cost nature of provision needed to support innovation may not generate the scale of return possible at the SME level.

Project Objectives

2.16 The GISMO project intended to increase beneficiaries' readiness to undertake R&D and encourage more 'innovation active' SMEs. Specifically, the project intended to:

- create an environment that supports SMEs to be technologically innovative and adaptive and resilient to external forces.
- improve business-to-business linkages by developing technical approaches that have narrow and broad applications.
- revitalise the manufacturing/materials base by moving product development along the value chain.
- increase the economic contribution of businesses and supply chains with high growth potential.
- support businesses to build high value external partnerships and to develop them into broader networks capable of competing for existing and new funding sources (e.g. Innovate UK, Industrial Strategy Challenge Fund).

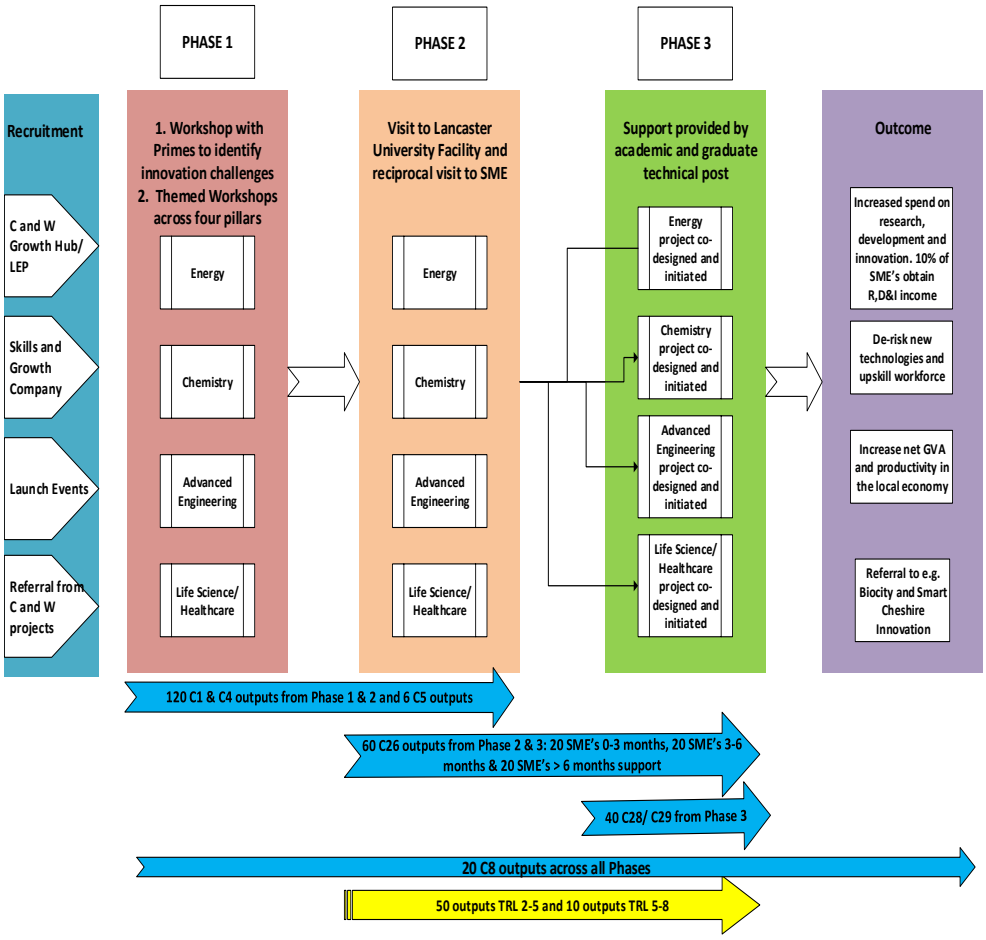
2.17 It hoped to deliver the following wider benefits, highlighting its strategic alignment with local and regional priorities:

- Supporting the ambitions of the Cheshire Science Corridor and EZ, particularly via Interdisciplinary and sectoral crossover within the innovation ecosystem.
- Building an enduring network of collaboration ready to respond to the Industrial Strategy.
- Providing long-term competitive advantage in manufacturing that includes the use of materials and /or the manufacturing of new material products.

Project Activities

2.18 The GISMO project aimed to provide SMEs with access to specialist technical facilities, expertise and a collaboration framework that would enable them to expand and accelerate their R&D and innovation capabilities. Figure 2.3 summarises the client journey.

Figure 2.3 The Client Journey



Source: GISMO Full ESIF Application Form

2.19 The project would deliver the following activities:

- **Workshops** – would be led by the Partnership Business Engagement Manager (PBEM). Utilising the expertise within the Lancaster University Management School, the project would deliver Open Innovation workshops to encourage greater connectivity between SMEs from a broad range of sectors. The workshops would be themed around three core

areas of 'smart material' focus: Chemistry, Processing & Energy; Advanced Engineering; and Life Sciences/Healthcare. Workshops would provide diagnostic support from academic and technical staff from Lancaster University. They would also help identify research/innovation ready SMEs that could benefit from technical support. While GISMO would work with individual SMEs on bespoke technical interventions, it would look to approach technical support from a supply chain perspective where possible. As such, alongside the themed workshops, coordinated interactions with regional primes would be held to identify 'Innovation Challenges'.

- **Technical interventions** – targeted at SMEs which have identified medium term research in innovation project/challenges (typically 5-6 months in duration). They would be primarily delivered by Innovation Fellows and graduate researchers undertaking Ph.D. level research, with access to specialist technical facilities. They would be supported by experimental officers and a cohort of academic staff. The technical interventions would aim to deliver tangible outcomes for SMEs (e.g. product quality improvements, cost reductions, development of new materials/products).

Inputs

2.20 The total project value was £4.4m of which 50% was ERDF funded and 50% was public sector match funded by Lancaster University.

Table 2.1 Costs and Funding

	ESIF	Public Match	Private Match	**Total**
Capital	£0	£0	£0	**£0**
Revenue	£2,206,659	£2,206,659	£0	**£4,413,318**
Total	**£2,206,659**	**£2,206,659**	**£0**	**£4,413,318**

Source: ERDF Grant Funding Agreement, August 2019

2.21 The expenditure plan of the project assumed the following itemisation of costs.

Table 2.2 Breakdown of Expenditure

Category	Expenditure
Salaries	£2,723,505
Flat Rate Indirect Costs	£877,663
Other Revenue	£776,500
Professional Fees	£15,000
Office Costs	£10,650
Marketing	£10,000
Total	£4,413,318

Source: ERDF Grant Funding Agreement, August 2019

2.22 62% of the costs were project staff salaries. This would cover staff costs for:

- Project Management, including a Project Manager and a Project Administrator.
- Business Partnerships and Engagement, including a Partnerships and Business Engagement Manager and a Business Partnership Officer.

- the Technical Team, including three Innovation Fellows (aligned with each theme and the six core principle investigators) and nine Graduate Researchers. The full-time team would be supplemented with a student consultant (through the internship programme) on an ad-hoc basis depending on beneficiary company needs.
- Marketing, including a Marketing Support Officer who would work a part of a wider university marketing team.

Outputs, Outcomes and Impacts

2.23 The contractual output targets for the project were informed by the University's experience delivering multiple ERDF initiatives and have taken into account know-how and best practice lessons from previous projects.

2.24 The estimation of output targets also drew upon the demand identified in the call, but also initial discussions and identified need from the SME sector and by working with project leads within the Cheshire and Warrington Science Corridor.

2.25 To ensure output targets were ambitious but realistic, the and technical nature of the project, which was expected to provide intense higher value support involving highly skilled staff and specialist equipment, was also taken into consideration.

2.26 The targets set out in the original application form were as follows:

Table 2.3 Original Output Targets

Output	Target
C1 - Number of enterprises receiving support	120
C4 - Number of enterprises receiving non-financial support	120
C5 - Number of new enterprises supported	6
C8 - Employment increase in supported enterprises	20
C26 - Number of enterprises cooperating with research institutions	60
C28 - Number of enterprises supported to introduce new to the market products	10
C29 - Number of enterprises supported to introduce new to the firm products	30

Source: Application Form

2.27 The ESIF application also identified the following intended outcomes:

- Awareness of new technical solutions in a relevant field
- Identifying supply chain relevant technical challenges
- Developing approaches to the technical challenges
- New products or processes developed
- Expansion of activity in existing or new markets
- Access to research facilities
- Access to new network(s) and partners
- Increase in profitability
- De-risk disrupting technologies

2.28 The intended impacts of GISMO include:

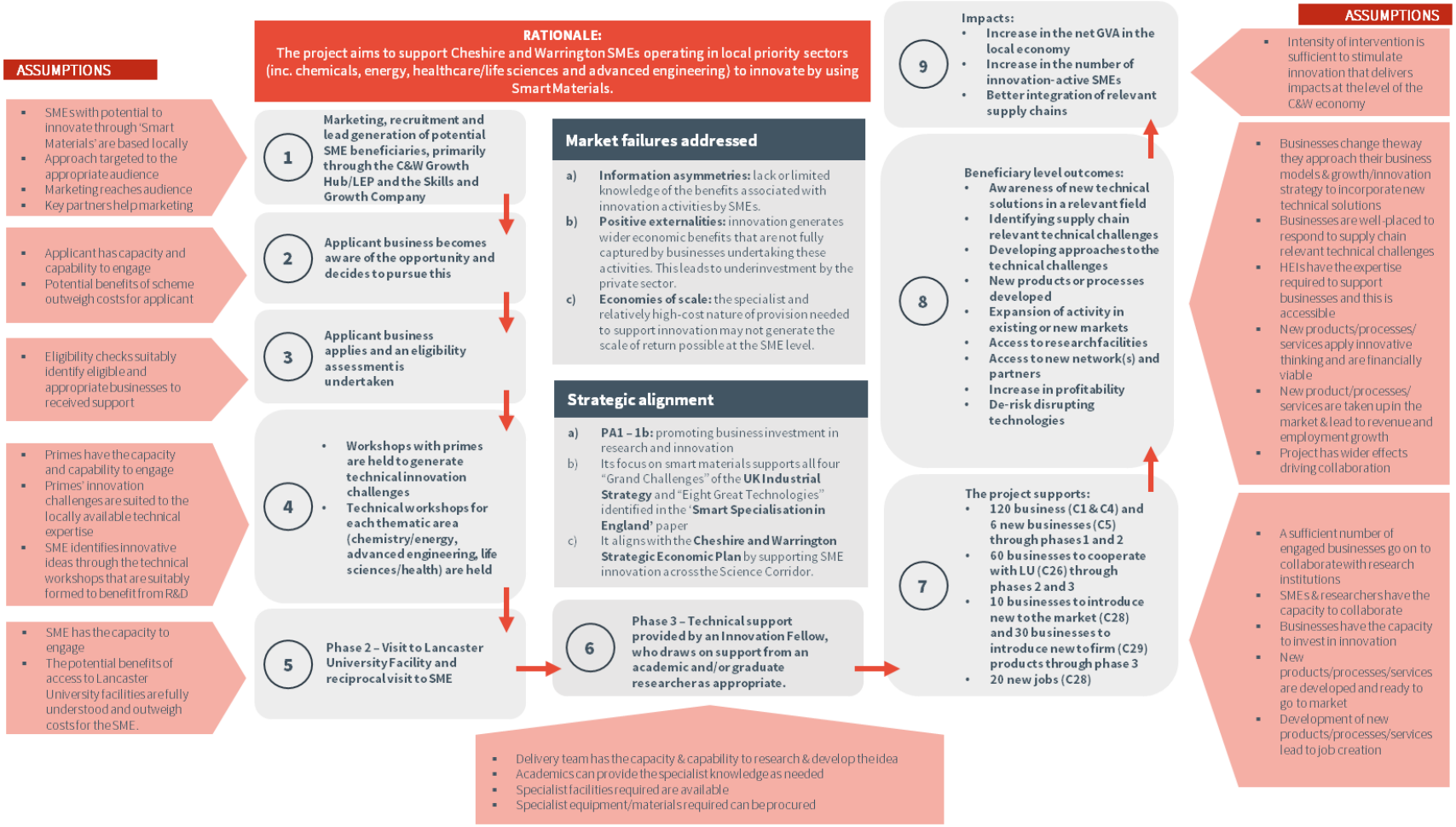
- Increase in the net GVA in the local economy
- Increase in the number of innovation-active SMEs
- Better integration of relevant supply chains.

Theory of Change

2.29 Figure 2.4Figure 2.4 presents the Theory of Change diagram for the GISMO project. The Theory of Change diagram traces the step-by-step rationale for the intervention to its intended outcomes and impacts in a sequential manner and explains the assumption which the intended outcomes and impacts depend on.

2.30 As such, it is a useful tool to evaluate the GISMO project, referencing original intent compared to how the project has performed in practice.

Figure 2.4 Theory of Change



Source: Hatch

Changes to Delivery Context

2.31 This section of the report reviews changes in the economic and policy environment which may have impacted on the delivery of GISMO, assessing the continued relevance and consistency of the project in light of any changes that have occurred during its delivery period.

Key Contextual Factors

2.32 Since GISMO launched in November 2019, there have been significant changes in the local and national political and economic landscape, which may impact on the project's delivery, impact and continued relevance. The following table review a range of policy and socioeconomic context and assesses their potential impact on the project.

Table 2.4 Changes to Delivery Context

Factor	Changes	Potential Impact on Project
Autumn Statement 2022	• Focuses on infrastructure, energy, and innovation as fundamental drivers towards achieving stability, growth and public services. • The government has committed to increasing public funding for Research and Development to £20bn by 2024-2025. The objective is to go above the 2017 target of investing 2.4% of GDP into R&D. • The statement will refocus investment zones on a "limited number of the highest potential knowledge intensive clusters" to enhance local research strengths.[i]	• GISMO aligned with the increasing emphasis placed on promoting innovation by Government, including through the formation of knowledge clusters.
Levelling Up the United Kingdom (2022)[3]	• Outlines a system change approach to the way that government works to deliver the levelling up Agenda. At its heart are twelve national missions. Among others, they aim to encourage innovation, boost productivity, and boost economic growth. • The agenda specifies that BEIS will aim to invest at least 55% of its total domestic R&D funding outside the Greater South East by 2024-25. In addition, the UK Government will target £100m of investment in three new Innovation Accelerators.	• GISMO sougth to support companies along the Cheshire and Warrington Science Corridor innovate by using smart materials. Its thematic areas of support spanned across 'Surfaces & Coating', 'Chemistry & Hydrogen' and 'Engineering. • As such, it supported the objectives of the Levelling Up and Build Back Better white papers of boosting investment in R&D across the whole of UK to accelerate SME supply chains, boost their growth potential and make them more resilient to economic shocks.
Build Back Better: Our Plan for Growth (2021)[4]	• The plan identifies levelling up the entire UK, transitioning to net zero and the vision for Global Britain as its three priorities, which it aims to achieve by building on three pillars of growth: infrastructure, skills and innovation. • A broad spectrum of actions to bolster innovation are outlined, including increasing the international	

[3] Levelling Up the United Kingdom, Department for Levelling Up, Housing and the Communities, 2022

[4] Build Back Better: Our Plan for Growth, HM Treasury, 2021

	competitiveness of high-growth, innovative businesses and supporting SMEs to grow through two productivity enhancing schemes (Help to Grow: Management and Help to Grow: Digital).	
UK Innovation Strategy: Leading the Future by Creating it (2021)[5]	• The UK's Innovation Strategy, launched in July 2021, aims to enhance productivity across the economy, and in turn bring jobs, growth and prosperity to all parts of the UK. The strategy focuses on supporting business innovation by making the most of the UK's research, development, and innovation systems. • The Strategy sets out four key pillars, including unleashing business through the provision of support, ensuring that UK research, development and innovation institutions serve the needs of businesses and places and stimulating innovation to tackle major challenges and drive capabilities in key technologies.	• GISMO sought to high value partnerships between SME's, prime manufacturers and research institutions to tackle industry-based challenges. In turn, this would drive capabilities in key technologies while raising productivity and improve SME growth and the number of innovation active SME's.
Innovate UK, Building the Future Economy 2021-2025[6]	• Articulates the role Innovate UK will play with partners to help deliver the UK innovation strategy. Commits to helping businesses grow through the development and commercialization of new products, processes and services, supporting by an outstanding innovation ecosystem. • To do this it will look at the future economy, focusing on opportunities for businesses in achieving net zero, improving health and wellbeing, creating and benefiting from advances in technology, and supporting horizon scanning and foresight. • Developing an innovation ecosystem by increasing coordination to support innovating businesses between	• Smart materials innovation has wide-ranging applications in domains such as advanced manufacturing and green technologies. • GISMO's approach sought to cultivate an innovation eco-system that would engage academia, SMEs and large enterprises to increase innovation partnerships, develop more research/SME partnerships, and build more efficient and resilient supply chains.

[5] UK Innovation Strategy: Leading the Future by Creating it, Department for Business, Energy & Industrial Strategy, 2021

[6] Innovate UK Action Plan for Business Innovation 2021 to 2025, Innovate UK, 2021

	public agencies, academia, infrastructure and the regulatory environment. Innovate UK will help partners work better, design better programmes and help businesses access more easily the support, knowledge and facilities they require to succeed.	
Net Zero Target, COP26 & the Energy Crisis	• In June 2019, the UK Parliament implemented legislation requiring the Government to reduce the UK's net emissions of greenhouse gases by 100% (relative to 1990 levels) by 2050. • Following COP26 in November 2021, businesses and governments have been encouraged to work together to accelerate innovation and scaleup green industries. • In 2021, there was a global surge in gas demand due to the lifting of Covid-19 restrictions and economies reopening, which has increased wholesale gas prices for the UK and overseas. • In tandem, the UK has a gas shortage which together has created uncertainty in the UK energy market and is expected to result in increased domestic energy costs of 54%[7]. As business energy costs do not have a price cap, businesses are likely to experience considerably higher energy costs compared to households.	• GISMO supported SMEs with smart materials innovation around 'Chemistry & Hydrogen'. Hydrogen's role in transitioning to a green economy has been a subject of increasing interest. It is considered by some as a versatile, highly efficient avenue for de-carbonising carbon-emitting activities across the electricity, transport, heat and industrial sectors.
EU Exit	• The UK and EU agreed on a post-Brexit trade deal which came into force in January 2021. The new deal has resulted in uncertainty for businesses, in relation to trade, employee and other regulatory considerations.	• External consultees commented on the implications of the EU Exit on the availability of funding for innovation support schemes. • The EU Exit has meant a loss of access to European Regional Development Funds, but also research and innovation programmes.

[7] British households face recrod 54% energy bill rise as price cap is raised

		• When it comes to innovation, barriers to entry can be high for SMEs, which often struggle to access the finance necessary to fund research and development activities. Projects like GISMO that make innovation accessible to companies of all sizes continue to be relevant.
UK Shared Prosperity Fund (UKSPF)	• UKSPF will replace the current European Union Structural Funds, which will finish by end of 2023. This may reduce the availability of funding to continue delivering SME support post-2023. • Jointly, the three local authorities in the Cheshire and Warrington LEP area were allocated £29.2 million[8] to support three core areas: Communities & Place, Supporting Business, and People & Skills.[9] • The UKSPF Investment Plans of the three local authorities identify priority interventions in the three core areas. They show a continued commitment to support SMES with the adoption of digital technologies, fund feasibility studies, drive town centre footfall and provide businesses with high quality support packages.	• GISMO aimed to support SMEs through technical innovation support and access to the University's academic expertise and specialist facilities. As such, it supported the continued importance placed by local authorities across the Cheshire and Warrington LEP area on providing local businesses with high quality support.
Covid-19 Pandemic	• In light of the pandemic outbreak in the UK in March 2020, the Government enacted several measures, which restricted the economic and social activity, to curb the spread of the Coronavirus. • These measures included, but were not limited to, three separate national lockdowns, a tiered regional lockdown approach, and restrictions to certain sectors and business' operations.	• The onset of the Covid-19 pandemic coincided with the launch of the project. Delivery consultees felt that the Covid-19 pandemic posed significant challenges for GISMO both in terms of engagement and project delivery. • Unlike its project stalemates, GISMO did not have a Cheshire and Warrington based delivery partner. With no significant track record with businesses

[8] The includes £11.6m in Cheshire East, £11.2m in Cheshire West and Chester and £6.5m in Warrington.

[9] The figure excludes funds allocated under the U.K government's Multiply numeracy programme.

	• To support the economy, through the pandemic, the Government introduced several support schemes such as the job retention scheme, bounce back loans scheme and specific sector funding to support vulnerable individuals and businesses.	and intermediaries in the area, it was envisioned that engagement with key local players, like the LEP, would be an important avenue for establishing the project. At a time when their focus shifted on navigating the impacts of the pandemic and offering pandemic-related support to businesses, the levels of engagement necessary to kick-start GISMO were not possible. • A basic tenet of the original project design was engaging with prime manufacturers in the area to come up with a series of technical challenges that local SMEs could tackle with support from GISMO. The project managed to gain traction with large companies (BASF and Tata Chemicals) in December 2020. But it was not able to maintain their interest beyond March 2021, as restrictions continued following the announcement of a third national lock-down in January 2021. • Generating a pipeline of SMEs also proved difficult, as their priorities shifted to adapting to working from home and safeguarding their businesses from the economic shock of the pandemic.
Cost of Living Crisis	• The cost of living crisis refers to the fall in 'real' disposable incomes (that is, adjusted for inflation and after taxes and benefits) that the UK has experience since late 2021. • This crisis is predominantly caused by high inflation surpassing wage and benefit increased and further exacerbated by recent tax increases. • Government support in response to high energy prices, a particular turning point of the crisis in the form of lower income household support for energy bills.	• Recruitment of SMEs onto GISMO remained a challenge post-pandemic. Research and development continue to be of lower priority to SMEs that are faced with the challenge of adapting to an uncertain, high-inflation economic environment that poses a persistent threat to business survivorship.

Developing the Cheshire and Warrington Local Industrial Strategy (LIS)– Evidence and Insight Summary (March 2019)[10]	• The Cheshire and Warrington LIS outlines 3 priority areas that will increase growth in the Cheshire and Warrington LEP. These include raising productivity, increasing business resilience and increasing the earnings power of our residents[11]. • The LIS aims to maximise the existing investments in the enterprise zone for the Cheshire Science Corridor, with the potential for 20,000 new jobs, 500 new businesses and £200m in retained business rates for re-investment.	• The technical innovation support GISMO offered resulted in a range of performance enhancing benefits for companies in the Cheshire and Warrington Science corridor, including cost efficiencies, development of new products and services and access to new markets. These translate to improved economic productivity and more high-skilled employment opportunities locally, in line with the objectives of the LIS.
Cheshire and Warrington LEP Economy	• The GVA per filled job in the Cheshire and Warrington LEP in 2020 was £61,141 compared to £63,401 in 2019 and £61,170 in 2018. This is a marginal decrease of 0.05% between 2018 and 2020[12]. • The unemployment rate in the Cheshire and Warrington LEP in 2022 was 3%, 3.6% in 2021 and 3.6% in 2020.The unemployment rate in the LEP is below the national average of 3.9% which has followed the same trends in the LEP over the past 2 years[13]. • The LEP's business base is similar to the national base where SME's account for 99.6% of all businesses. Among those SME's the LEP has a slightly lower proportion of micro businesses (89.3%) relative to the national rate (89.6%) but a relatively higher proportion of small businesses (8.7% vs	• GVA per head is lower than the national average with the productivity rate also being lower. GISMO's focus on SME innovation through smart materials applications may facilitate higher value activities. As a result, this could increase the net GVA for the Cheshire and Warrington economy. • There is a base of innovation active businesses in the Cheshire and Warrington LEP area, which could benefit from the support of innovation focused business schemes. However, consultees suggested that given the niche nature of a project like GISMO, and the fact that the University had limited experience of direct support delivery in this geographical location, a more in-depth evidence of need analysis at the inception stage

[10] Redefining Lancashire: Our Approach to Recovery, Lancashire County Council, 2020

[11] Developing the Cheshire and Warrington Local Industrial Strategy – Evidence and Insight Summary

[12] ONS, Current Price (Unsmoothed) GVA per filled job, Enterprise Regions (2020)

[13] ONS, Annual Population Survey, 2022

	8.5%) and a similar level of medium (1.5% vs 1.5%) businesses. • The proportion of innovation active businesses in the UK between 2018-20 (45%) has increased compared to 2016-18. In the Cheshire and Warrington LEP, 50.5% of businesses were innovation active between 2018 and 2020 which is above the national average. • Latest data for 2019 showed that Cheshire and Warrington had fewer business births per 1,000 working age population than the national level with 8.4 business births per 1,000 working age population compared with 9.3 for England[14].	would have been beneficial in terms of ascertaining the pool of potential businesses most likely to benefit from GISMO support. Well-targeted innovation support could contribute towards boosting business creation activity in the area.
Lancaster University, Strategic Plan 2021-2026	• Since its last Strategic Plan in 2015, the economic and political context of the UK has changed. The Strategic Plan responds to the new challenges faced regionally and nationally, and seeks to build economic growth and wellbeing in the region. • By focusing on high-value, high-impact projects that leverage its inter-disciplinarity and subject strengths, Lancaster Universities aims to deliver transformative impact in the communities in it operates.	• GISMO sought to leverage the University's expertise in smart materials, which is one of its three centres of excellence. The three thematic areas of support sought to leveraged knowledge sitting across three of the University's departments. • Delivery consultees indicated that office space allocation sought to build strong links among the inter-disciplinary GISMO team, while also encouraging collaboration with sister projects like NextGenChem. These efforts were frustrated by the shift to working to home during the Covid-19 pandemic.

[14] ONS Business Demography (2022) and ONS Mid-Year Population Estimates (2021)

Appropriateness of Project Design

2.33 The socio-economic and policy environment in which GISMO operates has significantly changed since the project's inception. The consecutive external shocks to the UK economy, including the EU Exit, the Covid-19 pandemic and more recently the cost-of-living crisis, increased economic uncertainty. They affected how businesses work and the type of support they seek. Meanwhile, local and central government bodies have introduced a series of policy responses to manage the set of emerging challenges and opportunities.

2.34 GISMO's rationale centred around increasing the innovation capacity of SMEs in Cheshire and Warrington through technical interventions enabling the application of smart materials in their business. In doing so, it aimed to strengthen links between SMEs in the area and Lancaster University and to contribute towards the development of an innovation cluster in the Cheshire and Warrington Science Corridor. In light of the increasing emphasis placed by local and central government on improving business resilience and boosting productivity through collaborative innovation activities, the core objectives of the project remain relevant from a strategic point of view.

2.35 However, the original design of the project has struggled to lead to the intended outputs, outcomes and impacts. The primary reason for this was the onset of the Covid-19 pandemic. The protracted period of national lockdowns and social distancing restrictions hampered the project's efforts to engage with SMEs, prime manufacturers, and local stakeholders. Moreover, it compromised the feasibility of the delivery model originally envisioned. Chapter 4 explores in more depth the full set of obstacles encountered by the project and the mitigation strategies pursued.

2.36 The project delivery team has made consistent efforts to adapt its engagement activities and delivery model throughout the lifetime of the project (see Chapter 4). Feedback from engaging with businesses has been taken into account to ensure the support corresponded to business needs, while also meeting the objectives of GISMO. Despite efforts to ensure the support provided remained relevant, the project continued to struggle.

2.37 Consultations with delivery staff and external stakeholders highlighted that by nature, GISMO was a niche project with a narrow target audience. Some consultees suggested that the project delivery team would have been better equipped to realise GISMO's ambitions had there been a more detailed demand analysis and more involvement by local stakeholders during the project design stage. However, there was broad agreement that the leading obstacle encountered by the project was the change in economic conditions.

2.38 The economic environment has not been conducive to the type of support provided by projects such as GISMO. Potential beneficiaries were pre-occupied with mitigating the impacts of Covid-19, and as such did not have the capacity to engage in high intensity innovation activities. Their capacity to engage in this type of activities continued to be constrained post-pandemic, as supply chain disruptions, a tight labour market and the cost of living crisis means that businesses are still operating in a very challenging economic environment.

Key Summary

The rationale for public sector intervention in the GISMO project was good and aligned with local stakeholder perspectives on the needs of the local economy. However, consultee evidence suggests that a more in-depth demand analysis would have been helpful in setting more realistic output targets, especially given the University's limited experience of direct delivery in the Cheshire and Warrington area.

The political and economic landscape changed radically since the project's inception given the combined economic shock of the Covid-19 pandemic, EU exit and the cost of living crisis. The project remained strategically relevant considering the increased emphasis placed on innovation-led economic growth by local and central government. However, the project faced lower demand by SMEs who were focused on managing the uncertainties created first by the Covid-19 pandemic, and later by the cost-of-living crisis. Meanwhile, the exceptional circumstances associated with the Covid-19 pandemic meant the original project design became unfeasible. As such, the project team worked consistently on re-calibrating their engagement and delivery strategy.

3. Progress Against Contractual ERDF Targets

3.1 This section provides an overview of the project's progress in terms of the contractual ERDF output targets and financial profile, and the extent to which it has supported the horizontal principles. It includes a discussion of factors contributing towards any areas of under or over performance.

3.2 The analysis draws on the latest data provided by Lancaster University, including copies of quarterly claims submitted and underpinning data. Performance is analysed using the latest data provided, which covers the period up to the end of Q4 2022.

3.3 This section also draws on consultations with delivery and management staff which has provided further qualitative insight into the internal and external factors which may have affected project progress.

Project Change Request

3.4 GISMO experienced substantial engagement and delivery challenges because of the Covid-19 pandemic, which were compounded by staffing issues. As such, a Project Change Request (PCR) process was initiated that sought to extend activity to June 2023. However, upon reflection, the decision to suspend the processing of the PCR was taken in August 2022. After actively monitoring and reviewing the project, it was concluded that while GISMO noted improvements in terms of recruiting ERDF eligible business, the rate of improvement was not sufficient in meeting the University's long-term needs.

3.5 Having decided to end project activity on 31st September 2022, as per the original Grant Funding Agreement, the University engaged with the Department of Levelling Up, Housing and Communities (DLUHC) to agree a set of revised targets. The project performance analysis below has been based on the revised set of targets.

Progress Against Contractual ERDF Targets

3.6 The project's performance as of Q4 2022 is summarised below:

Table 3.1 Spend and Output Performance, Q4 2022

	Original Targets	Revised Targets	Performance as of Q4 2022		Expected Performance at Project Completion	
			No.	% of Revised Targets	No.	% of Revised Targets
Revenue Expenditure	£4,413,318	£2,528,760	£2,288,221	90%	£2,381,381	94%
ERDF	£2,206,659	£1,264,380	£1,144,221	90%	£1,190,691	94%
Public Match	£2,206,659	£1,264,380	£1,144,000	90%	£1,190,691	94%
C1 – No. of enterprises receiving support	120	36	35	97%	36	100%
C4 – Receiving non-financial support	120	36	35	97%	36	100%
C5 – Number of new enterprises supported	6	3	3	100%	2	67%

C8 – Employment increase in support enterprises	20	3	1	33%	1	33%
C26 – Cooperating with research entities	60	15	15	100%	16	107%
C28 – Supported to introduce new to the firm products	10	0	7	n/a	12	n/a
C29 – Supported to new to the firm products	30	0	9	n/a	12	n/a

Source: ERDF Grant Funding Agreement, August 2019; GISMO Claim 13 Q4 2022

Financial Performance

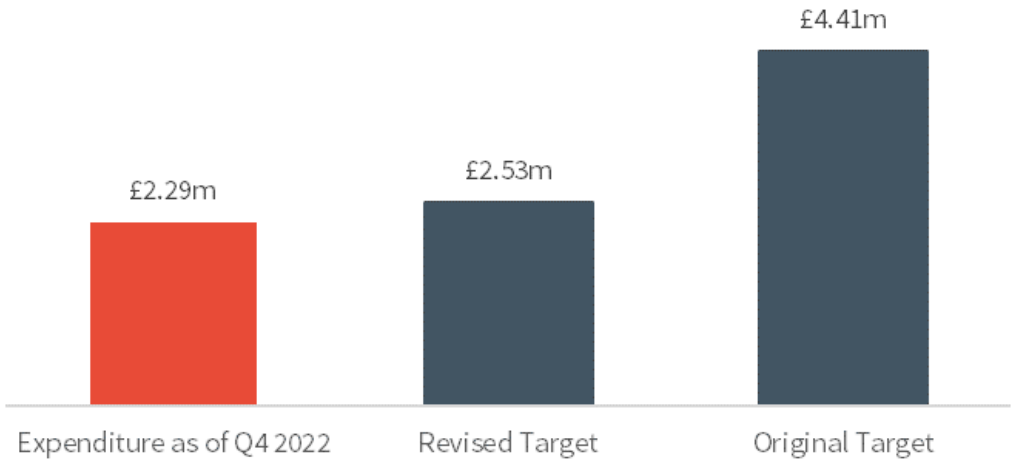
3.7 The GISMO project was granted a £4.41m budget, of which 50% was ERDF investment. Throughout the project's lifetime, expenditure significantly lagged the profile set out in the GFA due to significant operational challenges. These operational challenges were rooted in the Covid-19 pandemic, with the first national lock-down coinciding with project kick-off.

3.8 The nature and design of the project meant that the Covid-19 pandemic had a disproportional impact on project performance. As beneficiary focus shifted to business survival, their innovation activities were de-prioritised resulting in diminished demand for GISMO's services. Meanwhile, the project had to contend with delivery challenges such as the inability to access laboratories and other technical facilities on campus, a significant hurdle for a lab-based project, but also re-configuring its delivery model as engagement with prime manufacturers was frustrated by the Covid-19 pandemic.

3.9 The operational challenges the Covid-19 pandemic posed were compounded by staffing difficulties. There were delays in the recruitment of key technical staff, with not all of the graduate researcher positions being filled. Embedding GISMO withing its host department and onboarding key academic staff was made more difficult by the Head of Chemistry changing several times. Meanwhile, the project experienced long periods of sickness absence, particularly by the project administrator. In consultations, delivery staff commented that the expenditure shortfall reflects the staffing challenges the project experienced. The engagement and delivery challenges GISMO experienced are considered in detail in Chapter 4, along with the mitigation challenges the project team pursued.

3.10 Given the significance of the obstacles GISMO experienced, the expenditure target was revised to £2.53m (57% of the original budget), following conversations with DLUHC. As of Q4 2022, the project spent £2.29m, accounting for 90% of its revised expenditure target. The Q4 2022 Project Progress Report reflects on the overhead figure shortfall. It highlights that several vacant posts were not replaced, in the knowledge that the project was to end on 31st December 2022, and as such lower staff costs were incurred.

Figure 3.1 Total project expenditure, as at Q4 2022



Source: ERDF Grant Funding Agreement, August 2019; GISMO Claim 13 Q4 2022

Output Performance

3.11 The engagement and delivery challenges outlined above had a profound and long-lasting negative impact on the project's ability to deliver on its key headline output indicators. The project team made persistent efforts to support output realisation:

- an alternative delivery model based on assisting SMEs with their individual smart materials needs was adopted while efforts to engage prime manufacturers were underway. Online seminars were used to support recruitment, but they were not found to be an effective means of delivering the technical support that face-to-face workshops were envisioned to provide. The technical workshops would have straightforwardly translated to C1 outputs.
- telemarketing proved to be an extremely effective way of generating a pipeline of potential clients. Feedback from the first telemarketing campaign, which took place in July 2021, was used to redefine GISMO's offer. The refreshed offer was re-branded as a 'Materials MoT' and generated a positive response from businesses.

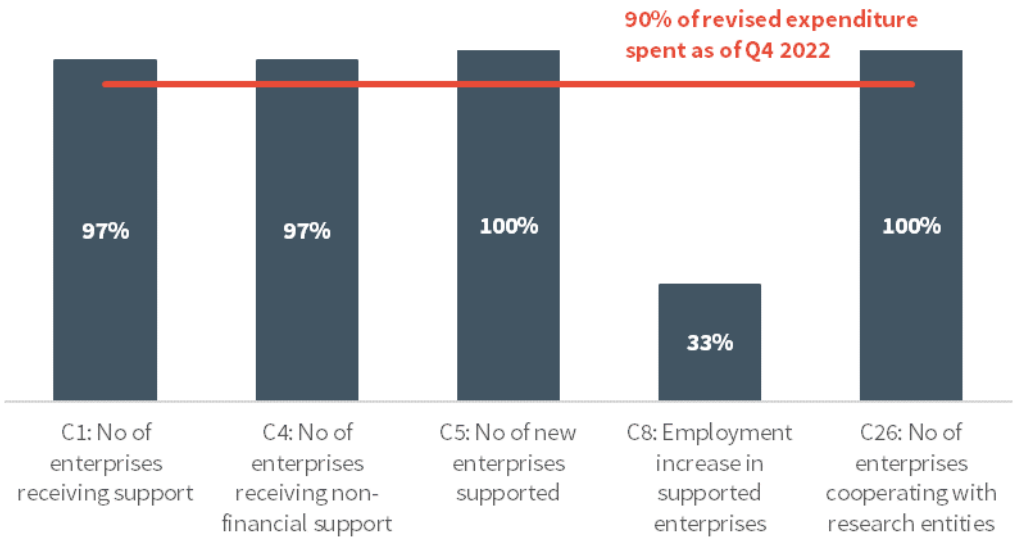
3.12 Moreover, in the early days of the project, establishing Gross Grant Equivalent (GGE) values for C1 and C26 interventions proved a challenge. This was primarily due to the multi-thematic nature of GISMO. A menu of GGE values was developed as the project progressed to ensure they were adequately tailored to the particularities of delivering short- and long-term support across each thematic strand. In consultations, delivery staff noted the impact the lack of well-defined GGE values had in terms of claiming outputs. Specifically, some observed that the resulting delay in transitioning C1 interventions into longer-term research projects led to a missed opportunity to capture C26 outputs in some cases. More broadly, consultee comments suggest that there were improvements in terms of the time required to get paperwork signed and approved with experience. However, this remained an issue throughout the project. A fast-track process for signing contracts was introduced in the spring of 2022 that further improved the rate of signing contracts and delivering outputs.

3.13 The University has actively monitored and reviewed this project. The consistent efforts made to recalibrate GISMO's engagement and delivery model led to improvements in output realisation.

However, the rate of improvement in terms of the volume of activity and types of companies was not sufficient in meeting the University's needs going forward. In consultation with DLUHC, a revised set of targets was agreed to reflect the significant hurdles the Covid-19 pandemic posed for the project, but the PCR to extend activity to June 2023 was suspended.

3.14 Figure 3.2 compares the rate at which the project has reported outputs relative to expenditure, against its revised output targets. It shows that the rate of output realisation exceeded the rate at which expenditure was incurred for all indicators except employment increase (C8).

Figure 3.2 Progress against revised headline output indicators and expenditure, Q4 2022



Source: GISMO Claim 13 Q4 2022

3.15 The Q4 2022 Project Progress report states that as a number of staff were retained on the project until the project end date of 31st December 2022, it was possible to maximise delivery, with a higher number of outputs delivered than originally anticipated. As of Q4 2022, the project delivered 35 C1 assists, 97% of its revised target. It met its revised output targets for new enterprises supported and number of enterprises cooperating with research entities, having claimed 3 C5[15] and 15 C26 business assists respectively.

3.16 As of Q4 2022, the project was underperforming in terms of the employment increase seen in supported enterprises, having claimed one C8 output corresponding to 33% of its revised target. However, this can be largely attributed to the fact that employment increases tend to materialise over a longer time horizon and the majority of GISMO activity took place in the last year of the project. According to Q4 2022 monitoring data, support concluded in 2022 for more than three quarters (77%) of beneficiaries.

3.17 The number of enterprises supported to introduce new the market (C28) and new to the firm (C29) products were revised to zero. However, in line with its commitment to DLUHC to maximise more impactful outputs, the project has delivered 7 C28 and 9 C29 outputs.

[15] Note that one C5 was subsequently removed as a result of the audit.

Expected Lifetime Outcome

3.18 The Q4 2022 Project Progress Report anticipated that some outputs would be captured in Q1 2023. Table 3.1 sets out the latest available data on expected performance at project closure. It shows that an additional C1 assist would be claimed in Q1 2023, which would see GISMO achieving its revised output target by project closure. It was also anticipated that 1 additional C26 assist, 5 additional C28 assists and 3 additional C29 assists would be claimed in Q1 2023. Finally, one C5 was subsequently removed as a result of the audit.

Horizontal Principles

3.19 The project has responded to the ERDF horizontal principles of equality, diversity, environment and sustainability via Lancaster University's existing policies set up to address these principles. This is achieved by assisting beneficiary businesses to factor the horizontal principles into future business operations and resource planning for new product, process and service development.

3.20 In consultations, delivery staff suggested that although the project had not been explicitly configured to these principles, it has followed the University's equality and diversity policies in its recruitment of staff and has contributed towards sustainable development through the research projects it supported businesses with.

3.21 The project delivered an in-person seminar on the adoption of green hydrogen at SciTech Daresbury in October 2021. One consultee remarked on GISMO's contributed towards the green hydrogen production for the food and drink sector cluster.

Key Summary

The financial and output performance of GISMO lagged the profile set out in the Grant Funding Agreement throughout the project's lifetime. This reflected the disproportionate impact the Covid-19 pandemic had on GISMO, given its niche nature and its original design, which was compounded by the staffing difficulties the project faced. Given these challenges, the project was actively monitored and reviewed. The project team made persistent efforts to mitigate the engagement and delivery difficulties experienced. The different activities pursued had variable rates of success and it was not until 1.5 years into project delivery that GISMO's delivery model was re-calibrated to an extent that was more suitable to the new economic climate. Project performance improved in light of the new engagement and delivery model adopted. However, a PCR to extend project activities to June 2023 was suspended as, on reflection, the rate of improvement was not deemed sufficient in meeting the University's long-term needs. Instead, a revised set of targets was agreed with DLUHC. The expenditure target was revised to £2.53m (57% of its original target), of which 90% was spent as of Q4 2022. The project met its revised output target for enterprises collaborating with research entities (C26). The latest forecasts suggest that GISMO is on track to achieve its businesses supported (C1/C4) target by project closure, with 97% of the revised target already achieved. In line with its commitment to maximise more impactful outputs, the project also supported businesses to introduce new to the firm (C28) and new to the market (C29) products, despite no target for these being set as part of the revised output targets. However, as of Q4 2022, GISMO achieved only a third of its revised job creation (C8) target, which can be largely attributed to the delay between support delivery and employment impact realisation.

4. Delivery and Management Performance

4.1 This section provides an analysis of how effectively the project has been implemented, highlighting factors which explain the project's development and performance. It synthesises findings from consultations with management and delivery staff of the GISMO project (a full list of consultees is provided in Appendix). These semi-structured consultations were carried out over August – September 2022 and January 2023 by Microsoft Teams calls. A list of consultees was provided by Lancaster University, which included current and past management and delivery staff involved in designing and delivering the project.

Project Set Up and Contracting

The design of the GISMO project incorporated local stakeholder perspectives on the needs of the local economy.

4.2 The design of the GISMO project considered feedback from previously unsuccessful project proposals, which focused on broad-based innovation support. In discussions with the Cheshire and Warrington LEP, a preference for an innovation support project that would encourage collaboration with the innovation assets across the Cheshire and Warrington Science Corridor was expressed.

4.3 To refine the focus of the project, discussions were held with key local stakeholders, including cluster leads and industry partners. Materials science emerged as a promising avenue of collaboration with Lancaster University, with it being one of the University's three centres of excellence.

4.4 The original design of the project envisioned that it would engage 'prime manufacturers' in the area to identify a series of technical challenges relating to their unmet research and development needs. SMEs in Cheshire and Warrington would then be supported through GISMO to respond to these challenges. Three thematic areas of support were identified based on the mix of companies operating in the Science corridor. These were 'Chemistry, Processing & Energy', 'Advanced Engineering' and 'Life Science & Healthcare'.

4.5 The Skills and Growth Company (SGC) was included as a project delivery partner in the Outline Application for the project. However, it stepped down following its acquisition by Cheshire East council. It was envisioned that the SGC would maintain an active role as a conduit into a number of 'prime manufacturers' and SMEs in the area, despite it not being a delivery partner on this project.

GISMO would have benefited from further demand analysis at the project design stage.

4.6 External consultees were complimentary about the genuine attempt made by GISMO to bring something unique to the Cheshire and Warrington's business support landscape. One consultee went on to describe it as one of the most successful elements of the project. However, external consultees also commented that the project design process could have been more collaborative to ensure the support offered more closely matched the needs of local businesses.

4.7 Similarly, delivery staff observed that a more in-depth demand analysis was necessary at the project design stage to understand the size and nature of the market GISMO was operating in

and set realistic output targets. Some commented that this was especially important given the University's limited experience delivering business support in Cheshire and Warrington.

The project encountered significant obstacles, principal among them being the Covid-19 pandemic.

4.8 The onset of the Covid-19 pandemic and the ensuing series of three national lockdowns, tiered regional lockdowns and social distancing restrictions that lasted up to the summer of 2021 frustrated GISMO's engagement and delivery activities.

Table 4.1 The impact of the Covid-19 pandemic on GISMO
Engagement Challenges
• Potential beneficiaries were focused on managing their response to the pandemic. This reduced demand for the project's services over a period of 18 months.
• Efforts to recruit businesses were constrained by the inability of the team to be present and recruit in the region. This had a disproportionally large impact on GISMO given the University's limited experience delivering direct activities in Cheshire and Warrington.
• Local stakeholders were focused on supporting businesses manage the effects of the pandemic. Achieving the levels of engagement necessary to embed the project in the area's business support landscape was not feasible at the time.
• Despite the difficult circumstances, the team managed to engage with two large enterprises in the area. However, a protracted period of lockdowns and social distancing restrictions was not conducive to sustaining the interest of these prime manufacturers, one of whom had subsequently moved out of the area.
Delivery Challenges
• The project delivery team joined the University in February and March 2020, shortly before the first lockdown was declared in March 2020. As such, they did not have the opportunity to build relationships that would embed the project within the Department of Chemistry, its host department, or the wider Faculty of Science and Technology.
• There were delays in the recruitment of key technical staff to the project team when lockdown was declared. Not all of the graduate researcher positions were filled.
• The University's ability to deliver R&D services was disrupted. The delivery team did not have access to labs for at least 14 months. The nature of the proposed technical delivery did not easily translate to online provision. At the same time, academic staff capacity was taken up with adapting teaching to online delivery.
• The supply chain led open innovation model became unworkable in light of difficulties to sustain the interest of prime manufacturers.
• Delivering thematic based technical workshops did not translate well to online delivery. With one exception (Hydrogen), the workshops translated to one-way webinars but they were not able to deliver C1 assistance in itself.

4.9 The aforementioned challenges were compounded by staff recruitment challenges. The Head of Chemistry changed on several occasions due to career progression (twice) and sickness absence. This exacerbated the difficulty of embedding GISMO in the department and onboarding key academic colleagues. Moreover, there were long periods of sickness absence, particularly by the Project Administrator. This had a detrimental impact on data collection and processing, and in turn on project administration and delivery. The post has remained vacant since the Project Administrator has left the University.

4.10 The delivery team worked consistently to mitigate these challenges throughout the lifetime of the project. Among others, their efforts entailed repositioning their approach to recruitment and engagement, pivoting the delivery model and addressing staffing and recruitment challenges. However, the performance of the project did not improve at the required level and pace, as their plans did not come to full fruition.

4.11 The subsequent sections explore in depth the mitigations strategies pursued and the impact they had on project performance.

Marketing and Client Engagement

GISMO was proactive in its efforts to generate a pipeline of suitable beneficiaries from the get-go.

4.12 As soon as the project team commenced work in March 2022, it considered ways of identifying SMEs that could either participate in tackling prime manufacturers' technical challenges or be supported with their own R&D needs, in parallel with its efforts to engage with prime manufacturers.

4.13 The University purchased details of 300 companies from Beauhurst[16], which was supplemented with publicly available details of 91 companies awarded Innovate UK funding and 100 tenants of science parks in the area. GISMO's business relationship officer identified eligible and appropriate businesses from this database and called as many of them as possible between March and June 2020.

4.14 Simultaneously, the project joined the Cheshire and Warrington LEP's business support forum, which consisted of representatives from 48 local intermediary organisations, as well as all four Chambers of Commerce in the area.

4.15 These engagement activities proved unsuccessful, primarily because of the coincidence with first national Covid-19 lock-down, which came into effect only three weeks after the GISMO team commenced work.

4.16 However, they also demonstrated that the offer needed to be better defined in terms of how it could be beneficial to SMEs. As such, during Q3 2020, researchers across the three thematic areas of GISMO (which settled as 'Engineering', 'Surfaces and Coating' and 'Chemistry and Hydrogen') concentrated on improving the messaging of the GISMO project. Their efforts resulted in the launch of a GISMO website and social media accounts (LinkedIn, Twitter and YouTube).

Online seminars and in-person events were successful to a limited extent, having struggled to generate a suitable pipeline of leads.

4.17 The project proceeded to deliver nine online seminars from 2020 to 2022, some of which were delivered by two of the project's seven graduate researchers. The first two seminars were held in July and September 2020. The first seminar targeted local intermediaries, whereas the second was a launch event targeting businesses. The first two seminars proved successful, yielding GISMO's first eight clients.

4.18 Subsequent online seminars focused on providing updates on specific areas of material science. Their rate of return on business recruitment was lower, reflecting the persistent difficulties in identifying suitable local businesses (even when events were promoted by local specialist

[16] Beauhurst is a data platform of high-growth companies.

technology organisations and intermediaries). These difficulties were recognised in consultations with delivery staff and external stakeholders alike.

4.19 As lockdown restrictions eased, the project sought to establish physical presence in the area. An in-person seminar on the adoption of green hydrogen was organised and delivered by one of GISMO's graduate researchers at SciTech Daresbury. The seminar was well-attended, with 40 delegates being present, and led to a small number of new enquiries. Attempts to organise a second in-person event at Aderley Park, which would allow GISMO researcher to introduce their research interest to the tenants, collapsed due to lack of contacts.

4.20 Moreover, in early 2022, tours of the Lancaster University campus were organised to introduce the facilities and specialist equipment offered and provide an opportunity for businesses to discuss their R&D needs with GISMO's researchers. Two tours were held in February and May 2022, respectively. These events did not lead to new enrolments on the project. Additional tours were scheduled, but had to be cancelled because of local Covid restrictions.

The project explored several referral pathways by engaging with local intermediaries.

4.21 The outbreak of the Covid-19 pandemic was a major impediment to establishing referral pathways, both because it curtailed efforts to establish rapport with local intermediaries through face-to-face contact but also because they were primarily preoccupied with managing their response to the pandemic and supporting local businesses.

4.22 However, efforts to generate leads through referrals also reflected the difficulty of identifying businesses that could benefit from GISMO support. Consultations with delivery staff indicated that the local Growth Hub did not work extensively with the type of businesses best suited to GISMO. However, sustaining that relationship did yield several leads from early 2022 that resulted in new enrolments.

4.23 Efforts were also made to work with projects like Made Smarter and Innovate UK Edge to create a pathway of cross-referrals. For instance, two of the online seminars were delivered in conjunction with Made Smarter and Innovate UK. However, as GISMO's own offer slowly evolved to include additive manufacturing (a strand of support not highlighted in the original application), it became apparent that the offer of Made Smarter in this domain was well-established with local businesses, while it was also involved in C&W 4.0, a new ERDF project offering this type of support.

Traction with prime manufacturers was achieved, but could not be maintained as lockdown persisted.

4.24 GISMO made persistent efforts to engage prime manufacturers in the hope of delivering on the supply chain led open innovation model originally envisioned in the application. Those efforts included seeking assistance from the Cheshire and Warrington LEP in identifying contacts as large manufacturers. However, as the LEP justifiably focused on managing the impact of the pandemic and lockdowns, those efforts did not prove as fruitful as initially hoped.

4.25 Despite the challenging circumstances, GISMO did manage to engage two large prime manufacturers (Tata Chemicals and BASF) in December 2020. However, as the lockdown persisted, the project was not able to sustain their interest beyond March 2021. Direct appeals to large manufacturers continued into the summer of 2021. In light of the persistent engagement difficulties, the decision to conclude those efforts were taken, with intention of focusing the project's delivery model on supporting SMEs with their individual needs.

Telemarketing feedback was used to refresh GISMO's offer and generate a healthy pipeline of suitable clients.

4.26 Following the decision to re-focus GISMO's delivery model, telemarketing was undertaken to better understand the needs of local businesses and generate a pipeline of suitable leads. This activity was funded by Lancaster University, because of the project's limited marketing budget[17], which also meant that the Marketing Officer post could not be filled following staff departure (in September 2021).

4.27 Ant Marketing Ltd was commissioned to undertake a telemarketing campaign in July 2021. The campaign run for 12 weeks and it was very successful. Feedback from the campaign on businesses' need was used to refresh the project's offer, which was re-branded as a 'Materials MoT'. By using a popularly understood term like 'MoT', the project aimed to simplify its messaging and make its support services accessible to more business. The new brand was used for the remainder of the project's lifetime and it proved to be attractive to business.

4.28 A second telemarketing campaign was commissioned in June 2022 to update the pipeline of potential leads and thereby support the preparation of a Project Change Request that sought to extend GISMO's activity to June 2023. Although the PCR was withdrawn, the telemarketing campaign resulted in 20 new business engagements. At this point, large businesses were also approached, as previous questions with regards to their eligibility were resolved.

4.29 In consultations, delivery staff unanimously commended the success of telemarketing in generating leads well suited to the activities delivered by GISMO. Some remarked that, with the benefit of hindsight, they would have integrated telemarketing from the project's outset.

The GISMO project did not achieve its desired level of market penetration.

4.30 Delivery staff commented in consultations that GISMO sought to attract small and large R&D intensive companies based in Cheshire and Warrington based, with the aim of delivering C26 outputs and establishing long-term collaborations between local businesses and the University.

4.31 Delivery staff also observed that among GISMO's thematic areas, 'Engineering' was popular partly because it was easier to identify companies that would benefit from the type of assistance offered by the project, but also because it was easier for business to understand how the University could assist the overcome their technical challenges. It was also noted that during Covid-19, the 'Surfaces and Coatings' thematic area proved popular as companies were exploring questions like how can their products help make surfaces more safe at hospitals.

4.32 The combination of the factors considered above has meant that the project did not go on to have the desired market penetration. This was recognised by both delivery staff and external stakeholders, with some regarding it as one of the least successful elements of the project. Notably, one consultee noted that while the GISMO brand is well known among the economic development community, it did not achieve this level of reach among the business community.

4.33 External stakeholders speculated that the project has not tapped into all potential markets, especially businesses that are unaware that their performance can improve through smart material innovation. They acknowledged the marked improvement in the marketing communications as the project matured and case studies became available, but noted that more could have be done in the early days to appeal to a wider spectrum of businesses. One consultee suggested that given the project's specialist subject matter, a two-tiered approach to marketing

[17] Marketing accounted for less than 1% of GISMO's total budget.

could be used to separately target businesses aware of the potential of smart materials science and those that are not.

Delivery

The Covid-19 pandemic meant the original project delivery model was no longer feasible.

4.34 The original delivery model was contingent on successfully engaging with prime manufacturers to identify technical R&D challenges that SMEs could help them address. This would inform the development of Innovation Workshops across GISMO's three thematic areas: 'Engineering', 'Surfaces and Coatings' and 'Chemistry and Hydrogen'. The thematic technical workshops would deliver C1 assistance, before SMEs proceeded to clinic sessions showcasing the University's facilities. In turn, this would generate a pipeline of projects, ideally focused on addressing prime manufacturers' R&D challenges, that would lead to C26 outputs.

4.35 Anchoring workshops around the R&D challenges of prime manufacturers was not possible, as the Covid-19 pandemic inhibited efforts to engage and maintain their interest. The project did attempt to deliver workshops as online seminars that provided updates on specific areas of materials science. As discussed in the *Marketing and Engagement* section, these webinars yielded a few new leads. However, the technical nature of the support they intended to provide did not lend itself well to online delivery. Given their one-way nature, the webinars did not generate capturable outputs.

GISMO had to pivot its delivery model and offer to supporting businesses with their individual R&D needs.

4.36 While efforts to engage with prime manufacturers persisted, the project pivoted to supporting businesses with their individual long-term R&D needs. The pivot away from a supply chain driven open innovation model meant that a well-defined diagnostic process was not feasible at that point in time. Instead, Innovation Fellows would first engage in an informal conversation with the businesses to assess whether the technical innovation challenge they were facing was something GISMO could support them with.

4.37 Where GISMO could offer relevant assistance, the Innovation Fellow would send the eligibility forms to the company. Once the eligibility forms were completed and approved by the PSU, the Innovation Fellow would arrange a second meeting to agree the precise scope of the work and then proceed to draft the delivery contract. As per the original design of GISMO, the preference was for the Innovation Fellow to deliver the support themselves, referring to an academic only where necessary. If extra resource was required, assistance from graduate researchers and interns was brought in.

4.38 In the summer of 2021, the decision was taken to concentrate efforts solely on assisting businesses with their individual needs. As aforementioned, feedback from the first telemarketing campaign was used to better define the project's offer and ensure its compatibility with businesses' needs. This also meant that a more structured diagnostic analysis of the technical challenge the business was facing became possible. The recalibrated 'Materials MoT' offer revolved around offering diagnostic support that would help businesses identify opportunities in areas of growing interest, including:

- testing the anti-viral qualities of their products
- understanding the properties and performance of materials

- finding alternative materials and improve environmental sustainability
- producing prototypes
- benchmarking the performance of their products
- examining opportunities to use smart materials.

Delivery challenges were compounded by staffing considerations.

4.39 Staffing posed an ongoing challenge that impacted the delivery of support to beneficiaries. Delivery staff noted that:

- There were delays in the recruitment of key technical staff to the project team when the lockdown was declared, with not all of the graduate researcher positions being filled.
- There were long periods of sickness absence, especially from the Project Administrator whose role was pivotal in data collection and processing.
- During the pandemic, academics were focused on adapting teaching to online delivery or doing research that was directly supporting efforts to tackle the Covid-19 pandemic, as such their availability to take on GISMO related projects was limited.
- The Innovation Fellow for the 'Chemistry and Hydrogen' departed in July 2021 and at short notice. Nine months passed before a suitable replacement could be recruited and the 20 chemistry related projects that came through telemarketing could be dealt with.
- Before the withdrawal of the PCR in the summer of 2022, the project lost the services of its Engineering Innovation Fellow.

GISMO's delivery model provided opportunities for early career researchers and students at Lancaster University.

4.40 A novelty of the project was the extent of reliance on Innovation Fellows, who were post-doctoral students themselves. Innovation Fellows were responsible for interfacing with clients and leading the delivery of a portfolio of projects. In doing so, the project invested in and was driven by their expertise. However, on the other hand, some consultees remarked that:

- some time was required before a good pace of work could be established, as the team was relatively inexperienced across project administration and business engagement.
- reliance on the post-doctoral students' expertise (and signposting to appropriate academic contacts were required) meant that a good fit with SME needs was not always possible. A consultee noted that the project should have perhaps remained a bit more open and responsive in terms of its research team.

4.41 With regards the internship programme, delivery staff noted that it was one of the most successful elements of GISMO. Research intern positions were advertised on the University's careers site and businesses were offered the opportunity to be part of the recruitment process. These internships gave Lancaster University students the chance to work on industry-relevant projects, but also showcased to businesses the talent pipeline available at the University. Delivery staff noted that feedback from businesses suggests they were impressed with the performance of the students.

Businesses benefited from GISMO support, but the project did not have its desired outcome in terms of supporting the development of an innovation cluster.

4.42 Consultees noted that GISMO beneficiaries were supported to:

- make use of alternative materials
- achieve cost savings
- introduce new products, processes and services
- access new markets.

4.43 Moreover, one consultee noted that some businesses who were not eligible for support from GISMO went on to receive support from Lancaster University a result of getting in touch with the project. External stakeholders suggested that referrals were dealt with satisfactorily. In consultations, they commented that once the businesses engaged with the project, the delivery went well and they found it beneficial.

4.44 However, both delivery staff and external stakeholders acknowledged that the project did not manage to achieve its ambitions in terms of supporting the development of an innovation cluster in Cheshire and Warrington, given the small number of businesses supported.

Project Administration and Governance

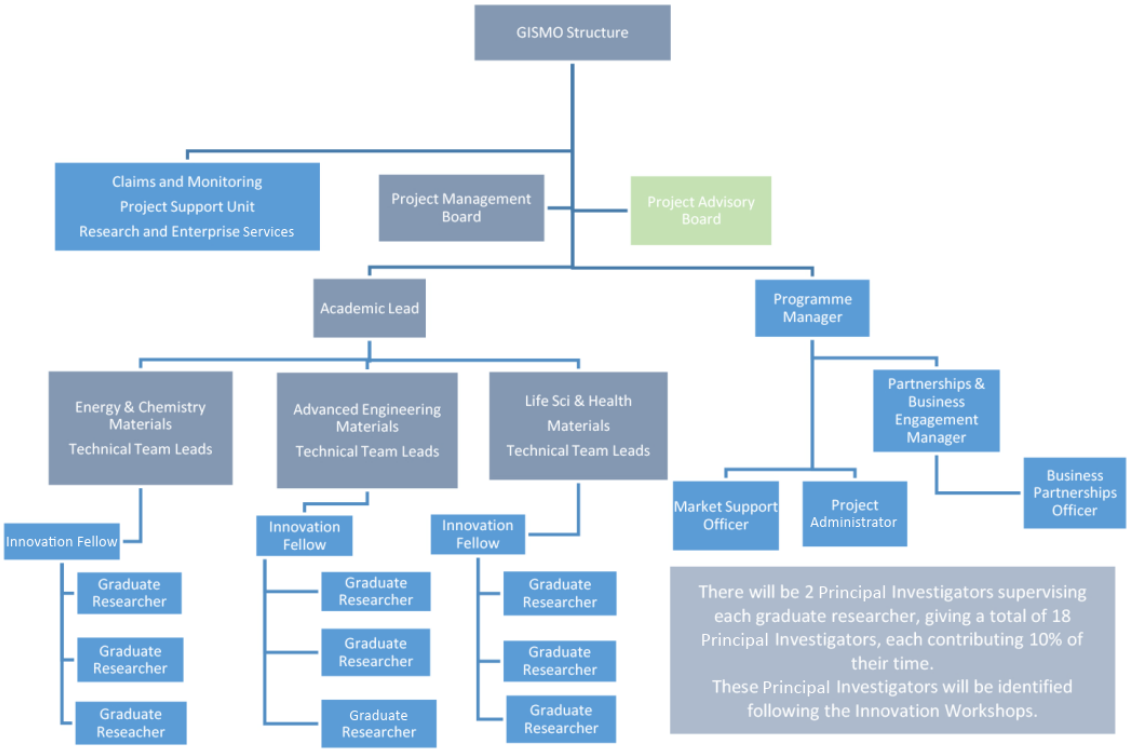
4.45 The GISMO project organogram describes the project management and governance envisioned in the Original Application.

4.46 Lancaster University would undertake project management, with day-to-day operational responsibility lying in the Faculty of Science and Technology and Lancaster University Management School, under the overall direction of the Director of Enterprise and Innovation. The GISMO Project Manager would be responsible to the Project Management Board (PMB) and the Project Advisory Board.

4.47 The Project Management Board would consist of the Knowledge Exchange Administration Manager, Head of Partnerships and Business Engagement: Physical Science, Academic Lead and GISMO Project Manager. The Project Advisory Board would include representatives from the Cheshire and Warrington LEP/Growth Hub, prime manufacturers and cluster bodies together with the Project Management Board.

4.48 Project monitoring would be undertaken by the central Research & Enterprise Service Division's Project Support Unit (PSU), which takes overall responsibility for the monitoring, performance and reporting of regeneration project on behalf of knowledge exchange and transfer teams.

Figure 4.1 GISMO Project Organogram



Source: GISMO Organogram 3, University of Lancaster

Despite the lack of formal external governance structures, GISMO was proactive in building relationships with local stakeholders.

4.49 The project struggled to constitute Project Management and Advisory Boards. Given the University's limited footprint in Cheshire and Warrington, GISMO did not have an extensive list of contacts it could reach out to when it was seeking to establish its external governance structure. The project reached out to Cheshire and Warrington LEP representatives, who supplied them with a list of possible people to approach. However, given the mounting pressures of the Covid-19 pandemic, there was a hesitancy around committing to a role on the Board. Considering that the purpose of governance structures is to keep the project team accountable to its objectives and leverage the influence of board members, some delivery staff expressed the view that the lack of external governance had a negative impact on project performance.

4.50 Despite the limiting circumstances, the project team was proactive in its efforts to embed GISMO locally. In consultations, external stakeholders observed that GISMO was an active member in the group of local intermediaries the Cheshire and Warrington LEP pulled together to support export manufacturers. This group included representatives from programmes like C&W4.0, Start Smart and ECO-I.

4.51 External stakeholders were also complimentary about the relationship developed between GISMO and the Cheshire and Warrington LEP, noting that the project team maintained regular communication with them. One consultee went on to suggest that links between the Cheshire and Warrington LEP and the University strengthened as a result of the project.

There were sufficient internal project management and governance structures.

4.52 The Project Manager held monthly meetings with each of the three thematic area teams. Each of these teams was headed by a lead academics. Moreover, informal project management meetings were also held monthly. The Head of Partnerships and Engagement: Physical Sciences met regularly with the GISMO Project Manager and the Academic Lead.

4.53 A consultee indicated that during the first month of the project, the Project Manager arranged daily meetings with the team to mitigate the impact of working-from-home on team building. Moreover, during the early days of the project the Project Manager and Head of Partnerships and Engagement: Physical Sciences met more frequently, and more regular engagement and monitoring meeting were held to address the challenges brought on by Covid-19.

4.54 Although the internal project management and governance structures worked well, the staffing challenges outline in the *Delivery* section meant that team members had to take on responsibilities beyond the original scope of their role. This was reflected in consultations with delivery staff, some of whom felt that roles and responsibilities were not clearly defined around the areas of marketing and engagement and drafting delivery contracts.

The project made consistent efforts to mitigate the administrative challenges it faced.

4.55 Delivery staff commented that completion and approval of eligibility forms was a time-consuming process that discouraged businesses from enrolling onto the project. This was due to a combination of factors, including the heavy administrative burden placed on businesses, but also internal delays in singing-off paperwork more generally.

4.56 The project took steps to address the administrative burden this placed on business by pre-filling the forms with information available about the business in the public domain. The delays in signing-off paperwork were due to a complex set of factors that the team made efforts to respond to:

- The GISMO delivery team was relatively new and lacked the tacit knowledge other teams at the University had acquired through experience. To help members of the team keep up with best practice requirements, additional layers of compliance checks were added based on lessons gained through delivering GISMO. Moreover, training courses were provided to improve staff's understanding of compliance. Despite these efforts, getting paperwork through compliance checks remained an issue. As checks are part of a cyclic monthly process, at times this led to substantial delays in getting sign-off. To increase the rate at which contracts were approved, a fast-track process was introduced in spring 2022, under which a common form contract was used, a 'diagnostic' analysis of the client's technical issue was undertaken for the C1 output, and the solution was delivered as a C26 output. Having a well-defined offer, under the 'MoT Materials' brand, was a key enabler of streamlining contract preparation under this diagnostic driven approach.
- Establishing a Gross Grant Equivalent (GGE) value for the short-term interactions (C1) and long-term research projects (C26) was a key challenge at the beginning of the project, which led to delays of 6 to 42 weeks in starting projects and in some instances, an inability to claim the long term research support delivered as a C26 output. Principally this was due to the multi-faceted nature of the support delivered by the project, which stretched across three different departments of the University. A menu of GGE values depending on the support type and the University department delivering it was arrived at. The project team reached out to sister projects for assistance in establishing adequate GGE values.

- There were long periods of sickness absence by the Project Administrator, whose role was pivotal in data collection and processing. The post remained vacant for after the Project Administrator left the University. Some consultees suggested that having a pool of administrative support personnel at the University, which can be deployed to support project delivery as required, could have been helpful in counteracting the some of the effects this had on project delivery.

Key Summary

The assessment concludes that the GISMO project made significant efforts to re-calibrate its engagement and delivery model against a backdrop of unprecedented challenges posed by the Covid-19 pandemic.

GISMO struggled to establish a Project Management and Advisory Board, as local stakeholder focus shifted on supporting SMEs deal with the aftermath of the Covid-19 pandemic. Despite the lack of formal external governance structures, the project team made persistent efforts to build good relationships with local intermediaries and other business support providers, as reflected by external consultee comments about the good relationship built between GISMO and the Cheshire and Warrington LEP.

The limited success of the initial marketing and engagement strategies pursued led to the commissioning of a telemarketing campaign that proved extremely successful in generating a pipeline of potential leads. GISMO's offer was refreshed using insights from the telemarketing campaign. The refreshed service offering was rebranded as a 'Materials MOT' to make its message more accessible. Despite these efforts, both delivery and external stakeholder consultees believe GISMO did not achieve its desired level of market penetration, especially in terms of engaging companies that are not aware that materials innovation could be relevant to their business.

While efforts to engage prime manufacturers were underway, delivery activity focused on supporting SME with their individual smart materials needs. A more ad-hoc delivery of C1 outputs became necessary, as technical workshops were not well-suited to remote delivery and as such, efforts to adapt them translated to one-way seminars. Protracted lockdowns meant the interest of the two prime manufacturers the project team managed to engage could not be sustained. Therefore, in the summer of 2021, the decision to focus exclusively on supporting SMEs with their individual needs based on the refreshed 'Materials MoT' service was taken.

Project delivery also faced issues around staffing and project administration. Staffing difficulties included delays in recruiting key technical staff, difficulty recruiting a 'Chemistry and Hydrogen' Innovation Fellow and long periods of sickness absence, especially by the Project Administrator. This post that remained vacant after the Project Administrator left the University. The was one of key project administration challenges experienced, along with having a relatively less experienced team, establishing Gross Grant Equivalent (GGE) values given the project's multifaceted nature and administrative burden placed on SMEs. To address the resulting delays in signing and approving paper works, measure like staff training, prefilling the eligibility forms shared with potential beneficiaries and working with sister projects to establish menu of GGE values were taken. In autumn 2022, a fast-track process for contract approval was introduced, enabled by having a better-defined diagnostic approach to support delivery.

5. Beneficiary Outcomes

5.1 This section reviews progress with targeting and recruiting beneficiaries and beneficiary insights into experiences with the project and the extent to which it has helped them to achieve outcomes and impacts.

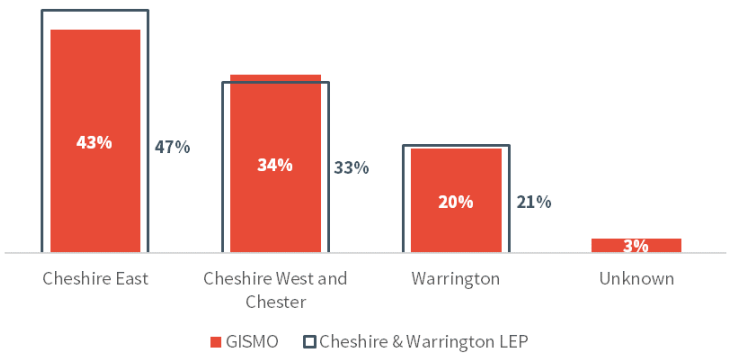
5.2 To inform this review, we have drawn on evidence gathered through:

- A review of the latest project monitoring data provided by Lancaster University (ESIF form 1-013) which covers 35 of the businesses supported to the end of Q4 2022.
- five in-depth beneficiary consultations were conducted over Microsoft Teams over February and March 2023. The consultations aimed to provide insights on how the business support has generated and can sustain improvements in performance, in addition to exploring the key challenges and successes in delivery from the viewpoint of beneficiaries and suggestions for improvements for the design of any future projects.

SMEs Supported

5.3 GISMO client engagement data provide information on the characteristics of the 35 businesses that benefited from GISMO support as of Q4 2022. The majority of businesses were located in the Cheshire East (43%) and Cheshire West and Chester (34%) local authorities. A fifth (20%) of the businesses were located in Warrington. The geographic profile of businesses supported broadly corresponds to that of SMEs in the Cheshire and Warrington LEP area. However, Cheshire East businesses were slightly under-represented among GISMO's beneficiaries (43% vs 47% of all Cheshire and Warrington SMEs).

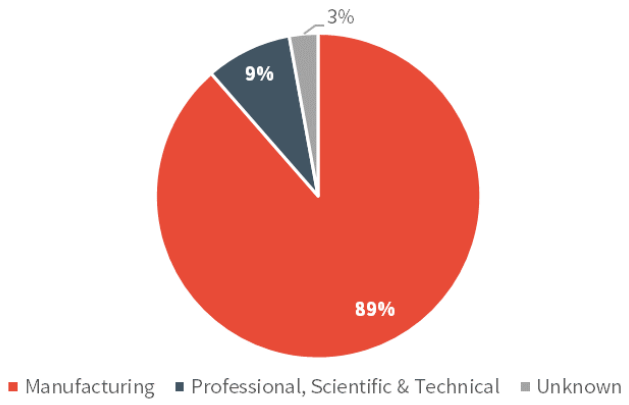
Figure 5.1 Local authority of businesses supported as of Q4 2022 (% of businesses)



Source: GISMO Client Engagement Data, January 2023; UK Business Counts, ONS, 2022

5.4 GISMO primarily engaged businesses operating in the manufacturing sector. Almost nine tenths (89%) of beneficiaries were manufacturing businesses and a small share (9%) operated in the professional, scientific and technical sector.

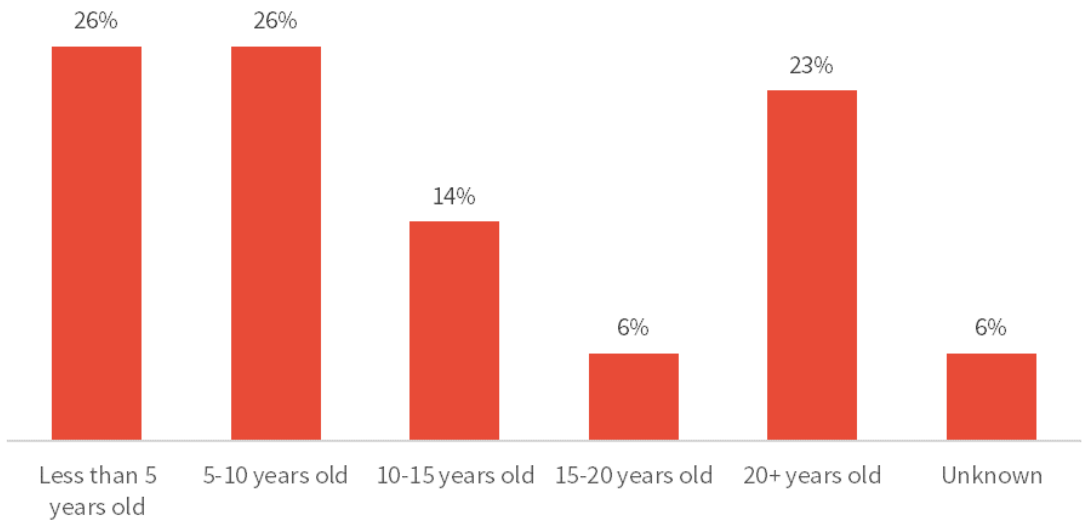
Figure 5.2 Sector of businesses supported as of Q4 2022 (% of businesses)



Source: GISMO Client Engagement Data, January 2023

5.5 GISMO attracted a mixture of young and established businesses. More than half (51%) of the businesses supported by the project have been operating for less than 10 years, while more than a fifth (23%) have been operating for 20 or more years.

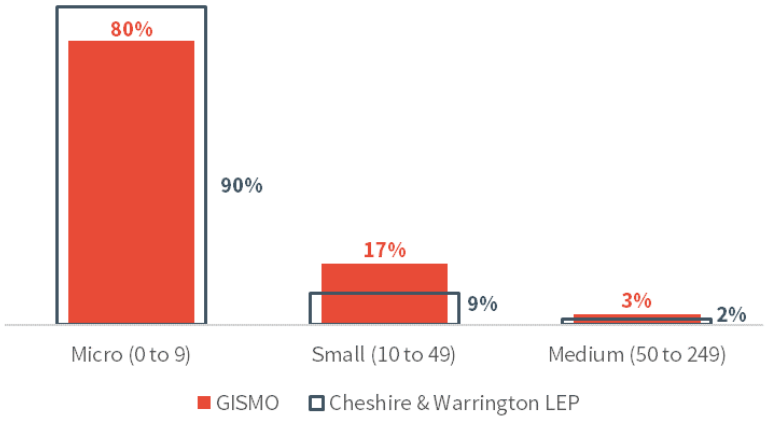
Figure 5.3 Age of businesses supported as of Q4 2022 (% of businesses)



Source: GISMO Client Engagement Data, January 2023

5.6 On average, the businesses supported employed 8 staff. However, the median number of employees was 3, suggesting the average employee figure is skewed by the number of staff of a few larger businesses. The breakdown of micro (0 to 9 employees), small (10 to 49 employees) and medium (50 to 249 employees) sized businesses confirms that GISMO predominantly catered to micro businesses (80%), followed by small businesses (17%). The comparison to the size profile of businesses in the Cheshire and Warrington LEP suggests GISMO was more attractive to small rather than micro businesses. A negligible (3%) share of medium-sized businesses were supported.

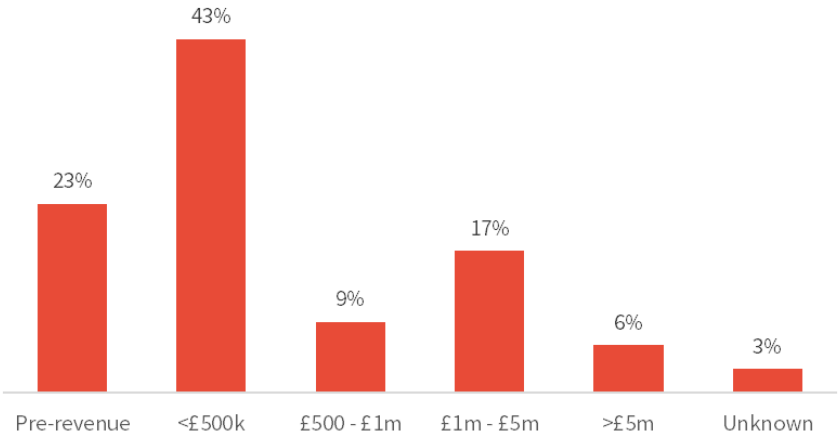
Figure 5.4 Size of businesses supported as of Q4 2022 (% of businesses)



Source: GISMO Client Engagement Data, January 2023; UK Business Counts, ONS, 2022

5.7 On average, the annual turnover of the businesses supported was £1.1m, while the median annual turnover was c. £156,000. More than three fifths of businesses supported were either pre-revenue companies (23%) or they had an annual turnover of less than £500,000 at the time of seeking support (43%). GISMO supported slightly over a fifth (23%) of businesses with revenue exceeding £1m at the time of seeking support.

Figure 5.5 Turnover of businesses supported as of Q4 2022 (% of businesses)



Source: GISMO Client Engagement Data, January 2023

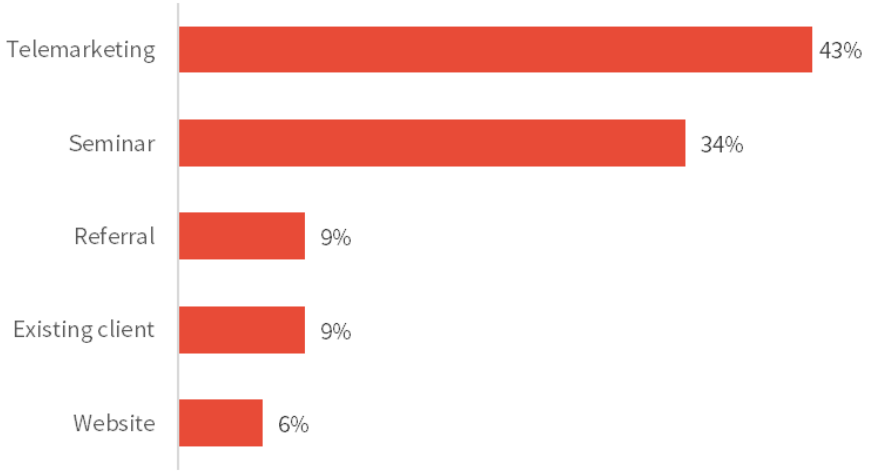
Motivations for Seeking Support

5.8 GISMO client engagement data shows that more than two fifths (43%) of businesses supported were engaged through telemarketing, while over a third (34%) came onto the project following a seminar. In consultations, beneficiaries suggested that lack of in-house expertise and the cost of independent testing were the main innovation barriers their business faced when they approached the project. In seeking support from GISMO, beneficiaries were primarily looking to:

- support the scientific underpinnings of their products thereby validating or improving them.

- expand into new markets by exploring the use of alternative materials.

Figure 5.6 Method of engagement of businesses supported as of Q4 2022 (% of businesses)



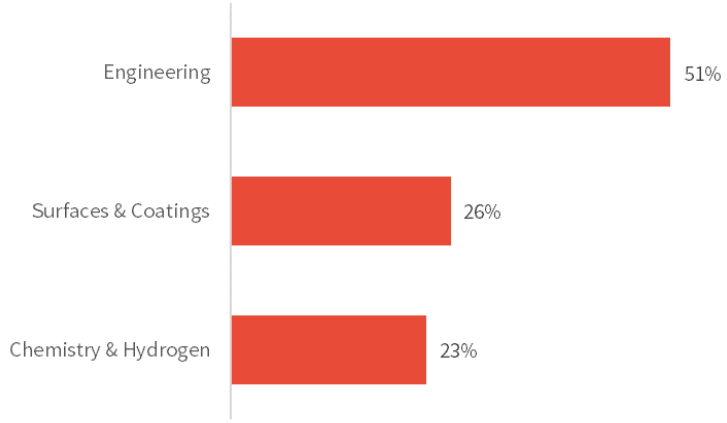
Source: GISMO Client Engagement Data, January 2023

The Experience of Seeking Support

5.9 Based on beneficiary consultations, businesses began their client journey by having two to three meetings with project team staff. The meetings sought to establish whether the business was eligible for support and understand how GISMO could address its needs. Businesses were asked to complete online application forms as part of the process. Beneficiaries indicated that the process was simple. However, some remarked on the level of information they were asked to provide and the delay between completing the application process and receiving support, which reflects the findings from delivery staff consultations, discussed in Chapter 4.

5.10 GISMO client engagement data suggest that slightly over half (51%) of beneficiaries received support through the project's 'Engineering' strand, followed by 'Surfaces and Coatings' (26%) and 'Chemistry & Hydrogen' (23%) related materials support. Testing using equipment and facilities at Lancaster University was the most cited support type among the beneficiaries consulted. Some noted that they also received technical/modelling support and research support.

Figure 5.7 Percentage (%) of businesses supported as of Q4 2022 by thematic support strand

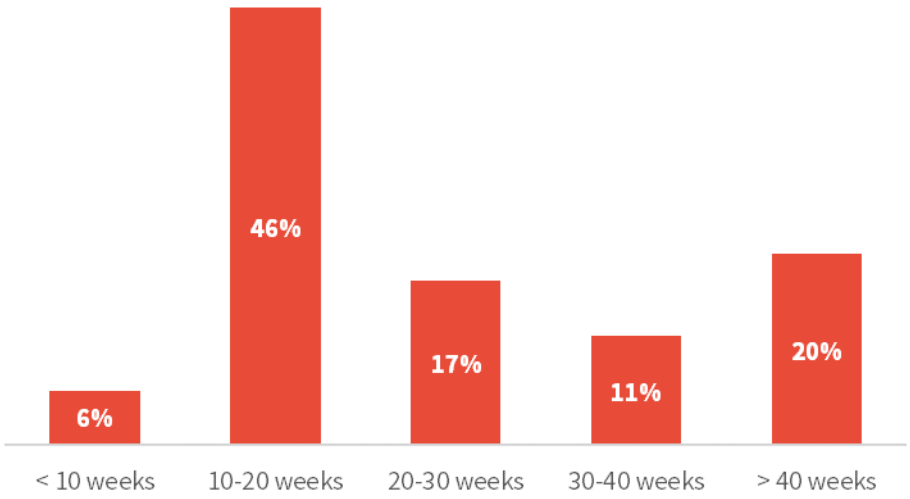


Source: GISMO Client Engagement Data, January 2023

5.11 The typical duration of support from GISMO was 10-20 weeks (46% of businesses), while in some cases support exceeded 40 weeks (20% of businesses). As such, while the average duration of support was 28 weeks, the median company received 18 weeks of support. The nature of different research projects could explain the variation in the duration of support to an extent. However, beneficiary consultations indicated that delays in progressing support delivery could also be a significant driver.

5.12 Some of the beneficiaries consulted indicated that the Covid-19 pandemic contributed to the slow pace of delivery, in addition to limiting their ability to visit Lancaster University facilities. The most common remark on the impact of the Covid-19 pandemic on the support received was the remote nature of the delivery.

Figure 5.8 Duration of support received by businesses supported as of Q4 2022 (% of businesses)



Source: GISMO Client Engagement Data, January 2023

5.13 Consultees that experienced delays noted that the support had to be delivered within a tight timeframe as a result, which in turn limited their ability to pursue follow-on support from the project. This was compounded by limited time and resource availability as the project drew to an end.

5.14 The quality of support provided by GISMO was satisfactory, having received an average rating of four among the beneficiaries consulted[18]. Consultees indicated that the support was tailored to their needs. Some reflected on how their business needs evolved during the process of receiving support. They indicated that the project was receptive to their changing needs, observing that the GISMO team was open to feedback and responded swiftly to it.

5.15 Suggestions for improvement of the support provided by GISMO included:

- **a more structured approach to the delivery of support** by setting out milestones and the timescales within which they will be achieved at the outset.
- **a more well-defined conclusion to the delivery of support** by outlining key recommendations and next steps the business could take post-support.

Business Outcomes

Businesses feel enabled to make progress towards achieving their objectives after receiving support from GISMO.

5.16 Beneficiary consultations highlighted that as most of delivery occurred during the last year of the project, only a preliminary assessment of beneficiary outcomes and impacts is possible at this stage. The emerging evidence from in-depth discussions with beneficiaries suggest that the technical support and independent testing helped businesses to validate new products and/or improvements to existing products. As a result of this support, consultees reported:

- feeling more confident in their ability to promote their products effectively
- feeling more confident to diversify their product base and access new markets
- having or intending to invest in new materials and equipment to improve the commercial viability of their products.

GISMO contributed towards strengthening links between the SMEs engaged and academic institutions.

5.17 The beneficiaries consulted were of the view that their engagement with GISMO has given them a better understanding of how to collaborate with universities. Moreover, consultee remarks suggest that the project helped forge stronger links between the businesses supported and Lancaster University:

- a consultee remarked that they became aware of the range of high-specification equipment available at the University through GISMO. Due to time limitations, they were not able to access equipment that could be beneficial to their business, as such they expressed an interest in part-time courses that would make that possible in the future.
- a consultee indicated that they developed an ongoing collaboration with a Lancaster University academic that has involved undergraduate projects as a result of GISMO.

[18] N = 5

Beneficiaries were overall satisfied with the support accessed through GISMO.

5.18 Overall satisfaction with the GISMO project is high, having achieved an average rating of 4 out of 5 across the five businesses interviewed. Consultees indicated that they are keen to continue working with Lancaster University as a result of the project. They also suggested that they are very likely to seek business support in the future, considering their experience with GISMO. Asked whether they would be willing to pay for support in the future, most businesses highlighted that the type of support accessed through GISMO tends to be expensive for companies of their size. Some indicated that they would be willing to pay for this type of support, but only up to a point or if it was part subsidised.

Case Studies

5.19 The case studies below bring to life the experience of two businesses that received support from GISMO and the impact the project had on their operations by drawing on the in-depth consultations held with beneficiaries. The case studies seek to explore the mechanisms through which support was effective for beneficiaries.

Figure 1.1 Case Study 1: Environelle

Environelle **Providing environmentally friendly cosmetics and beauty products**

Local Authority: Cheshire and Warrington
Sector: Cosmetics industry
Type of support received: 1 to 2 months of research support

November, 2018 — Business created
December, 2022 — GISMO enrolment
December, 2022 — Research support delivery commenced
December, 2022 — Feasibility study completed
Switch to glass and aluminium alternative for packaging.

Reason for seeking support: To find an alternative for single use plastic in packaging for beauty products. As well as eliminating preservatives and reduce chemicals for shampoo bars, creams, face creams and collagen booster creams.

Project support activities
The project produced an extensive report on single use plastic alternatives covering:

- Benefits of using alternatives
- Base materials used for independent testing
- Technical details of how the alternatives are more environmentally friendly compared to current base materials in cosmetic products and cosmetic packaging

Benefits

- Independent testing of single-use plastic alternatives in packaging and cosmetics
- Testing waterless beauty products
- Detailed report that helped Environelle identify the base materials for their cosmetic products

Limitations/ Challenges

- Restricted time scale due to long application process and delayed response times between Lancaster University and Environelle
- Limited funding from GISMO for the business support

"The work done by GISMO will enable us to expand, create employment and get greater consumer awareness about plastic waste on the environment and help solve this global problem"

Source: Hatch, 2023

Figure 1.2 Case Study 2: Specialist Technical Product Ltd

Specialist Technical Products Ltd. **Providing adhesive and sealants in the construction and domestic industries**

Local Authority: Cheshire East
Sector: Construction industry
Type of support received: 3 months research and testing support

October, 2001 — Business created
November, 2021 — GISMO Enrolment
March, 2022 — Research support delivery commenced
June, 2022 — Feasibility study completed
Investment into new extruder machine and substantiated product claims made by the business.

Reason for seeking support: Substantiating the claims made by the business about adhesives and sealants (green alternative) through the independent testing carried out by Lancaster University. Also, to investigate whether the products could succeed in the world of cross-linked adhesives.

Project support activities

- Sampling adhesives and sealants to test how environmentally friendly they are.
- Identifying the type of extruder machine that should be utilized.
- Examining polymers made from biomass.

Benefits

- Independent subsidized testing of sealants and adhesives.
- Highlighted the need for investment into a new extruder machine.
- Detailed results that helped substantiate the claims made about greener sealants and adhesives.
- Project helped substantiate claims in a not clearly defined market area.

Limitations/ Challenges

- Restricted time scale due to the covid pandemic and a lack of in-person collaboration limited further progression into the independent testing.
- Issues with first set of trials due to experiencing problems with the extruder machine. As a result, investment was needed for new extruder machine.

"The report created by the work of the GISMO project will provide 60% to 70% of positive benefits to the business"

Source: Hatch, 2023

Key Summary

In-depth consultations with beneficiaries suggest overall satisfaction with the GISMO project is high, having achieved an average rating of 4 (out of 5) across the five businesses interviewed. The project has contributed towards strengthening the links between the supported businesses and Lancaster University. Some interviewees commented on how GISMO provided them with a better understanding of how to collaborate with research institutions.

Consultees reflected positively on the tailored nature of the support and the responsiveness of the project team to their evolving needs. However, they did recognise that there were delays in the delivery of support. Some recognised that Covid-19 might have played a role in this. The delays meant support had to be delivered within a tight timeframe, which limited the beneficiaries' ability to pursue follow-on support.

Beneficiary consultations confirm that as most of the delivery occurred during the last year of the project, only a preliminary assessment of outcomes and impacts is possible at this point in time. The emerging evidence indicate that the technical support and independent testing accessed through GISMO helped beneficiaries make progress towards validating new products and/or improvements to existing products. As such, beneficiaries feel more confident to promote their products, diversify and reach new markets. Moreover, some interviewees indicated they have or intend to invest in new materials and equipment as a result of the support received.

6. Impacts and Value for Money

6.1 Our evaluation scoping concluded that it was not feasible to establish robust estimates of the gross and net additional economic impacts of GISMO through self-reported beneficiary survey evidence. Given the limited population of beneficiaries, achieving a survey response rate that is sufficiently high to ensure that economic impact estimates are within reasonable margins of errors would have been highly challenging and resource intensive.

6.2 As a second-best alternative, the GISMO Summative Assessment attempts to provide an indication of the project's impact and value for money through:

- a qualitative assessment of impact drawing on in-depth beneficiary consultations conducted via Microsoft Teams. Invitations were sent to 36 businesses that have received support from the project. Of this, 5 responded and were interviewed, which accounts for 14% of the businesses contacted.
- a cost efficiency analysis comparing the cost per output of the project with those achieved by similar ERDF business support programmes.

Beneficiary Impacts

6.3 The engagement and delivery challenges GISMO experienced meant that the majority of delivery took place during the last year of the project. As such, most beneficiary impacts should be expected after the project has been completed. This was evident in beneficiary consultations. Of the five businesses interviewed:

- two expected to employ additional staff.
- three expected to see an increase in turnover, with the estimates reported ranging between £50,000 and £100,000.

6.4 To establish whether beneficiaries would have been able to achieve these impacts through alternative means of support, beneficiaries were asked to consider what they would have done if they were not able to join GISMO. Of the five consultees interviewed:

- one suggested that they would have not progressed without GISMO's support.
- one suggested the support would not have been accessed within the same timescale and quality.
- two indicated that they would have accessed support from different providers. However, one proceeded to add that they chose GISMO as there was nothing similar to it.

6.5 Remarks by four consultees suggest that the extent to which expected impacts can by attributed to the project varies widely. However, on average, the project supported the realisation of over half of the expected impacts cited by the businesses interviewed. Three consultees indicated that they intend to continue operating in the Cheshire and Warrington LEP area, which implies a benefit for the local economy.

6.6 While some consultees indicated that the increase in materials and labour costs may affect future impact realisation, at large they did not suggest that the current economic climate is a significant concern in this regard.

Value for Money Assessment

6.7 To understand the value for money of the GISMO project, this section presents a cost efficiency summary drawing on an analysis of costs per output.

6.8 The project spent c. £2.3 million as of Q4 2022. Having supported 35 businesses, the average cost of supporting one business (C1) through the GISMO project is £65,378. The cost per output of each GISMO project ERDF output is shown in Table 6.1.

Table 6.1 GISMO Cost per ERDF Output

Output	No.	Cost per Output
C1: No. of enterprises receiving support	35	£65,378
C4: No. of enterprises receiving only non-financial support	35	£65,378
C5: No. of new enterprises supported	3	£762,740
C8: Employment increase in supported enterprises	1	£2,288,221
C26: No. of enterprises cooperating with research entities	15	£152,548
C28: Enterprises supported to introduce new product to market	7	£326,889
C29: Enterprises supported to introduce new product to firm	9	£254,247

Source: Hatch analysis of figures from GISMO Claim 13, Q4 2022. Note that cost per output figures may be subject to change, depending on realisation of expected performance at project closure.

6.9 To assess the cost efficiency of the project it is helpful to compare the costs per output with those achieved by similar ERDF business support programmes. Hatch has either evaluated or reviewed a Summative Assessment for the following comparator projects:

- Comparator Project 1 provided support to manufacturing SMEs with digitalisation including advice and guidance around their innovation strategy, infrastructure integration, new product development and commercialisation.
- Comparator Project 2 provided support to innovation active SMEs in the MedTech sector to facilitate the creation of new medical technologies. This comparator project has been delivered during the COVID-19 pandemic.
- Comparator Project 3 provided one-to-one product innovation support, innovation leadership workshops, digital and eco-innovation advice and supported innovative collaboration with large companies. This comparator project has been delivered during the COVID-19 pandemic.
- Comparator Project 4 provided workshops and technical one-to-one support to help business learn about, develop and utilise fuel cell technology.

6.10 Where these were revenue and capital projects, only the revenue costs have been accounted for. These projects are not directly comparable due to differences in aims, activities and targets but the comparison provides a broad indication of how the project's value for money compares with others.

6.11 It should be noted that, due to limited availability of more recent Summative Assessment findings, only Comparator Project 2 and 3 operated during the significant disruption caused the COVID-19 pandemic. This is important because the impacts of support to businesses pre-pandemic are likely to be different to those of projects delivered during it. The performance of businesses across the UK was adversely affected by lockdown measures, supply chain disruption

and a commercial environment in which consumer and business spending was constrained. The impacts of business support on trading performance including turnover and recruitment through COVID-19 would therefore be expected to be lower than activity delivered during normal trading conditions.

6.12 The value for money of the GISMO project is reflective of the significant obstacles it experienced, primarily as a result the Covid-19 pandemic. The severe economic disruption and uncertainty instigated by Covid-19 led to lower demand for innovation support by SMEs who were focused on business survival. Economic uncertainty remained high throughout the project's lifetime as the Covid-19 pandemic gave way to the cost-of-living crisis. Meanwhile, the difficulty of sustaining prime manufacturers' interest as national lock downs and social distancing restrictions persisted created the need to change the delivery model of GISMO. Jointly, these factors have resulted in high costs per output across indicators, which exceed those of most comparator projects presented in Table 6.2.

6.13 Focusing on jobs created by supported businesses (C8), the high cost per output can be attributed to the fact that the majority of delivery took place during the last year of the project, thereby not allowing for enough time to have passed for employment impacts to materialise. As discussed above, beneficiary consultations suggest that businesses are optimistic about future employment creation.

Table 6.2 Cost per Output of the GISMO Project and Comparator Projects

	GISMO	Comparator 1	Comparator 2	Comparator 3	Comparator 4
C1: No. of enterprises receiving support	£65,378	£28,072	£15,955	£8,178	£11,057
C4: No. of enterprises receiving non-financial support	£65,378	£28,072	£25,071	£8,205	£11,057
C5: No. of new enterprises supported	£762,740	£105,909	£175,500	n/a	n/a
C8: Employment increase in supported enterprises	£2,288,221	£145,625	£175,500	£29,304	£283,800
C26: No. of enterprises cooperating with research entities	£152,548	£35,126	£58,500	£63,935	£13,732
C28: No. of enterprises supported to introduce new to the market products	£326,889	£258,889	£234,000	£140,657	£65,492
C29: No. of enterprises supported to introduce new to the firm products	£254,247	£116,500	£351,000	£60,778	£47,300

Source: Hatch, 2022. Green (red) indicates that the comparator project is more (less) cost efficient than GISMO.

Key Summary

Our evaluation scoping concluded that a quantitative assessment of impact was not feasible given the limited population of beneficiaries supported by GISMO. Instead, evidence from in-depth beneficiary consultations were used to provide an indication of the impacts associated with the project.

The majority of GISMO's impact will be realised after the completion of the project as the majority of delivery occurred in the last year of the project. Consultee remarks corroborated this intuition. They suggested that they expect to experience an increase in turnover and employment in the future, which can be attributed to support from the GISMO project to an extent. Namely, on average, half of the expected impacts cited were attributed to the support received. Moreover, three of the five consultees indicated they intend to continue operating in the Cheshire and Warrington LEP area, which highlights the potential for local retention of benefits.

To assess value for money, a cost efficiency analysis has been carried out as a second-best alternative. GISMO was benchmarked against four comparator ERDF projects, two of which were also delivered during the Covid-19 pandemic. Note that although the comparator projects chosen are of similar nature to GISMO, differences in aims, activities and targets mean they are not directly comparable. The cost per output figures across GISMO indicators notably exceeded those of most comparator projects. The value for money of GISMO is reflective of the obstacles the Covid-19 pandemic posed, which meant that the project's engagement and delivery strategy had to be significantly re-focused, whilst trying to maximise delivery. Furthermore, the high cost per job created (C8) figure can also be attributed to the fact that a large share of impacts will be realised post project completion due to the majority of GISMO activity occurring in 2022.

7. Conclusions and Recommendations

7.1 This section of the report provides a summary of the main findings of the report, and recommendations for future design of similar projects.

Conclusions

Project Relevance and Consistency

7.2 **Project design responded to GISMO's rationale:** The rationale for the GISMO project aligned with local stakeholder perspectives on the needs of the local economy. The project design responded to the rationale and objectives of GISMO. However, some consultees suggested that more in-depth demand analysis and local stakeholder involvement at the project design stage would have been beneficial, especially in terms of setting realistic output targets.

7.3 **A changing context created the need to reconsider the original project design:** The strategic and socio-economic landscape changed radically since project inception due to the Covid-19 pandemic, EU Exit and cost of living crisis. The Covid-19 pandemic had a profound on the deliverability of the original project, as originally designed, and on the levels of demand for innovation support by SMEs. As such, the engagement and delivery strategy of the GISMO project has undergone significant changes.

7.4 **GISMO remained strategically relevant, but the need for this type of support suffered as a result of Covid-19:** The focus placed on innovation-led economic growth by local and central government suggests that GISMO remained strategically relevant. However, the Covid-19 pandemic meant that SMEs did not have the capacity to engage with a project like GISMO, offering highly specialist technical innovation support. This remains a concern as economic uncertainty persisted in the aftermath of the Covid-19 pandemic, with the onset of a cost-of-living crisis.

Progress against contractual targets

7.5 **A revised set of targets was agreed with DLUHC:** The GISMO project has been actively monitored and reviewed. Although the project noted improvements in generating a pipeline of eligible SMEs, the decision to suspend a PCR to extend activity to June 2023 was taken as on reflection, the rate of improvement was not sufficient in meeting the University's long-term needs. Instead, a set of revised targets was agreed with DLUHC in recognition of the significant obstacles the project faced as a result of the changing economic landscape.

7.6 **Project performance suffered in light of engagement and delivery challenges, primarily related to Covid-19, but the revised project targets were largely achieved:** The engagement and delivery challenges resulting from the Covid-19 pandemic had a significant negative impact on financial and output performance throughout the project's lifetime. These difficulties were compounded by staffing issues and project administration challenges. However, as of Q4 2022, the project has delivered against its revised output targets, with the exception of employment increases in supported enterprises (C8), for which a third of the revised target was achieved. The project went beyond the scope of its revised targets, by also supporting businesses to introduce new to the firm (C28) and new to the market (C29) products. The Q4 2022 PPR anticipates that additional C1, C26, C28 and C29 outputs will be captured in Q1 2023.

Delivery and management performance

7.7 **External governance structures and aspects of projects administration could have been improved:** GISMO struggled to constitute Project Management and Advisory Boards, as local stakeholder focus understandably shifted on supporting local businesses deal with the impact of the Covid-19 pandemic. Regardless, the project team has been proactive in cultivating relationships with key intermediaries, including the Cheshire and Warrington LEP and other business support providers, such as Made Smarter. External stakeholders recognised these efforts in consultations and were complimentary about the relationships developed as a result. Nevertheless, some delivery staff expressed the view that lack of formal external governance arrangements may have contributed towards project under-performance. Delivery staff consultations also indicated that while there were sufficient internal project management and governance structures, aspects of project administration posed a persistent challenge for the project. These challenges centred around delays in getting paperwork signed and approved, a task that was made more difficult by long periods of sickness absence by the Project Administration. This post remained vacant after the Project Administrator left the Universiyt. A number of mitigating measures were pursued:

- eligibility forms were pre-filled to reduce the administrative burden placed on potential clients
- training courses were provided to improve staff's understanding of compliance
- a menu of GGE values reflecting the multi-faceted nature of the project were developed by reaching out to sister projects within Lancaster University
- a fast-track process for contract approval was implemented in spring 2022, largely as a result of having a better-defined offer, which lent itself well to a diagnostic based approach.

7.8 **The project remained pro-active in its marketing and engagement efforts:** To create a pipeline of potential clients, it compiled a database of suitable SMEs using information purchased from Beauhurst and directly reached out to them. It also delivered a series of online seminars. The project team made efforts to refine its marketing message in terms that would highlight the benefits of the support for businesses. However, the success of these engagement strategies was limited. As such, a telemarketing campaign was deployed. This proved extremely successful in attracting SMEs to the project, but also generating feedback that was used to re-calibrate the project's offer and re-brand it as a 'Materials MoT'. Efforts to embed the project locally by engaging with local intermediaries were initially frustrated by Covid-19, but persistent efforts were made to establish referral pathways that eventually directed a limited number of businesses to GISMO. Consultees suggested that the project did not achieve its desired market penetration, which some highlighting it as one of the least successful aspects of the project. The project team's efforts to reach prime manufacturers were partly successful, having managed to engage two large enterprises, but the protracted period of national lockdowns and social distancing restrictions meant that their interest could not be sustained.

7.9 **The project delivery model was refocused on supporting SMEs with their individual materials needs:** Initially, the project delivery team continued efforts to engage prime manufacturers in the hope of delivering on the supply chain driven open innovation model originally envisioned. However, in the summer of 2021, the decision to concentrate efforts on assisting businesses with their individual materials needs was taken. At this point, feedback from the telemarketing campaign was used to better tailor GISMO's offer to businesses' needs. The original delivery model also entailed technical support provision through workshops, which

would straight forwardly translate to C1 outputs. Technical workshops were not well-suited to online delivery, as such they translated to one-way seminars that supported GISMO's engagement efforts, but were not able to provide a level of assistance that would qualify as a C1 output. The challenge of adapting the delivery model to a post-pandemic world was compounded by staffing challenges, among them the difficulty in recruiting a 'Chemistry and Hydrogen' Innovation Fellow.

7.10 **GISMO's delivery model invested in early career researchers and students:** Consultees noted that a novel feature of the project was the extent of reliance on Innovation Fellows, who were post-doctoral students themselves, on delivering support. However, some consultees observed that given the project team's level of experience, some time was required before a good pace of work could be established. Moreover, one consultee remarked that at times, achieving a good fit with SME needs was not possible given the reliance on post-doctoral Innovation Fellow's expertise, suggesting that a more open and responsive approach to the research team could have been beneficial. Delivery staff noted the success of bringing in additional resource when required through its student internship programme, recognising the complimentary feedback received from beneficiaries on the calibre of Lancaster University students.

Outcomes and impacts

7.11 **Despite delays in the delivery of support, beneficiaries were satisfied with the support received:** Support was predominantly accessed through the 'Engineering' strand of GISMO, which accounted for 51% of beneficiaries supported as of Q4 2022. Testing using Lancaster University equipment and facilities was the most cited support among the beneficiaries consulted. Their remarks suggest that they were satisfied with the quality of support received by GISMO, with some recognising how delivery staff remained adaptive to the evolving needs of their research projects. Delays in the delivery of support was a common observation across the beneficiaries consulted, of whom some recognised Covid-19 as a contributing factor. Consultees agreed that support had to be delivered within tight timeframes as a result of the delays, which in turn limited their ability to request follow-on support. Despite this, overall satisfaction with the GISMO project remained high, achieving an average rating of 4 out of 5 across the businesses interviewed. Notably, businesses highlighted their willingness to continue working with Lancaster University.

7.12 **The majority of outcomes and impacts of GISMO will be realised post project completion:** As most of delivery occurred during the last year of the project, the outcomes and impacts of the support provided cannot be comprehensively assessed at this stage. This was evident in beneficiary consultations. However, they did yield some valuable insights in terms of emerging beneficiary outcomes and impacts.

7.13 **Emerging findings indicate that beneficiaries feel empowered to achieve their objectives after receiving support from GISMO:** Beneficiaries cited lack of in-house expertise and the cost of independent testing as the main innovation barriers they faced before seeking support from GISMO. The emerging consultation evidence suggests that the support provided by GISMO helped beneficiaries make progress towards overcoming these barriers and validate new products and/or improvements to existing products. As such, consultees felt more confident in their ability to promote their products and diversify by accessing new markets. Some consultees indicated they have or intend to invest in new materials and equipment after receiving support from GISMO, thereby improving the commercial viability of their products. Beneficiary remarks suggest their understanding of Lancaster University's offer, and of working with universities

more generally, improved as a result of engaging with GISMO, demonstrating how the project has contributed towards strengthening links with the SME engaged.

7.14 **Beneficiaries expect to experience an increase in turnover and employment:** The estimates provided by three of the five beneficiaries interviewed indicate that the expected increase in turnover could range from £50,000 to £100,000. To assess GISMO's role in generating these expected impacts, beneficiaries were asked about their ability to access support through other providers and the degree to which they can attributed to the support received. Their remarks suggest that GISMO played a role to an extent. Three of the five interviewees noted their intention to remain in Cheshire and Warrington, which would help retain benefits locally. At large, consultees did not appear concerned about the impact of the current economic climate on future impact realisation, although a few recognised that material and labour cost increase could have some impact.

Value for money

7.15 **The value for money of GISMO reflects the engagement and delivery challenges the project experienced:** The value for money assessment relied on a cost efficiency analysis approach, given the challenge of obtaining reliable evidence through a beneficiary survey. The shock of the Covid-19 pandemic meant that the project team had to significantly change the engagement and delivery model whilst the project activity was underway. Meanwhile, ongoing economic uncertainty supressed demand for the project's services among SME's who were focused on business survival. As such, GISMO's cost per output figures were high across its output indicators, exceeding those achieved by most of the comparator projects considered. The cost per job created by supported businesses (C8) figure is especially high. But as employment impact tend to materialise over longer time horizons and the majority of activity took place in 2022, this figure most likely overstates the long-term cost per job created of the GISMO project.

Recommendations

7.16 **Recommendation 1:** The original project design responded to GISMO's rationale and aligned with local stakeholders' perspectives on the needs of the local economy. While GISMO's experience is tainted by the Covid-19 pandemic, with project kick-off coinciding with the UK entering its first national lockdown, discussions with delivery staff highlighted the importance of extra layers of due diligence at the design stage (e.g. in-depth demand analysis), especially when there is not a local delivery partner involved or significant experience of delivery locally, to ensure there is a potential pipeline of suitable leads as soon as the project starts. The importance of an in-depth demand analysis is becoming increasingly important for future projects, as a prolonged period of economic uncertainty appears to have impacted SMEs capacity to engage with certain types of specialist innovation support projects.

7.17 **Recommendation 2:** Given GISMO's specialist nature, upfront investment in marketing to both sustain a pipeline of high quality leads and increase market penetration was necessary. Telemarketing proved an incredibly successful avenue of generating suitable leads. With the benefit of hindsight, delivery staff suggested that it should have been integrated into the programme from the get-go. Moreover, a consultee recommended that a two-tiered marketing approach could have been helpful in terms of targeting businesses not yet aware of the potential benefits of smart materials adoption.

7.18 **Recommendation 3:** Establishing goodwill with local stakeholders and intermediaries was frustrated initially by the loss of the local delivery partner (SGC) and then by the challenges

posed by Covid-19 pandemic. While local stakeholder input was requested during the project design stage, external consultees did suggest that they would have liked to be more actively engaged in the design of the project. A more collaborative approach at the project design stage would have been helpful in setting in motion external governance structures, and in turn embedding the project in the business support landscape more organically.

7.19 **Recommendation 4:** Some of the project administration challenges GISMO faced were inherent to the project, such as the long periods of sickness absence by the Project Administrator (a post that was not filled once vacant) and the fact that the original delivery model became unfeasible, in turn impacting other project processes. Nevertheless, GISMO's experience provided some valuable lessons that can be more widely applied. A consultee suggested that having a pool of administrative support project's can draw upon would ensure more effective project administration practices. This would also create a clearer demarcation of roles, allowing delivery staff to concentrate on supporting beneficiaries with their needs.

7.20 **Recommendation 5:** Beneficiary suggestions for improvement included having a more structured approach to delivering support, including setting out key milestones and the timeframes within these will be achieved, and having a more well-defined conclusion to project, as part of which recommendations and next steps would be considered. Better integration of aftercare into the delivery model would also be useful in term of creating avenues of long term collaboration with the University, as per GISMO's original objectives.

Appendix A - Consultees

A.1 Consultations were carried out between August and September 2022 and January 20223 with delivery and management staff and those involved at a strategic level with GISMO. Beneficiary consultation took place over February and March 2023. A mixture of telephone calls and Microsoft Teams video calls were used.

A.2 The consultations were carried out in the format of semi-structured interviews, with aide memoires used to help guide the questioning. The following project stakeholders were consulted as part of the evaluation:

Table A.1 Consultees

Name	Company/Organisation	Job Title/Role on Project
Armin Kanani	Lancaster University	GISMO Innovation Role
Martin Gilmore	Lancaster University	Head of Partnerships and Engagement - Physical Sciences
James Stancombe	Lancaster University	GISMO Project Manager
Andy Devaney	Cheshire and Warrington LEP	Director of Business Innovation
Paul Chapman	Cheshire and Warrington Growth Hub	Strategic Account Manager
Mark Shepherd	Jurni	Business Support Beneficiary
Scott Storey	Cleanzyme	Business Support Beneficiary
Kat Lennox	Rawwater Applied Technology Ltd	Business Support Beneficiary
Anthony Lowe	Specialist Technical Products Ltd	Business Support Beneficiary
Alan Crawford	Environelle	Business Support Beneficiary

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