

## DPS FRAMEWORK SCHEDULE 4: LETTER OF APPOINTMENT AND CONTRACT TERMS

### Part 1: Letter of Appointment

Dear Sirs

#### Letter of Appointment

This letter of Appointment dated Thursday, 30<sup>th</sup> January 2020 is issued in accordance with the provisions of the DPS Agreement (RM6018) between CCS and the Supplier.

Capitalised terms and expressions used in this letter have the same meanings as in the Contract Terms unless the context otherwise requires.

|               |   |
|---------------|---|
| Order Number: | CR19088   |
| From:         | The Department for Business, Energy and Industrial Strategy (BEIS) 1 Victoria Street, London SW1H 0ET ("Customer"), |
| To:           | SQW Limited, Oxford Centre for Innovation, New Road, Oxford OX1 1BY ("Supplier")                                    |

|                 |   |
|-----------------|---|
| Effective Date: | Monday, 3rd February 2020   |
| Expiry Date:    | Friday, 30 <sup>th</sup> June 2020<br><br>Minimum written notice to Supplier in respect of extension: 30 days |

|                    |  |
|--------------------|--|
| Services required: | Set out in Section 2, Part B (Specification) of the DPS Agreement and refined by:<br><br>the Customer's Project Specification attached at Annex A and the Supplier's Proposal attached at Annex B; and |
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|                  |  |
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| Key Individuals: |  |
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|  |            |
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|  | [REDACTED] |
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|---|--|
| Contract Charges (including any applicable discount(s), but excluding VAT): | £102,420.18 excluding VAT  |
| Insurance Requirements  | <p>Additional public liability insurance to cover all risks in the performance of the Contract, with a minimum limit of £5 million for each individual claim</p> <p>Additional employers' liability insurance with a minimum limit of £5 million indemnity</p> <p>Additional professional indemnity insurance adequate to cover all risks in the performance of the Contract with a minimum limit of indemnity of £2 million for each individual claim.</p> <p>Product liability insurance cover all risks in the provision of Deliverables under the Contract, with a minimum limit of £5 million for each individual claim</p> |
| Liability Requirements  | <p><b>Suppliers limitation of Liability</b> (Clause <b>Error! Reference source not found.</b> of the Contract Terms);</p> <p>Clause 18.2 of the Contract Terms</p> <p>"The Supplier's liability to the Authority during the Term shall not exceed an amount equal to GBP 1,000,000 (one million pounds sterling), save in the event of the Supplier's fraud, negligence or wilful misconduct, or any other default for which liability cannot be capped as a matter of law."</p>   |
| Customer billing address for invoicing:                                     | All invoices should be sent to finance@services.ukpbs.co.uk or Billingham (UKPBS, Queensway House, West Precinct, Billingham, TS23 2NF).   |

**FORMATION OF CONTRACT**

**BY SIGNING AND RETURNING THIS LETTER OF APPOINTMENT (which may be done by electronic means) the Supplier agrees to enter a Contract with the Customer to provide the Services in accordance with the terms of this letter and the Contract Terms.**

The Parties hereby acknowledge and agree that they have read this letter and the Contract Terms.

The Parties hereby acknowledge and agree that this Contract shall be formed when the Customer acknowledges (which may be done by electronic means) the receipt of the signed copy of this letter from the Supplier within two (2) Working Days from such receipt

**For and on behalf of the Supplier:**

Name and Title:

[Redacted]

Signature:

[Redacted]

Date: 03/02/20

**For and on behalf of the Customer:**

Name and Title:

[Redacted]

Signature:

[Redacted]

Date: 05/02/2020

## ANNEX A

### Customer Project Specification

To be determined by the Customer at Call for Competition stage

#### 1. Background

Sharing in Growth is a government and industry backed business support programme established in 2013 and designed to improve competitiveness, raise workforce capability and increase the productivity of UK aerospace suppliers.

Initially launched with £50 million government backing through a competitively won Regional Growth Funding (RGF) bid in 2013, it was further bolstered by another £30million in 2015. With industry contributions (time in kind) backing, the total programme now equates to £250 million.

Since its launch, the scheme has provided funded training, development and business transformation support to companies with turnovers in the range of £5-£100m within the UK Aerospace sector. To date, 63 companies within this segment (distinctively characterised by a lack of competitiveness) have benefitted from the programme.

The scheme was originally set up as part of the Regional Growth Fund (RGF) to support the creation of jobs in geographic areas with high unemployment levels after the financial crisis. Helping to secure high value jobs in economically deprived areas is still seen as a relevant objective for Sharing in Growth. However, the programme also aims to address issues, which might be currently preventing UK aerospace companies from investing in innovation, causing them to be uncompetitive compared to their European and rest of the world counterparts.

#### 2. Aims and Objectives of the Project

The programme has to date received £80m in public funding (through the Regional Growth Fund) and leveraged £170m in industry in kind contributions. BEIS is committed to undertaking a robust evaluation of the impacts of Sharing in Growth, which will inform policy decisions on whether government should continue to support the programme.

The aim of this evaluation is to assess the extent to which the programme has achieved the desired impacts to date, taking into consideration its original aims and objectives. It will also look in more detail at the current market failures that SiG aims to address and how successful the programme has been in doing so to date.

Research questions to be considered include:

- To what extent, if at all, has participation in the SiG programme led to improvements in operational competitiveness, leadership behaviours and business strategy for beneficiary businesses?
- To what extent, if at all, has participation in the SiG programme led to an improvement in performance of the wider UK aerospace supply chain?
- To what extent, if at all, has the programme achieved its initial aim of levelling regional unemployment levels?
- What type of market failures, if any, is the programme addressing?
- How many additional jobs have been created/safeguarded as a direct result of the programme?

- To what extent, if at all, has participation in the programme affected the value of contracts won?
- How, if at all, has participation in the programme affected the skill level of staff both in beneficiary companies and in the wider sector?
- How, if at all, has SiG contributed to promoting innovation in the wider sector?
- What unintended consequences, if any, has the programme generated for companies or/and the wider sector?
- What long-term impacts, if any, could be achieved by the programme and how can they best be measured?
- How, if at all, do SiG participants interact with other sector specific interventions, particularly with the Aerospace Technology Institute?

BEIS recognises that some of the longer-term impacts of this Supplier Development Programme may not be realised within the lifetime of this evaluation. Therefore, the proposal should clearly set out:

- The base line for impact assessment
- The intermediate and final impacts which can be measured within the lifetime of the study and the proposed approach for measuring them.
- The impacts which may be realised beyond the lifetime of the study and the proposed approach for measuring them.

In addition, the study should include some consideration of how this programme complements and interacts with other sector specific interventions such as the Aerospace Technology Institute (ATI) and the National Manufacturing Competitiveness Levels programme (NMCL) in particular.

### 3. Suggested Methodology

A Theory of Change and Logic Model for the project are available, so a theory-based approach to evaluation is anticipated. The research methodology is expected to involve mixed methods and a theory of change approach, using a range of primary and secondary data.

#### **Primary data collection**

This should constitute a large part of the research project. We are particularly keen for this evaluation to employ the following research methods:

- **Semi-structured telephone interviews with beneficiaries** (target population: all 63 participants): these will help to assess the nature and scale of outputs achieved to date, the wider indirect outcomes and spill-overs - including economic, social, knowledge transfer/upskilling - and the nature and scale of future expected potential outcomes.
- **Semi-structured telephone interviews with unsuccessful applicants** (target population: all 20 unsuccessful applicants): these will help to inform the assessment of the counterfactual and are likely to offer a much better response rate, having the potential to collect much richer data compared to an e-survey.
- **Case studies** (6) covering a range of different beneficiaries: these will rigorously test the findings of the interviews above and explore in more detail the nature of outcomes achieved so far (particularly those which are 'hard to assess', such as spill-overs), the routes to impact and key mechanisms involved (in order to test the theory of change established at the outset), attribution and the factors which have contributed to the outcomes (including

sequencing, combinations and interactions between factors). This will also include gathering evidence on why projects were successful (or not).

### **Secondary data analysis**

This phase of the work should mainly consist of the following:

- Reviewing the available information and primary data against the existing theory of change / logic model.
- Reviewing of existing work available on outputs/outcomes achieved, including all project completion forms available to understand the nature and scale of outputs/outcomes recorded to date and data on turnover/employment at the time of project completion.
- Analysing the programme monitoring data
- Analysing official ONS data on the aerospace sector, its trends and changes over time and -where possible - a comparison with other EU countries (e.g. France and Germany).
- Reviewing and refining of the existing Theory of Change and Logic model on the basis of the findings.

It is recognised that the SiG has a relatively small population size, and may provide particular challenges in terms of econometric research and in terms of establishing a robust control/comparison group—whether this be, for example, via high-quality applicants who were not successful in obtaining funding (our preferred option), or via non-applicants who have similar business characteristics to applicants. Establishing a robust counterfactual is important if the evaluation is to credibly assess the extent to which the programme has effectively contributed to the realisation of impacts that would have not been realised without the intervention.

In case an alternative methodological approach is suggested, bidders should also justify why they have suggested it. Proposals should clearly set out potential issues with any proposed methodology and how the bidder will ensure the validity of the research and its conclusions. All proposals should follow best practice in designing evaluations as set out in HM Treasury's Magenta Book.

### **Data**

Sharing in Growth hold contact data for all applicants who have:

- Registered an interest in the programme but have not applied for support
- Submitted an application for funding (both unsuccessful and successful applicants).

The successful bidder will have access to:

- Information contained within the submitted applications
- Monitoring information and metrics
- The Close-Out Reports of completed programmes?

This data will be made available to the successful bidder under a data sharing agreement with BEIS and Sharing in Growth at the initiation of the project.

The future use of this data will be restricted to research and evaluation, and such assurances will be given to businesses responding. Where data does need to be anonymised the contractor will be expected to conduct the anonymization and provide the dataset alongside the other deliverables.

### **4. Deliverables**

The winning bidder is expected to provide the Steering Group with regular updates on emerging findings and project progress.

In addition, proposals should set out how they will deliver:

- An interim report setting out early results and emerging themes (by end of March 2020).
- A final report for the full impact evaluation, including an executive summary (by end of June 2020). The report should be concise and clear, and understandable by non-technical readers. Case studies undertaken should be written up in full and proposals should set out the format and expected length of these case studies.
- A PowerPoint summary of key findings.

#### **Peer review**

The final report will be subject to a peer review system, which applies to all BEIS publications that make claims about the impact or value-for-money of any policy or programme. This review will be undertaken by an external expert peer review group and managed by BEIS. The final report will then be published with a summary sheet, which summarises the key findings, methodology, and the peer reviewers' comments. The successful contractor will be expected to consider the peer reviewers' comments and allow enough time and resource to address them, before producing a final draft of the report. In cases where the contractor disagrees with the expert peer review group's recommendations, they will be given an opportunity to respond formally. The expert peer review group will then have a final opportunity to reply to the contractor's formal response. Both sets of responses will be published with the summary sheet and evaluation.

#### **Publication**

The final report must be formatted according to BEIS publication guidelines and adhere to BEIS accessibility requirements for all publications on GOV.UK. The publication template will be provided by the project manager.

## ANNEX B

### Supplier Proposal

To be determined at Call for Competition stage

*Impact Evaluation of Sharing in Growth A Proposal to the Department for Business, Energy and Industrial Strategy*

## PROJ1.1: Approach

Key objectives and challenges

1.1 The overall objective of this *impact evaluation of the Sharing in Growth (SiG)* programme is to assess the extent to which it has achieved its intended impacts for the UK's aerospace suppliers. This assessment will need to take into account the programme's key aims, to: improve competitiveness, improve workforce skills/capabilities, increase productivity, secure high value jobs in economically deprived areas, and address barriers to investment in innovation. These aims reflect the programme's funding from the Regional Growth Fund (RGF) which was set up to support jobs in high unemployment areas of the UK after the financial crisis of 2007/8. It also reflects the need for the UK aerospace sector to remain internationally competitive. Given these aims, the programme provides funding for training, development and business transformation support to firms which the ITT refers to as "*distinctively characterised by a lack of competitiveness*". From our ongoing evaluation of the Aerospace Research Technology (ART) programme and other evaluation work of business support interventions for the aerospace, manufacturing, engineering and technology sectors, we know the challenges in evaluating aerospace schemes. We highlight the following challenges that we consider to be relevant to this evaluation:

1.2 First, the SiG programme supports training and development at different levels within supplier firms, drawing on the SiG team of business coaches and 15 external 'delivery experts' (e.g. Rolls Royce, HVM Catapult, Institute for Manufacturing). This covers a range of relevant disciplines e.g. lean operations, manufacturing processes and leadership. This is across different firm sizes and stages of development – targeting those with turnover of £5m-£100m. This is a wide range, encompassing firms such as South West Metal Finishing and Ferranti Technologies. In addition, several supply chain firms operate across multiple sectors, e.g. selling components and services to aerospace, automotive, marine, rail, nuclear, defence. All these factors (i.e. firm characteristics and delivery aspects) mean that the evaluation will need to consider the nature, routes and timescales to outcomes and impacts of the programme

1.3 Second, there may be tensions between programme aims, which will affect how performance is assessed. For example, job creation in economically deprived areas does not necessarily mean firms are more productive; or that investment in innovation results in new jobs (e.g. the adoption of lean processes may replace workers). Put another way, there may be a lack of alignment between programme aims and benefits realised. The evaluation will need to identify any tensions as well as prioritise the outcomes and impacts. In any case, it will be essential to determine the spatial distribution of outcomes and impacts taking into consideration any issues of displacement.

1.4 The third set of challenges are around attribution and additionality. The small population of business beneficiaries (65) means that a comparison group is unlikely to yield statistically robust evidence on the programme. In addition, there will be issues around attribution given firms will have accessed other business support from external and internal sources. The extent to which the SiG programme has led directly to the desired benefits is likely to vary considerably and be difficult to trace conclusively. Testing the contribution or attribution of the SiG programme relative to other factors – and how this may vary across different firms

and their locations – will be important. Given the population size and issues of attribution, a mixed methods approach to evaluating the programme will be most suitable.

1.5 The overall evaluation objective is underpinned by 11 key research questions as identified in the ITT. These seek to determine the extent to which the programme has achieved the key intended benefits for participating firms and the influence it has had on the wider aerospace sector. Importantly, the focus is on developing staff skills, firm practices, and innovations. Table 1-1 below outlines our proposed approach against each of these questions.

Table 1-1 Research questions and our proposed approach

| #  | Research question   | Our proposed approach   |
|----|---|---|
| 1. | What type of market failures, if any, is the programme addressing?  | We will review and test the programme logic model and theory of change including the key drivers and external factors influencing the logic model to establish the specific market failures and barriers the programme is designed to address. To inform this review, we will undertake scoping discussions with those involved in programme delivery. We expect that the market failures and barriers will relate to: capability/capacity of firms; information and coordination of training and development support; technical risk; positive externalities i.e. spillovers. As indicated above, there are also strategic reasons for supporting the programme: international competitiveness and creating/safeguarding employment in the UK. We will test the programme's market failures and barriers through interviews with businesses and stakeholders, including probing on how these issues may have changed over time. Specifically, we will ask businesses what training and development issues/barriers they experienced and why the SiG programme was appropriate in addressing these. Similarly with stakeholders, we will seek to obtain their understanding of the rationale for the programme. |
| 2. | To what extent, if at all, has participation in the SiG programme led to improvements in operational competitiveness, leadership behaviours and business strategy for beneficiary businesses? | Given the support is in the form of on-site coaching, training and mentoring tailored to the individual needs of firms (through an agreed training plan), and lasts for up to four years, we expect these outcomes to be evident. We will review the programme monitoring data and documentation and extract any relevant evidence on these three outcomes. We will ask businesses to provide evidence of these outcomes. For example, businesses may now regularly review and update their business strategies/plans. Similarly, new leadership practices learned through SiG may have involved better understanding of how to establish more diverse boards, better communication between directors and other staff, etc. We will seek to gather evidence on the extent and nature of these outcomes. We will also draw on the case studies to highlight how these outcomes came about and what impacts (e.g. jobs) these ultimately led to. We will interview stakeholders to obtain their perceptions on the degree to which the three outcomes specified in the research question have occurred and any evidence they can provide to support their responses.  |
| 3. | To what extent, if at all, has participation in the SiG programme led to an improvement in performance of the wider UK aerospace supply chain?  | We will undertake analysis of aerospace sector data, identifying trends and developments over time in the performance of the UK supply chain. We will also identify other key initiatives complementary to the SiG programme e.g. Supply Chains for the 21st Century, the National Aerospace Technology Exploitation Programme (NATEP) and ART through our scoping discussions and desk review. Informed by the sector analysis, we will undertake stakeholder interviews with external organisations/experts and internal delivery staff to obtain views on the performance with and without the SiG programme. The business beneficiary interviews will probe for any perceived third-party effects, i.e. spillovers. Our evaluation experience and the wider innovation literatures indicates these are difficult to measure and track conclusively. Notwithstanding this, we will seek to identify the types of spillovers by drawing on classification/typology we have used on previous evaluations (e.g. ART, Smart, Catapults) -knowledge, market and network related. For example, knowledge   |

| #  | Research question  | Our proposed approach   |
|----|--|---|
|    |  | spillovers for other businesses, for example in relation to adoption of technologies such as robotics. We will also explore the conditions to support spillovers as a result of the programme.  |
| 4. | To what extent, if at all, has the programme achieved its initial aim of levelling regional unemployment levels? | The assessment of this will be informed by our proposed econometric analysis of business beneficiaries and comparison group of firms that applied but were not successful. It will also draw on our stakeholder interviews (local and national) to understand the level and nature of the regional employment generated as a result of the programme. Also, some companies may not be able to say how many supply jobs are associated with the programme as they implement several aerospace (and other) projects which make it more difficult to track jobs. Gathering data on jobs directly from suppliers requires survey work (see below).  |
| 5. | How many additional jobs have been created/safeguarded as a direct result of the programme?                      | Related to the above, we will design a business survey questionnaire for our interviews with beneficiaries – asking and assessing jobs data from businesses attributable to the SiG programme. We will calculate gross to net estimates by making necessary adjustments for additional factors such as displacement and leakage of jobs created/safeguarded. The data for this will be drawn from the survey responses and any other secondary sources (e.g. BEIS and Innovate UK guidance). The jobs estimates will be for the time period of evaluation (i.e. since 2013) and also cover future impacts (e.g. in 3-years' time). The critical aspect to assess will be what would have happened without the programme.<br><br>In addition to the survey of beneficiaries, we will analyse data from a comparison group drawn from the unsuccessful applicants (preferred option of BEIS, as indicated in the ITT). We will undertake econometric analysis to assess the jobs impacts including development of an Excel-based model (see later in section) This will also draw on our review of monitoring data. In parallel, we will gather views from stakeholders to help contextualise the findings on jobs. The case studies will illustrate how these jobs came about. |
| 6. | To what extent, if at all, has participation in the programme affected the value of contracts won?               | The training and development is expected to contribute to improved R&D and innovations of technologies for commercialisation. Given this, any contracts won as a result of the programme should (or expected to) be translated into turnover. The survey of business beneficiaries will seek quantitative data on the values and types of contracts won. We will compare these with the progress made by unsuccessful applicants. We will also review the monitoring data on contracts/turnover data to check the feedback from businesses.   |

7. How, if at all, has participation in the programme affected the skill level of staff both in beneficiary companies and in the wider sector?

Assessing the development of a highly skilled workforce in the UK within the business beneficiaries will need to involve measurement across participating firms and against the wider aerospace sector. We will discuss with the client how best to approach this, but at this stage propose to collect data on skills through a survey of supply chain companies. This will involve qualifications grouped into levels, from NVQ Level 1 to NVQ Level 5 (following the same NVQ level descriptions developed by BEIS for ATI). Availability of data depends on whether and how internal company HR departments record staff qualification levels / profile. This is likely to vary by company. We will also check the quality and coverage of the programme monitoring data relating to

**# Research question Our proposed approach**

skills development. We will identify and use the most appropriate sector sources to undertake the comparative assessment of the wider sector (e.g. ATI, Semta).

8. How, if at all, has SiG contributed to promoting innovation in the wider sector?

We will ask businesses and stakeholders about how SiG has contributed to promoting innovation in the wider aerospace sectors. We will consider framing this in terms of promotion relating to SiG's three 'business growth pillars' – 'investment', 'technologies' and 'people capabilities' (or the promotion of so-called 'soft skills'). Drawing on the responses from businesses and stakeholders, we will assess how the programme contributed to the promotion of innovation in the wider sector, including the methods used to do this (e.g. directing coaching, marketing, events). In doing so, we will need to consider the collaborative nature of aerospace firms undertaking R&D and innovation projects (e.g. SME suppliers working with tier 1 firms and the research base), and other programmes and trade organisations which promote innovation in the sector (as part of their objective and/or indirectly).

9. What unintended consequences, if any, has the programme generated for companies or/and the wider sector?

We will explore any unintended effects of the programme (positive or negative) by interviewing businesses and stakeholders. For instance, the unintended effects may have occurred as a result of the variation in delivery from the SiG programme's coaches and the 15 external delivery experts/organisations. A positive unintended consequence could be the learning for wider sector, and a negative could be loss of jobs as a result of manufacturing process adopted by a supplier firm.

- |  |  |
|--|--|
| <p>10. What long-term impacts, if any, could be achieved by the programme and how can they best be measured?</p>             | <p>We will review the programme's logic model and theory of change to identify the long-term impacts and test these with businesses and stakeholders). These are likely to include the impacts identified above mainly relating to improved: employment, turnover, skills, productivity; competitiveness of the UK supply chain. There may also be wider reputational benefits and development of the wider aerospace ecosystem (as indicated above). For example, in 2018 Sharing in Growth won the national Semta Innovation Award for improving the capability and productivity of over 10,000 people working in the UK aerospace supply chain.</p>   |
| <p>11. How, if at all, do SiG participants interact with other sector specific interventions, particularly with the ATI?</p> | <p>We will undertake external interviews with key stakeholders in the aerospace and related sectors. These discussions will explore, amongst other topics, how SiG businesses interact with other relevant interventions. The business interviews will also seek to identify other factors (including other programmes) the businesses have engaged with. These will also be explored in the case studies of businesses. Through our recent work on the ART evaluation for BEIS (and other relevant projects), we have engaged with a wide range of stakeholders from industry and the research base. We have worked with ATI as part of the ART study and are familiar with the strategic role they play and the activities they undertake in the aerospace sector.</p> |

*Source: SQW; ITT; Note: some research questions have been re-ordered from the list in the ITT.*

Overview of proposed approach and methods

- 1.6 Our approach will involve a theory-based assessment to test the extent to which outcomes and impacts have occurred as a result of the SiG programme - in line with the programme's logic model and theory of change. Specifically, the assessment will involve using contribution analysis to test the evidence on outcomes and impacts, whilst considering other factors which may have contributed to these benefits. Our approach will, therefore, draw on both qualitative and quantitative data. The main methods include: collation and analysis of programme monitoring data; aerospace sector analysis; telephone interviews with business beneficiaries, unsuccessful applicants and stakeholders; case study work; and testing the findings against the programme logic and theory.
- 1.7 Contribution analysis will be the overarching framework for the evaluation, with the various sources of evidence used to establish the extent to which the SiG programme has contributed to project activity, outputs, outcomes and impacts, while also considering the role of other factors (internal and external to the firms). This is particularly relevant in isolating the impact of SiG. We have used contribution analysis in our evaluation work (e.g. ART, Catapults, Innovation Loans).

***Approach to baseline for impact assessment***

- 1.8 We propose the development of a baseline for the impact assessment is undertaken in two main ways: collation and analysis of the programme monitoring data and project completion forms which according to the ITT contain data on outputs/outcomes recorded to date and data on turnover and employment at the time of project completion. This should provide a picture on key metrics of interest at the time of entry into the programme and on completion. In addition, we will collect baseline data retrospectively through the business interviews (e.g. estimates of employment and turnover when firms started on the programme). This may help to validate and address any gaps in the monitoring data.

***Measurement of intermediate and final impacts***

- 1.9 As requested in the ITT, summarised in the table below are the key intermediate and final outcomes and impacts which can be measured within the lifetime of the study. The main outcomes and impacts will relate to those identified in Table 1-1 above.

**Table 1-2 Measurement of intermediate and final impacts**

| <b>Timing</b>  | <b>Outcome/impact</b>  | <b>Measurement</b>                                  |
|--|--|---|
| Intermediate outcomes which can be measured within the lifetime of the study | Skills development of staff in UK: number of staff qualified / upskilled to each NVQ level (1-5)<br>Salary of staff i.e. the difference (wage premium) between average salary of total staff participating in the SiG programme and the average manufacturing wage<br>Value of contracts won<br>Adoption of management and leadership practices in firms<br>New innovations (products and services); R&D expenditure | Monitoring data<br>Survey of business beneficiaries |

|   |  |   |
|---|--|---|
| Final impacts which can be measured within the lifetime of the study. | Jobs created/safeguarded<br>Turnover<br>Gross Value Added (GVA)                                | Monitoring data, survey of business beneficiaries and unsuccessful applicants, econometric analysis |
| Impacts which may be realised beyond the lifetime of the study.       | Same for the final impacts as above but the key difference is that they are <i>sustained</i> . |   |

## Work plan

*Impact Evaluation of Sharing in Growth A Proposal to the Department for Business, Energy and*

### *Industrial Strategy*

- 1.10 Responding to the objectives and challenges, and consistent with the overall approach set out above, we propose a work plan across three phases of activity:

#### ***Phase 1 – Set-up, scoping and secondary data analysis***

- 1.11 We will commence the study with a set-up phase involving seven tasks which will be important to address and prioritise the evaluation questions, identify the specific evidence to be collected and analysed, and inform the approach to the impact assessment with the client group.

- **Task 1: Inception meeting**
- **Task 2: Scoping interviews (x5, telephone)**
- **Task 3: Programme monitoring data and document review**
- **Task 4: Aerospace sector data analysis (incl. comparison with other countries)**
- **Task 5: Review and refine logic model and theory of change**
- **Task 6: Design research tools for primary research (questionnaire, topic guides)**
- **Task 7: Develop model for impact assessment.**

- 1.12 Following the inception meeting with the client, we will undertake scoping interviews, collate and review programme monitoring data and documents. This includes data collected through economic monitoring forms (designed by BEIS) covering R&D expenditure and jobs, skills, sub-contracting, technical progress and collaboration patterns. In addition, we will undertake aerospace sector data analysis (incl. comparison with other EU countries). At this stage, we propose this covers 3-4 countries (e.g. Germany, France, Spain) but will discuss this with the client at inception stage. We are currently working with ATI on some international comparators for another piece of work. Informed by the review of key documents, scoping discussions and ongoing analysis of monitoring data, we will review and refine the logic model and theory of change for the SiG programme. This will form the basis for assessing the programme, and so will set out clear assumptions and hypotheses to be tested (and how) and will prioritise the outcomes and impacts for evaluation. We will design draft research tools: questionnaire for the business beneficiary interviews and a shorter version for the unsuccessful applicants. These will be finalised following review from the client. The research tools will be developed to reflect the methodology and ensure the steps in the logic model and theory of change is tested. Finally, we will develop an Excel-based model for the impact assessment of the programme. This will be populated with data collected through the primary research and secondary data, making key assumptions and sources transparent.

#### ***Phase 2 – Interviews with businesses and stakeholders, and case studies***

- 1.13 In Phase 2, we propose to undertake seven tasks relating to gathering evidence from businesses and stakeholders, and report to the client on early findings.

- **Task 8: Survey of business beneficiaries (x65, telephone)**
- **Task 9: Unsuccessful applicant interviews (x20, telephone)**
- **Task 10: Stakeholder interviews (x10, telephone)**
- **Task 11: Analysis of survey/ interview findings**
- **Task 12: Draft interim report with early findings/ emerging themes (PPT format)**
- **Task 13: Client meeting on early findings**
- **Task 14: Case studies and write-up (x8, face-to-face/telephone).**

- 1.14 We propose to target and complete interviews with all 65 business beneficiaries by telephone (each interview lasting c. 25 minutes). All the interviews will be undertaken by SQW consultants (who are specialist industrial policy evaluators) rather than a market research firm. We will initially contact 3-5 businesses as a small-scale pilot. The pilot will highlight any issues with the survey questionnaire before full roll-out. In addition, we will undertake 20 interviews with unsuccessful business applicants (each interview lasting c. 15 minutes). This will be the comparison group for the econometric analysis (see below). The responses from the interviews will be used to inform the impact and wider assessment of the programme.
- 1.15 Supplementing the survey, we will undertake follow-up interviews with eight firms to highlight different aspects of the programme. These will be undertaken face-to-face (and telephone where appropriate) through on-site visits to each company. These interviews will explore how the programme has brought about outcomes and impacts for companies (and wider development of the aerospace market). These interviews will be used to written-up as eight case studies. We anticipate recruiting the case study companies from the interviews with respondents. We propose the case studies are 2-pages in length each and follow the logic model structure highlighting different aspects of support. We will discuss and agree with the client on the final selection and format of cases.
- 1.16 We will undertake 10 stakeholder interviews by telephone – external and internal stakeholders, including those involved in SiG programme delivery. We will compile a draft list of stakeholders informed by the client group, and expect this to include representatives from BEIS, ATI, Innovate UK, the AGP, ADS Group, NATEP and HVM Catapult. The aim of the interviews will be to obtain an overall perspective on the benefits of the SiG programme, including within the wider sector and related sectors, covering the research questions identified in Table 1-1.
- 1.17 We will analyse all the responses from the interviews of businesses and stakeholders. We will adopt a structured approach to the qualitative data analysis, using the specialist software package MaxQDA. This allows text to be systematically tagged with agreed codes in order to identify common themes and reveal any emerging relationships in the data. Our 'coding framework' will be based on topics of interest.
- 1.18 We will produce draft interim report with early findings/ emerging themes (in PPT format) and discuss these findings at a meeting with the client.

***Phase 3 – Analysis and triangulation of evidence and reporting.***

- 1.19 The analysis and triangulation of the evidence will comprise of the following key tasks:
- **Task 15: Econometric analysis for impact assessment**
  - **Task 16: Analysis & triangulation of research findings**
  - **Task 17: Draft final report**
  - **Task 18: Final client meeting**
  - **Task 19: Finalise report and response to peer review.**
- 1.20 Phase 3 will include econometric analysis of the programme's impact (using specialist software packages Stata and R). At this stage we will establish a comparison group of unsupported companies and compare their performance to the performance of the 65 supported companies. Since the SiG has information on unsuccessful applicants, at present our view is that a **regression**

**discontinuity design (RDD)**, which compares supported companies to unsuccessful applicants, will provide the most robust counterfactual. Essentially, a RDD approach recognises that companies which enter the programme may, in most other respects, be similar to those which are judged ineligible (though they may be close to the threshold for inclusion). A comparison of outcomes for these two groups, after controlling for baseline differences, gives an estimate of impact of the intervention.

- 1.21 The small sample size (65 beneficiaries and 20 unsuccessful applicants) might lead to a large uncertainty around the estimate of the impact of the intervention. If this turns out to be the case, we will consider alternative statistical approaches, for example, the use of propensity score matching (PSM) and the construction of a synthetic comparison group (SC). The main advantage of an RDD over PSM and SC is that it allows to control for certain unobservable characteristics which make companies apply for the programme, for example, management attitudes which play a crucial role in success of a business. Both PSM and SC would allow us to match the supported firms to a control group based only on a set of observable characteristics and therefore may undesirably attribute some of the effects of unobservable characteristics to the intervention.
- 1.22 We recognise that the SiG is a tailored programme – the type and duration of support varies across companies – which, combined with the relatively small sample size, creates challenges for identification of statistically significant effects. There may be very few firms which had exposure to similar treatment and there may be even fewer unsuccessful applicants who would have had exactly the same exposure had their application been successful. To address this issue, we plan to estimate a range of models: some will analyse the impact of participation in the programme on a continuous independent variable (turnover, number of created jobs, etc) and some will work with a categorical variable indicating a positive outcome (for example being in the top 50% by GVA growth in the year after the end of support programme). The latter approach will allow us to group companies who demonstrate noticeable improvements as a result of a range of different support measures.
- 1.23 To set up a well specified model, we will need to get additional insight into the selection mechanism, which we will gain through our proposed scoping interviews. Our current understanding is that selection to the intervention is not a binary decision based on a single criterion, but that firms become eligible for support because of a combination of factors. Therefore, instead of assuming a sharp cut-off between treated and control firms, we will adopt a ‘fuzzy’ RDD approach which models the probability of being selected for the programme as a function of a number of firms’ characteristics. We will confirm the list of characteristics after our preliminary analysis of the data and scoping discussions.
- 1.24 We will need to determine how many of those in the intervention and comparison groups can be included in the impact analysis. Both supported and unsupported companies with particularly high or low values of certain characteristics may need to be excluded. We believe that a large percentage of both the supported companies and unsuccessful applicants can be included. This is based on the assumption that the scoring of applications is based on a balance of factors, so there is likely to be a wide area of overlap between the intervention and comparison groups. We will conduct a **sensitivity analysis** to ascertain the level of inclusion (hence any implications for the estimate of impact).
- 1.25 One of the main challenges will be access to data for unsuccessful applicants. As a minimum, we will need their contact details and their performance data. According to the ITT, this information will be available, however the information we will gain through interviews with 20 unsuccessful companies will help us to analyse the comparison group even if the rest of the data is patchy. All statistically significant results from the econometric analysis will inform the estimates for GVA (see below).
- 1.26 The approach to the impact assessment will depend on the evidence base, including from the econometric analysis and surveys. Options for monetising firm-level benefits will include the

following: (1) employment effect as detected in econometric analysis, converted to GVA by assumption on the wages or GVA/worker e.g. using ONS data based on sector profile; (2) self-reported outcomes on employment – converted to GVA. Benefits will need to be annualised to provide a flow of benefits, through the econometric analysis on how far benefits are sustained. We will make appropriate adjustment for gross to net estimates e.g. displacement, substitution and leakage of benefits. We will run sensitivity analysis based on varying key assumptions where there is most uncertainty.

- 1.27 We will analyse and triangulate all the evaluation evidence from the different research strands. The assessment will be made against the theory-based framework described earlier in this section - testing the underlying logic and theory of change as to whether the SiG programme delivered the intended outcomes and impacts, including the spatial distribution of benefits. Following this, we will produce a draft final report to an agreed structure, addressing the study objectives. We will review and address feedback on the report from the client and the peer review process. We will then finalise the report. Finally, we would expect there to be opportunities for dissemination of the work and results, for example, through conferences and events. Where appropriate, we will be happy to contribute to disseminating the findings to different audiences, such as policy-makers, sector representatives, and the evaluation community. This could include a workshop on the study's findings and the implications for different parts of BEIS, e.g. manufacturing, regions, central analysis/evaluation.

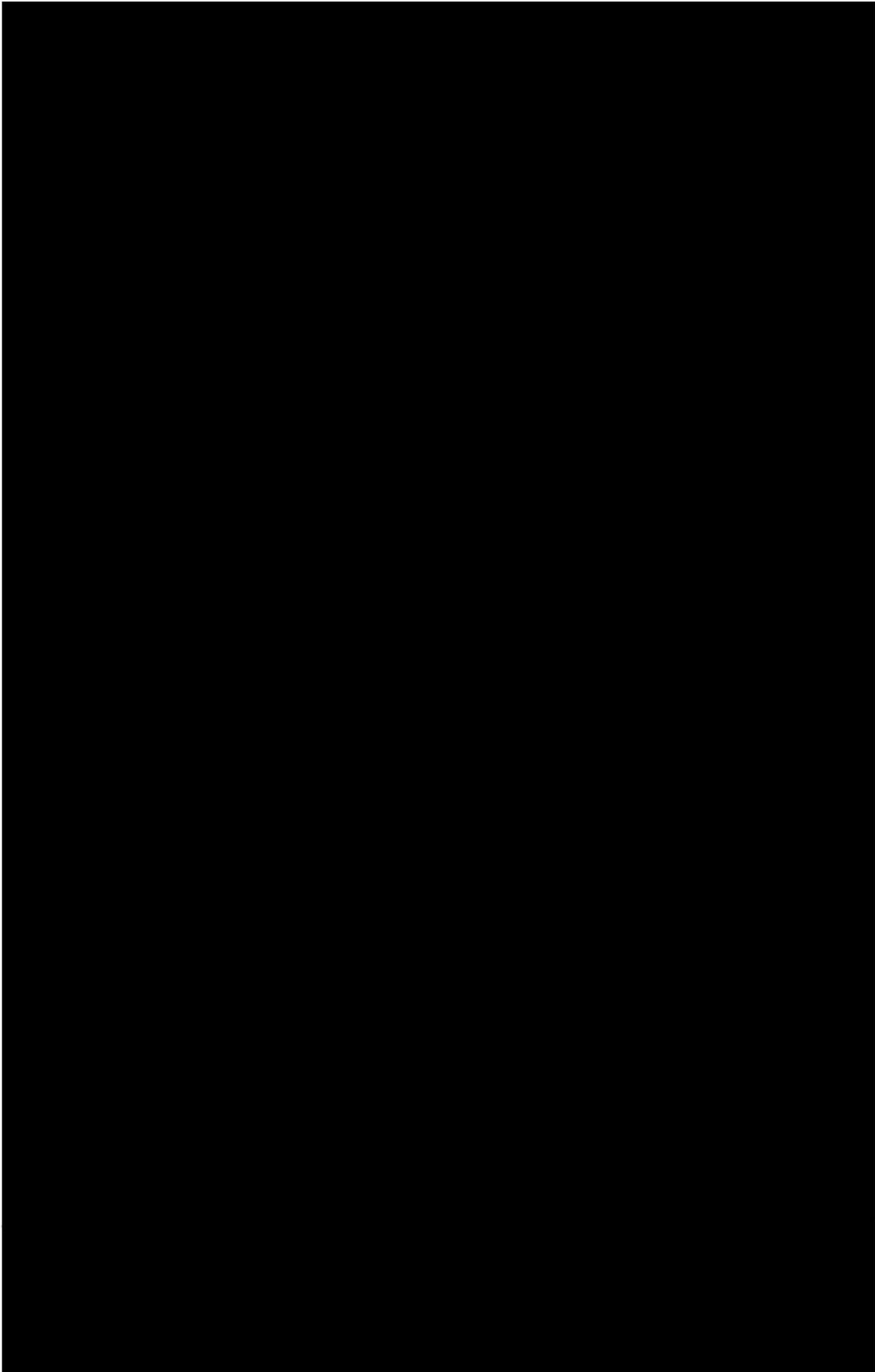
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## PROJ1.3: Understanding the Environment

### The Regional Growth Fund

RGF was created in 2010 against the backdrop of the 2008 financial crisis and the recognition that subsequent reductions in public spending would negatively impact some already relatively deprived areas to a greater extent than areas with a thriving private sector. Intervention was therefore justified on the basis of reducing regional disparities in economic performance, and tackling locally specific market failures which were limiting private sector growth. The RGF programme has two key objectives:

- “To stimulate enterprise by providing support for projects and programmes with significant potential for economic growth and create additional sustainable private sector employment
- To support in particular those areas and communities that are currently dependent on the public sector make the transition to sustainable private sector-led growth and prosperity.”<sup>1</sup>

RGF is formally targeted at the English regions, but organisations based elsewhere in the UK may be eligible for support if they “strongly satisfy other criteria to take part in the programme.”<sup>2</sup> In the case of Sharing in Growth (SIG), these criteria include commitment, demand side factors (including customer endorsement) and capability to deliver globally competitive performance.

There were six rounds of RGF funding, with the final round closing in September 2014. The latest RGF Monitoring Report covers 402 projects from Rounds 1-5 which were allocated a combined total of £2.4bn of support. The report estimates the created and safeguarded employment impacts of Rounds 1-5 as 275,000 jobs as at 31 March 2015.<sup>3</sup>

### Introducing the UK aerospace industry...

RGF was designed to support private sector growth and, in many areas of the UK, the aerospace sector is already a good example of this. Our understanding of the aerospace industry builds on the considerable experience and knowledge gained through our evaluation of the Aerospace Research and Technology

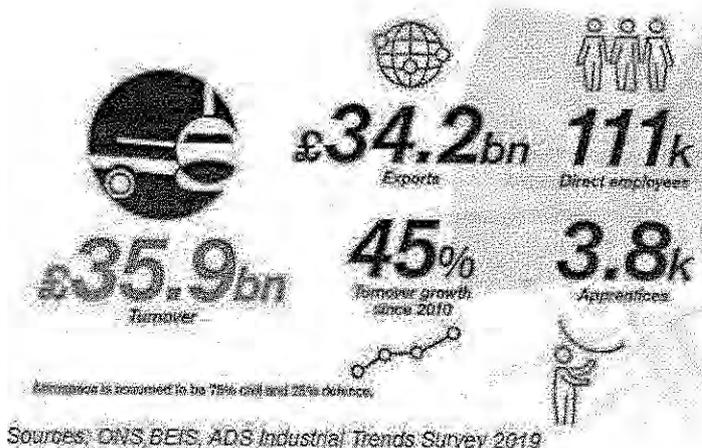
programme for BEIS and the Repayable Launch Investment evaluation scoping study, as well the evaluation of the High Value Manufacturing Catapult and many Science and Innovation Audits.

The aerospace sector is noted for its high productivity performance and economic importance to the UK. However, there are concerns about how well it is captured in official statistics. For example, although BRES data on employment by sector includes an SIC code for “Manufacture of air and spacecraft and related machinery”, this does not necessarily capture supply chain activity. Instead, cluster and sector bodies produce their own estimates. The latest estimations from the ADS Group

– the UK Aerospace, Defence, Sector and Space trade association, displayed in the graphic – show that the aerospace sector generates turnover of £35.9bn, exports of £34.2bn and has 111k direct employees.<sup>4</sup> These jobs are also well paid, with average annual earnings 45% higher than the UK average. The sector can be divided into civil and defence aerospace sub-sectors, although companies often work across both. Key companies include Airbus, BAE Systems, GE Aviation, GKN Aerospace and Rolls Royce – Sharing in Growth (SIG) is endorsed by all of these businesses.

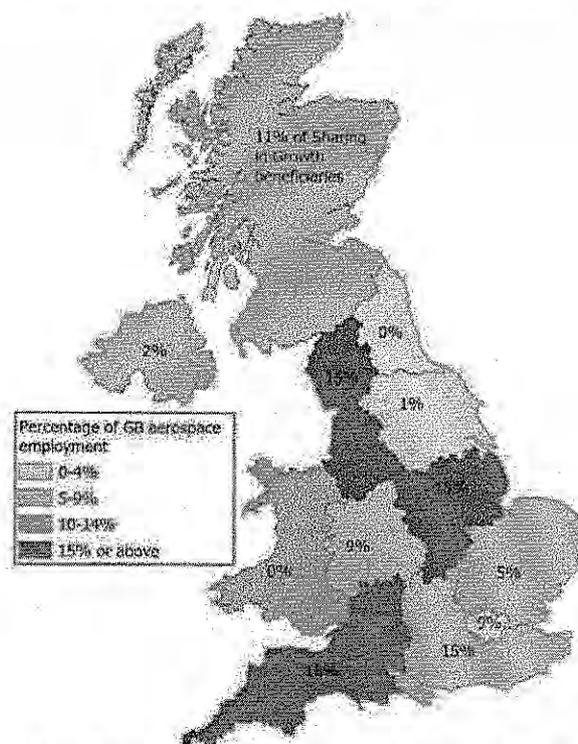
1.15 The aerospace sector is also defined by high levels of innovation and global competition. Countries such as Germany, France and the USA invest heavily to support their respective aerospace sectors in recognition of the economic benefits this brings. Part of the strategic basis for supporting the UK aerospace sector through interventions such as SIG is therefore to maintain a ‘level playing field’ against international competitors.

1.16 Importantly in the context of the RGF support for SIG, the aerospace sector is *not* concentrated in the more economically productive and prosperous areas of London and the South East. The map uses ADS Group data to show how employment in major aerospace firms and their suppliers is distributed across the country, and often occurs in lower productivity areas such as the North West (including BAE Systems, Rolls-Royce and Safran in Lancashire), East Midlands (Rolls-Royce in Derby), West Midlands (Meggitt, Moog and UTC/Collins Aerospace) and South West (Airbus, MBDA and GKN in Bristol, GE Aviation in Cheltenham). Supporting high value aerospace jobs in economically deprived areas meets the objectives of both RGF and SIG. Indeed, and as the labels on the map show (using data from the SIG website<sup>5</sup>), SIG beneficiaries have also been distributed across the UK, with the highest concentrations in the North West, East Midlands and South West.



... and its growth potential

- 1.15 The International Air Transport Association (IATA) estimates that passenger numbers could double to 8.2 billion by 2037, driven in part by the growing middle class in East Asia.<sup>6</sup> This will increase demand for all types of passenger aircraft and the Aerospace Sector Deal notes an estimated global market of £4.65tn over the next 20 years for large passenger aircraft alone.<sup>7</sup>
- 1.16 However, there are challenges to capturing the benefits of this growth potential for the UK economy. One of these is that, as discussed above, aerospace is a globally competitive industry and technology is evolving rapidly. In recognition of this, the UK government provides support to aerospace companies undertaking innovation activities via the Aerospace Technology Institute



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(ATI) programme (formerly known as the Aerospace Research and Technology or ART) and assets such as the Catapult network, particularly the High Value Manufacturing Catapult.

(ATI) programme (formerly known as the Aerospace Research and Technology or ART) and assets such as the Catapult network, particularly the High Value Manufacturing Catapult.

Innovation from Original Equipment Manufacturers (OEMs) must be matched with improvements in supply chain capabilities so that all can share in the growth potential of the sector. However, previous research for BEIS found that *“one of the biggest issues facing OEMs in order to deliver this growth...is the management of their supply chain.”* Specific issues highlighted include *“a shortage of skilled manufacturing and advanced technology skills”* and that *“lower-tier companies may lack the management structure and processes required to achieve growth.”*<sup>8</sup> This meant that whilst OEM revenues were growing the same was not true for supply chain companies, perhaps indicating that supply chain work was not ‘sticking’ in the UK.<sup>9</sup>

### Sharing in Growth (SiG)

In this context, the rationale for SiG is to support supply chain companies to improve their capabilities and transform their competitiveness. SiG was launched in 2013 and is funded through RGF (£80m) and industry contributions (£170m in kind).

SiG offers beneficiaries an intensive, tailored programme of training and development typically focussed on leadership, culture, lean operations, manufacturing capability and sales. After the appraisal of applications, SiG support is divided into three stages. The first is a diagnostic assessment of the beneficiary business (10-12 weeks) to inform the creation of a supplier development charter. This charter identifies the most relevant training and supports the business case for the beneficiary’s participation in SiG. Training – covering leadership, business improvement (at NVQ 2/3 level) and bespoke courses – is delivered in the second stage which lasts two years. Finally, ongoing support is provided over the following two years to ensure that the training is embedded and leads to improvements to the beneficiary company.

The training is provided by SiG’s 100-strong team of business coaches, with additional support available from a network of 15 specialist partners including the High Value Manufacturing Catapult, the National Physical Laboratory and the University of Cambridge’s Institute for Manufacturing. A typical beneficiary firm receives £1.2m worth of training and development over the four year period. There is no monetary cost to beneficiaries for this support, rather they must match the value of support in kind, e.g. through the value of the time of the staff participating in development training.

By October 2017, over 3 million hours of training support had been delivered to 65 beneficiary companies. SiG estimates that its training and development has led to £4.4bn in new contracts awarded and 7,500 jobs secured.

SiG works alongside, and is complementary to, the Supply Chains for the 21st Century (SC21) which was allocated £310m of Government funding in the Aerospace Sector Deal. Like Sharing in Growth, SC21 is endorsed as a continuous improvement programme by the Aerospace Growth Partnership’s Supply Chain Competitiveness Charter. Supply chain companies can also access innovation support for specific R&D projects through the National Aerospace Technology Exploitation Programme (NATEP). SiG is endorsed by the large aerospace corporates including Airbus, BAE Systems, Bombardier, GE, GKN, Leonardo, Lockheed Martin, MBDA, Rolls-Royce, Safran and Thales. BEIS recently awarded (2019) SiG an additional £6 million contract, SiG CEO Andy Page stated:<sup>10</sup> *“Increased government funding means we can maintain our impetus, typically helping companies to address a 20% cost gap and a 50% productivity improvement. Having secured more than £4 billion in contracts two years ahead of schedule, we’re well on target to safeguard 10,000 UK jobs by 2020. SiG is effective because it has the unique scope and scale that is commensurate with the size of the UK’s productivity challenge...”*

## Understanding of the project and requirement

With no Government plans for any further RGF funding to be allocated, and SiG having been running since 2013, an impact evaluation is required to inform decisions about the future of the programme. The recent National Audit Office (NAO) report on BEIS business support decisions and evaluations highlights the importance of having good quality evidence to inform policy decisions.<sup>11</sup> After the recent general election, the 'regional dimension' of SiG could be particularly important in securing any future funding especially if it can be demonstrated that SiG has contributed to reducing unemployment disparities. More broadly, independent evidence on the economic and employment impacts of SiG will be key to informing future decisions. It will be important to explore and evidence any intermediate and final outcomes and impacts generated as a result of SiG, for example improvements in capabilities of suppliers for adopting new manufacturing processes and/or improvements in leadership and management.

Our understanding of the requirement builds on our extensive experience and knowledge in a range of areas relevant to this evaluation will ensure the successful delivery of this project within the working environment. This includes our experience on:

- Innovation, training, skills programmes and policies
- SME competitiveness and productivity (incl. management and leadership practices)
- Supply chains, and R&D and spillover benefits.

Fundamentally, the requirement is to undertake an impact evaluation of the SiG programme addressing key challenges including: developments in the sector and its drivers, the nature of aerospace R&D activity, complexity in activity and routes to outcomes/impacts; the need to engage with a range of stakeholders; jobs and productivity in economically deprived areas; and the relatively small population of beneficiaries.

Robustly capturing evidence of additionality of the programme will be key. For example, JJ Churchill report long-term agreements being signed worth around £70 million to supply precision machined blades to Rolls-Royce.<sup>12</sup> Similarly, Glasgow-based Walker Precision Engineering made improvements to its culture, training, organisation and processes, and have invested more than £7 million in its plant and latest technology, and have secured almost £70 million in contracts and is on track to increase its turnover from £15 million in 2015 to more than £25 million by 2020. The additionality of these reported benefits and where they have occurred will need to be tested in the evaluation, taking into account other factors at play. The latter is important because as highlighted above, SiG forms part of a broader set of activities that support the aerospace sector. The AGP, for example, is involved in other complementary programmes covering grants, collaboration opportunities and mentoring. The Aerospace Sector Deal, investments such as the new Supply Chain Competitiveness Programme, the activities of the Aerospace Research Consortium (ARC) add to the support available. A range of infrastructure also exist including Catapult Centres and knowledge assets such as universities and research organisations. More broadly, the innovation landscape has changed, with the interventions of UK Research and Innovation, and the Industrial Strategy Challenge Fund.

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## PROJ1.4: Project Plan and Timescales

### Project plan and timescales

1.17 As set out in our response to Proj1.1 on the Approach, our work plan is split into three phases:

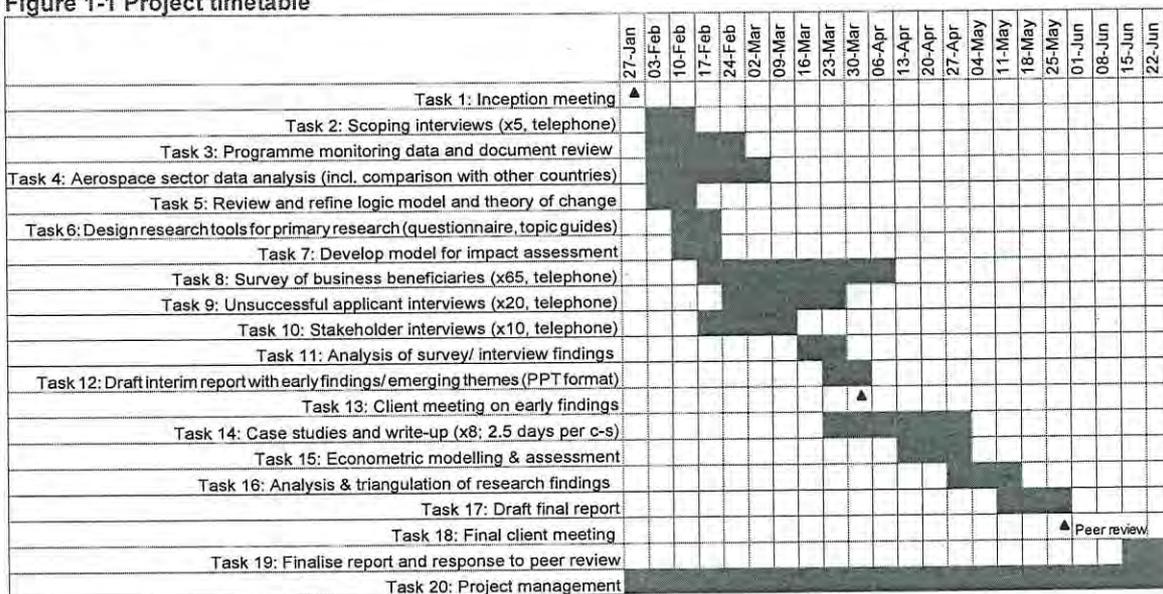
- **Phase 1: Set-up, scoping and secondary data analysis**
- **Phase 2: Interviews with businesses and stakeholders, and case studies**
- **Phase 3: Analysis and triangulation of evidence and reporting.**

1.18 The timetable and milestones are set out on a task-by-task and week-by-week basis in the graphic below. The key milestones are as follows:

- Inception meeting by end of January
- Programme monitoring data and document review by end of February
- Aerospace sector data analysis (incl. comparison with EU countries) by early March
- Review of logic model and theory of change by early February
- Completion of stakeholder interviews by w/c 9<sup>th</sup> March
- Completion of unsuccessful applicant interviews by w/c 23<sup>rd</sup> March
- Completion of business beneficiary interviews by w/c 6<sup>th</sup> April
- Draft interim report with early findings/emerging themes (PPT format) in w/c 30<sup>th</sup> March
- Completion of case studies by w/c 27<sup>th</sup> April
- Econometric modelling and assessment by w/c 27<sup>th</sup> April
- Draft final report by w/c 25<sup>th</sup> May
- Final client meeting to present findings by w/c 25<sup>th</sup> May (incl. PPT of key findings)
- A final report, following final review (including peer review) by w/c 22<sup>nd</sup> June.

1.19 The timetable allows substantial time for the business beneficiary interviews (8 weeks) – from w/c 10<sup>th</sup> February to w/c 6<sup>th</sup> April. We have been realistic and cautious in setting these timings, and this draws on our experience of undertaking similar exercises as part of other evaluation work. The case studies will require 2.5 days of consultant time, and with 8 case studies, the time for set-up and the time for quality assurance, there will be over 20 days required. It is therefore important to allow sufficient time for case study work to be undertaken.

Figure 1-1 Project timetable



## Risk management

- 1.17 The Project Director, [REDACTED] will have overall responsibility for the quality and direction of the study. The Project Manager, [REDACTED] will be responsible for client liaison and for the day-to-day study management. Our approach to project and risk management involves a number of key steps: an inception meeting followed by a note on key actions; regular internal monitoring of progress against milestones by the Project Manager; frequent liaison with the client-side project manager to provide updates on progress, and discuss risks arising and how these will be overcome; and face-to-face project meetings at which we will review remaining risks. SQW has a quality management system, which defines our key quality principles and the way they are applied throughout our business processes. This is underpinned by effective systems and procedures, which are certified as meeting the requirements of ISO 9001:2015.
- 1.18 The table below sets out the key risk areas for the study, their likelihood (L), potential impact (I), and the mitigating actions. The risks will be discussed at inception, with the inception note including a revised risk register. As part of project updates, we will notify you of any risks where actions are required, including new risks.

| Risk   | Effect                  | Mitigating actions   |
|--|-------------------------|--|
| Gaps/quality issues in monitoring data   | L: Low<br>I: Medium     | SQW has experience of working with Innovate UK on monitoring data. We will work with them, and others as appropriate, to address gaps and  |
| Lack of engagement in interviews and case studies by external organisations        | L:<br>Medium<br>I: High | SQW has extensive experience in encouraging organisations to participate, designing research tools appropriately and emphasising the importance of gathering evidence on what works to inform future interventions.                              |
| Organisations reluctant to share feedback (concern given commercial sensitivities) | L: Low<br>I: Medium     | We will design all topic guides and research tools appropriately, and share with interviewees in advance the topic guides to clarify expectations. Where necessary, we will undertake case studies on an anonymous basis – to be agreed with the |
| Capacity of SQW team members to complete the work                                  | L:<br>Low<br>I:         | Once work is won, it is booked on our commitment schedule so it cannot be displaced. In the event of absence, we will replace team members with staff of equivalent standing, agreed with BEIS   |
| Data security issues or breaches   | L: Low<br>I: Medium     | All data and information for the project will be managed to comply with SQW's Information Security Policy, which has been updated following GDPR. The assigned Project Director has overall responsibility for ensuring                          |

## Part 2: Contract Terms



**Contract Terms v6.0**

