UKSBS
Shared Business Services

Commissioning Letter

London Economics
Somerset House, New Wing,
Strand,
London,
UK,
WC2R 1LA

Wednesday 27th Febuary 2019

Dear Sirs,

**BIS Research and Evaluation Framework Agreement – Lot 1**
**Research into foreign direct investment in the UK space industry**
**CR18204**

Thank you for your response to the Specification for the above commission by the Department for Business,Energy and Industrial Strategy (BEIS) (the Customer) through the BIS Research and Evaluation Framework dated 2 January 2016 between (1) Secretary of State for Business, Innovation and Skills; and (2) London Economics (the Framework Agreement).

Annexes: A. Specification for Research into foreign direct investment in the UK space industry
B. Tender dated Wednesday 9th January 2019

The Department for Business,Energy and Industrial Strategy (BEIS) accepts your Tender (Annex A), submitted in response to our Specification (Annex B).

The Call–Off Terms and Conditions for this Contract are those set out in Schedule 5 to the Framework.

The agreed total charges for this assignment are [redacted] exclusive of VAT which should be added at the prevailing rate. The agreed invoice schedule is as follows:

- 15th March: Interim Method Plan Report, interview guide and case study template
  **40%:** [redacted]
- 29th March: Draft Final Report, including background, definitions and study objectives
  **45%:** [redacted]
- 18th April: Final sign off and retention payment
  **15%:** [redacted]

AW5.2 Price Schedule

Please ensure that you DO NOT alter this spreadsheet. Any alterations may result in your Pricing being disqualified.

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| | |
|---|---|
| SOURCING REFERENCE: | CR18204 |
| SOURCING DOCUMENT TITLE: | Research into foreign direct investment in the UK events industry |
| BIDDER NAME | London Economics Limited |

Please complete the shaded yellow sections only.

Please note that the staff costs in section 1 cell G21 should equal the staff costs outlined in section 2. Section 2 provides further detail around the project team and the distribution of staff days.

The figure used for evaluation is the total Cost (ex VAT) provided in Section 1 (cell G21). The total cost is the total staff costs (ex VAT) and the total Travel and Subsistence, Overhead costs, cost of production of materials and anyfull costs associated with the delivery of the project (ex VAT).

Section 1: Total Project Costs (Summ

| Objective | Number of Days | Total Staff Cost Per Objective (ex VAT) | Total Cost (Ex VAT) |
|---|---|---|---|
| 1. Research | 10 | £ | [redacted] |
| 2. Data Collection/Compilation | 10.25 | £ | |
| 3. Drafting | 11.5 | £ | |
| 4. Analysis | 12.75 | £ | |
| 5. Project management | 4.25 | £ | |
| 6. Meetings | 3.25 | £ | |
| 7. Other Costs | 6.25 | £ | |
| TOTAL | 59.25 | £ | |

Section 2: Total Staff Costs (Please complete)

| Job Title | Maximum Rate/Fees excluding VAT (MAY not) | Recommended Rate/Fees excluding VAT (MAY not) | Objective Area (Please Select) | Number of Days | Travel and Subsistence, Overhead costs, cost of production of materials and anyfull costs associated with the delivery of the project (ex VAT) | Total Staff Cost (ex VAT) | Total Cost (ex VAT) |
|---|---|---|---|---|---|---|---|
| Divisional Director | £ | £ | 1. Research | 0.00 | £ - | £ | [redacted] |
| Divisional Director | £ | £ | 2. Data Collection/Compilation | 0.00 | £ - | £ | |
| Divisional Director | £ | £ | 3. Drafting | 0.25 | £ - | £ | |
| Divisional Director | £ | £ | 4. Analysis | 0.50 | £ - | £ | |
| Divisional Director | £ | £ | 5. Project management | 1.25 | £ - | £ | |
| Divisional Director | £ | £ | 6. Meetings | 0.75 | £ - | £ | |
| Divisional Director | £ | £ | 7. Other Costs | 0.25 | £ - | £ | |
| Associate Director | £ | £ | 1. Research | 1.50 | £ - | £ | |
| Associate Director | £ | £ | 2. Data Collection/Compilation | 0.25 | £ - | £ | |
| Associate Director | £ | £ | 3. Drafting | 0.50 | £ - | £ | |
| Associate Director | £ | £ | 4. Analysis | 2.25 | £ - | £ | |
| Associate Director | £ | £ | 5. Project management | 2.00 | £ - | £ | |
| Associate Director | £ | £ | 6. Meetings | 1.75 | £ - | £ | |
| Associate Director | £ | £ | 7. Other Costs | 0.00 | £ - | £ | |
| Economic Consultant | £ | £ | 1. Research | 0.50 | £ - | £ | |
| Economic Consultant | £ | £ | 2. Data Collection/Compilation | 5.00 | £ - | £ | |
| Economic Consultant | £ | £ | 3. Drafting | 3.75 | £ - | £ | |
| Economic Consultant | £ | £ | 4. Analysis | 4.00 | £ - | £ | |
| Economic Consultant | £ | £ | 5. Project management | 0.50 | £ - | £ | |
| Economic Consultant | £ | £ | 6. Meetings | 0.75 | £ - | £ | |
| Economic Analyst | £ | £ | 1. Research | 0.00 | £ - | £ | |
| Economic Analyst | £ | £ | 2. Data Collection/Compilation | 0.00 | £ - | £ | |
| Economic Analyst | £ | £ | 3. Drafting | 16.00 | £ - | £ | |
| Economic Analyst | £ | £ | 4. Analysis | 6.00 | £ - | £ | |
| Economic Analyst | £ | £ | 5. Project management | 0.00 | £ - | £ | |
| Economic Analyst | £ | £ | 6. Meetings | 0.00 | £ - | £ | |
| TOTAL STAFF COSTS | | | | | | | [redacted] |

All invoices should be sent to should be sent to finance@services.uksbs.co.uk or Billingham (UKSBS, Queensway House, West Precinct, Billingham, TS23 2NF) A copy of the invoice should be sent to (PM to confirm if they would like a copy)

You are reminded that any Customer Intellectual Property Rights provided in order to perform the Services will remain the property of the Customer. The following deliverables have been agreed:

**The Services Commencement Date is Thursday 28th Febuary 2019**

**The Completion date is Tuesday 30th April 2019**

The Contract may be terminated for convenience by giving 30 days' notice in accordance with clause 38 of the Call-off Terms and Conditions.

Your invoice(s) for this work must include the following information:
Commission number: FWRECR18204

The Authorised Representative for this Commission will be [redacted] who can be contacted at [redacted].

Until the date of publication, findings from all Project outputs shall be treated as confidential. Findings shall not be released to the press or disseminated in any way or at any time prior to publication without approval of the Department.

This clause applies at all times prior to publication of the final report. Where the Contractor wishes to issue a Press Notice or other publicity material containing findings from the Project, notification of plans, including timing and drafts of planned releases shall be submitted by the Contractor to the Project Manager at least one week before the intended date of release and before any agreement is made with press or other external audiences, to allow the Department time to comment on factual accuracy. All Press Notices released by the Department or the Contractor shall state the full title of the research report, and include a hyperlink to the Department's research web pages, and any other web pages as relevant, to access the publication/s.

This clause applies at all times prior to publication of the final report and within one month from the date of publication. Where the Contractor wishes to present findings from the Project in the public domain, for example at conferences, seminars, or in journal articles, the Contractor shall notify the Project Manager before any agreement is made with external audiences, to allow the Department time to consider the request. The Contractor shall only present findings that will already be in the public domain at the time of presentation, unless otherwise agreed with the Department.

Congratulations on your success in being selected to undertake this Commission.

Yours sincerely

[redacted]
UK Shared Business Services Ltd

BY SIGNING AND RETURNING THIS COMMISSIONING LETTER THE SERVICE PROVIDER AGREES to enter a legally binding contract with the Customer to provide to the Customer the Services specified in this Commissioning Letter and Annexes incorporating the rights and obligations in the Call-off Terms and Conditions set out in the Framework Agreement.

Department for UK Space Agency (UKSA)

| | | |
|---|---|---|
| Name and Title | [redacted] | |
| Signature | | |
| Date | 18/03/19 | |

Signed on behalf of London Economics

| | |
|---|---|
| Name and Title | [redacted] |
| Signature | |
| Date | 13/3/19. |

- **Annex a Specification**

## 1. Background

### The UK Space Agency

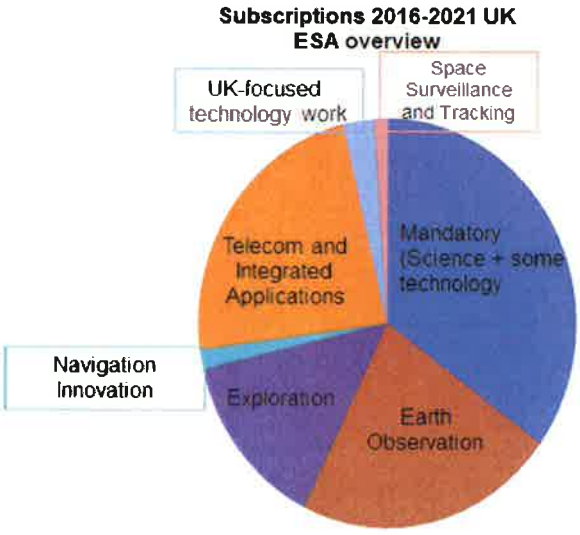
The UK Space Agency (UKSA) is responsible for all strategic decisions on the UK civil space programme, providing a clear, single voice for UK space ambitions. It is at the heart of UK efforts to explore and benefit from space.

The UK's thriving space sector contributes £13.7 billion a year to UK GDP and directly employs over 38,500 people. Since 2012/13 industry income has grown by 6.5% and 5.4% per annum, respectively.

The Agency supports this growth through providing funding for a range of programmes . It has a budget of about £380m per year of which £300m is spent with the European Space Agency. The rest of the national budget supports programmes such as the National Space Technology Programme, a national Space science programme and our ambitions in providing a national launch capability.

Our rationale for working with the European Space Agency is to maximise our investment by pooling our resources, giving UK Companies and scientists access to European partners, suppliers and customers meaning our £300m also brings us benefit from the total ESA spend of €4.25 bn per year.

The UK chooses what programmes it supports with ESA at ESA Ministerial meetings which occur every 3- 4 years ( the next one is in December 2019). The science programme is mandatory but all others are optional and countries choose them to play to industrial and scientific strengths. The breakdown of UK ESA subscriptions are shown below:




The UK is committed to collecting evidence of the benefits of investment in ESA both to

demonstrate value for money for that investment but also to inform future investment decisions with the European Space Agency. The next key milestone is a Ministerial meeting in December 2019 where the UK will decide the balance of its investment across several key programmes.

www.BEIS.gov.uk/ukspaceagency

Foreign Direct Investment

From a UK perspective, inward foreign direct investment (FDI) is an investment from a foreign investor into a UK enterprise. The UK entity then becomes what is known as an affiliate enterprise, which is either a subsidiary, branch, or an affiliate company of the parent company – the foreign investor. In practical terms, this can either happen where a foreign company sets up a version of itself in the UK, or where it acquires an existing UK company. The parent company needs to own at least 10% of the shares in the UK entity for it to classify as FDI. Direct investments include not only the initial operation establishing the relationship between the two units, but also all later capital operations between them and between related institutional units, whether incorporated or not.

Attracting FDI to the UK space sector is an important way through which the sector can grow, and contribute to the key goal of securing 10% of the global space economy by 2030.

## 2. Aims and Objectives of the Project

The principal aim of this piece of research will be to provide evidence in relation to Foreign Direct Investment (FDI) in the UK space sector and answer the following key broad questions:

- To better understand the factors underpinning organisation decisions to invest and grow in the UK
- Specifically, the extent to which UK involvement in ESA influences the FDI decision making process.
    - Are there certain ESA programmes that are important?
    - Is it access to ESA contracts and grants, access to partners through ESA collaboration or access to ESA expertise.
- Understand how the UK can better attract growth and FDI in future

To answer these questions this research project will need to elicit information (primarily) from UK space sector organisations who have chosen to invest in the UK. An more detailed set of the kind of questions we might ask, or information we need to collect could include;

- If possible, high level data on the FDI activity (e.g. purpose of investment, value of investment, area of activity, location of investment ?)
- What were the key factors underpinning the decision to invest in the UK
- Specifically, was there anything particularly attractive about the UK as a place to invest ?
- Conversely, are there currently any barriers to FDI in the UK ?
- Was there anything specific about other countries that could have made you more likely to

invest there (instead of the UK) ?

- More generally, is there anything that the UK could do differently to encourage greater FDI in future ?

As an output to this work we would like a number of more specific case studies of FDI and build a narrative around them - including 6 useable ESA case studies of FDI decisions and 6 useable case studies of other companies. These should include a mix of sizes of companies and stages on their investment journey from recent start up to long established FDI companies.

## 3. Suggested Methodology

The work to underpin this research will likely be consist of an initial scoping phase. We envisage that three separate phases of work should be undertaken and consist of;

- An initial method development and scoping phase
- The primary research phase of semi-structured interviews with space industry organisations
- Analysis and reporting

**Stage 1 – Method development and early consultation**

The first goal of Phase one of this research will be to confirm the overall scope and approach of this work. This will likely consist of deskbased research and a review of the available documentation that both the UKSA holds, and is publically available, relating to space sector FDI. Any wider literature on FDI in relation to the UK could also be relevant.

A further step that could take place during stage 1 will be to fully define the key questions we want this research to answer, and develop a draft topic guide to be used in the interview process.

**Stage 2: Fieldwork phase with UK industrial organisations delivering the ESA space science contracts and wider stakeholders**

Stage two is where the vast majority of the evidence to underpin this work will be collected. We currently envisage that will primarily consist of semi-structured face to face (or telephone) interviews with UK space industry organisations.

In terms of the sample, the key focus will be on UK space industry organisations who have chosen to invest in the UK.
If possible, valuable information could also be obtained organisations who have chosen **not** to invest in the UK, however identification is a concern here.
As ever, it will be important that this work obtains views from a wide range of organisations in question. We will need to include organisations varying in size (employment/turnover), length of operation, key activity type, did they have any presence in the UK before making the FDI decision ? Have they received an ESA grant in the past ?

**Stage 3: Analysis and reporting**

The focus of this section of the work will be to synthesise the evidence gathered during the inception and interview phases into a report, requiring analysis of the interview content. Contractors should propose how they would intend on analysing interview responses,

including both qualitative and quantitative data that they will likely provide.

## 4. Deliverables

Key deliverables

Additional Deliverables:

- Regular (weekly/fortnightly) updates on emerging finding and project progress
- Interim method plan report
- Draft final report with an executive summary
- Quality assured final report that will be published (with sensitive information removed if necessary), including a technical report/ section detailing the methodology of the research and analysis
- Datasets to support those to be published in the final report must be provided in an accessible format (Excel) if appropriate, with ultimate ownership to be retained by the UK Space Agency

In order to increase awareness of research and evaluation reports and maximise research impact, all contractors are to ensure the following are included in the costings for this project:

- Summary poster / infographic
- Slide pack summary

**Publication**

The final report for this research / evaluation project must be formatted according to BEIS publication guidelines, therefore within the Research paper series template and adhering to BEIS accessibility requirements for all publications on GOV.UK. The publication template will be provided by the project manager. Please ensure you note the following in terms of accessibility:

**Checklist for Word accessibility**

Word documents supplied to BEIS will be assessed for accessibility upon receipt. Documents which do not meet one or more of the following checkpoints will be returned to you for re-working at your own cost.

- document reads logically when reflowed or rendered by text-to-speech software
- language is set to English (in File > Properties > Advanced)
- structural elements of document are properly tagged (headings, titles, lists etc)
- all images/figures have either alternative text or an appropriate caption
- tables are correctly tagged to represent the table structure
- text is left aligned, not justified
- document avoids excessive use of capitalised, underlined or italicised text
- hyperlinks are spelt out (e.g. in a footnote or endnote)
- Datasets to support those to be published in the final report must be provided in an accessible format (CVS, Excel) on submission of the report.

**Peer review**

- **Annex B Tender Response**

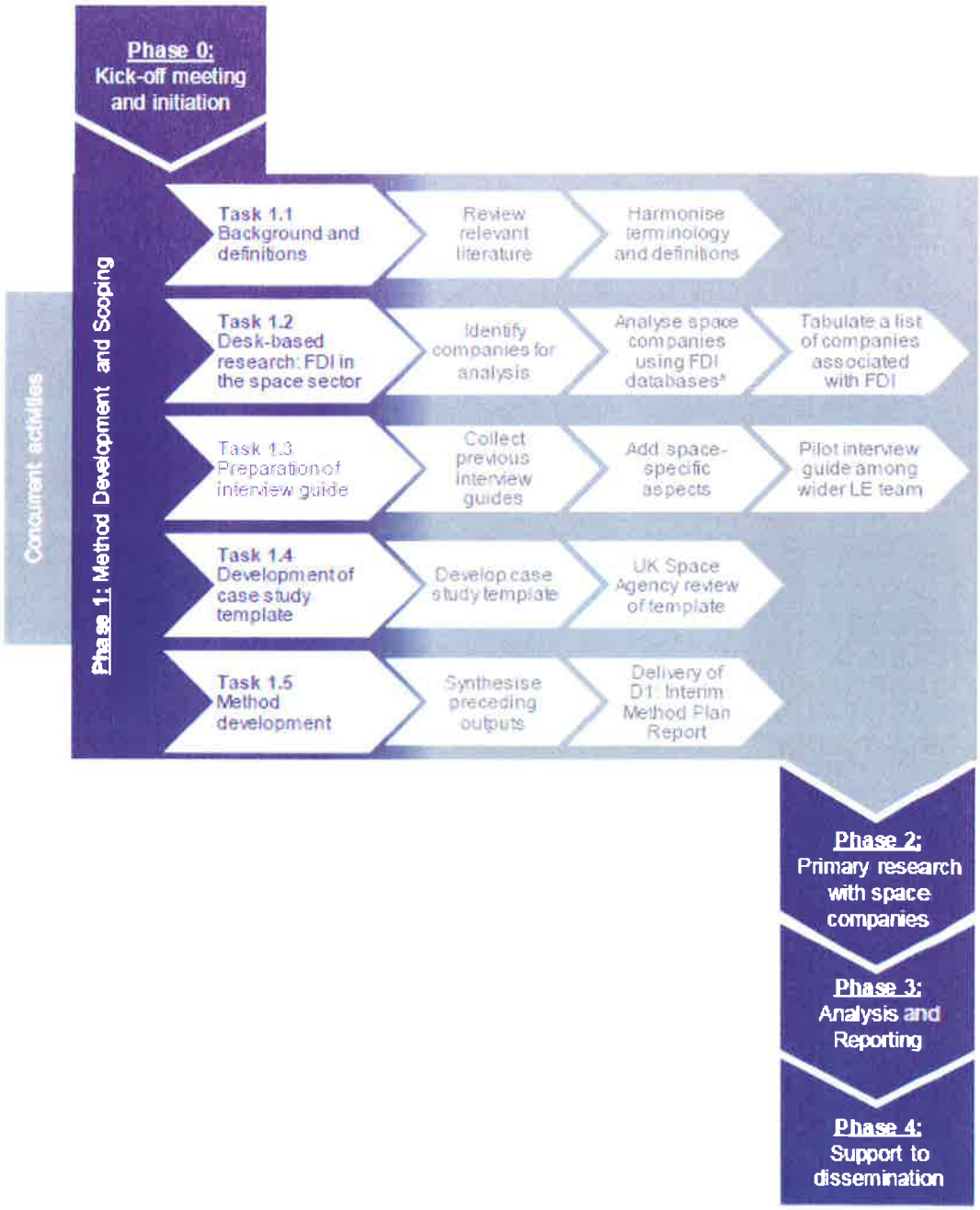
## Proj 1.1 Approach/Methodology

The attraction of Foreign Direct Investment (FDI) into the UK space industry is a key objective to help the UK realise its ambition of a 10% share of the global space economy by 2030.

As is combines two of our core practice areas (Space and Finance), London Economics (LE) is enthusiastic to study this area in more detail, to help the UK Space Agency (UKSA) understand FDI activity, and the underlying drivers that influence it.

Our suggested approach/methodology centres on a programme of semi-structured interviews (face-to-face where viable, otherwise by telephone). Our experience from past interview-heavy projects has reinforced our belief that the quality of information that can be gleaned from interviews is strongly dependent on the successful identification of interviewees, positive engagement and a well-defined interview guide. For this reason, we agree to follow the proposed phased approach to the project, described below.

### Figure 1 Project phases (with detail break-out of Phase 1)




Note: *: E.g. Orbis Cross-Border Investment and Zephyr, databases owned by Bureau van Dijk, focus on greenfield cross-border investments (including FDI) and Mergers & Acquisitions (M&A), respectively. Preqin is a database of investment into start-ups with information on origin and destination of funds.
***Source: London Economics***

### Phase 0: Kick-off meeting and initiation

LE will prepare a presentation of key scope and methodological discussion points, required Agency inputs and project management essentials to ensure that we can 'hit the ground running' at the Kick-Off Meeting (KOM). The objective of the KOM is to discuss any open issues and agree all aspects of the methodology, deliverables (format, content, dissemination), timeline, working arrangements (contacts, regular progress updates, project management procedures) and initiate the project. LE will share KOM minutes for review.

## Phase 1: Method development and scoping

Conscious of the short timeframe for the project, we have devised a methodology for phase 1 that allows concurrent activity in three of the five tasks. Those three are to be performed by three different staff members, coordinating between them, to increase efficiency.

**Task 1.1 – Background and definitions**
Drawing on our previous work on FDI, we are in a strong starting position to review the literature on FDI location choice. Please see a summary below.
The FDI location choice literature identifies several factors that affect FDI location choices:

### Table 1 Determinants of FDI location choice

| | |
|---|---|
| Production costs | ▪ Countries in which production costs are relatively low are more attractive, all else equal. |
| Taxes and subsidies | ▪ The headline corporate tax rate is important to FDI location choices (Hines, 1997).<br>▪ Specific taxes and subsidies may affect FDI location choices.<br>▪ Tax credits exist for R&D investments, as R&D activity generates external benefits for the host country.<br>▪ Firms may receive tax breaks or subsidies if investments provide jobs (Shleifer and Vishny, 1994). |
| Final demand | ▪ Firms may locate manufacturing investments near large markets in order to minimise the cost of transporting products to those markets.<br>▪ Market potential is wider term coined in the literature, that takes both domestic demand and demand in neighbouring countries into account.<br>▪ Demand in neighbouring countries is particularly important for the aerospace industry due to high levels cross-border trade.<br>▪ Of relevance is the extent of competition in the host and neighbouring countries, with market potential being inversely related to the intensity of competition.<br>▪ Trade costs arising from the geographic distance between demand and competitors is also important (Head and Mayer, 2004) |
| Potential agglomeration economies | ▪ Agglomeration economies are the benefits that come about when firms locate near one another in cities and industrial clusters (Glaeser, 2010). In the case of R&D investments, high pre-existing levels of R&D spend and firms undertaking similar activities may generate agglomeration economies that make R&D investments more productive. |
| Bilateral cost of investment | ▪ Finally, the bilateral costs of investment are relevant to FDI location decisions, including monetary factors such as transport costs from home to host country and non-monetary factors such as the use of a common language. |

**Source:** London Economics analysis of i) Glaeser, E. (2010). Introduction to the economics of agglomeration, in Agglomeration Economics, 1-14, London: University of Chicago Press; ii) Head, K. and Mayer, T. (2004). Market potential and the location of Japanese investment in the European Union. The Review of Economics and Statistics 86 (4), 959–972; iii) Hines, J. R. (1997). Tax policy and the activities of multinational corporations, in A.J. Auerbach (ed.), Fiscal policy: lessons from economic research, Cambridge MA: MIT Press; and iv) Shleifer, A., and Vishny, R. W. (1994). Politicians and firms. The Quarterly Journal of Economics, 995-1025.

In terms of definitions, the OECD FDI definition will be used for the purpose of identifying FDI projects. Greenfield FDI and M&A will be considered (with a focus of M&A on foreign owners taking a controlling stake in UK firms). Initial and subsequent capital outlays by foreign firms will be treated as FDI, as described in the terms of reference. Greenfield FDI is defined as the provision of fresh capital into the economy, i.e. where foreign funds are used to support a new company, either as equity or angel investment. Brownfield FDI on the other hand is defined as a change in ownership, but not does not imply an increase in funds. With these definitions, it is worth noting that re-investment profits earned in a foreign held company is a form of Greenfield investment.

**Task 1.2 – Desk-based research: FDI in the space sector**

Having completed the *Size and Health of the UK Space Industry 2018* and identified UK space companies in the process, we are in a strong position to analyse the companies in the list and identify those that qualify as an FDI event. However, owing to the elapsed time since the identification for that study as well as its focus on (recent) history, we do not purport to have a full list. As such, the first step is to complete the list of companies using the UK Space Directory and a list of organisations at the Harwell Campus (anecdotal evidence suggests this is an attractive site for greenfield FDI into the UK space industry) and members of the ESA Business Incubation Centre. Furthermore, we will rely on our extensive network in the UK Space Agency, Innovate UK, KTN, UKspace, DIT and regional development agencies (e.g. SE, HIE, AW, NISSIG), to capture new companies known to these organisations – particularly non-UK investors they may have talked to.

The output of Task 1.2 is a list of UK space organisations that are associated with FDI, either as a result of a greenfield investment from a foreign company, a start-up relying on significant funding that originates in a foreign country or has been taken over (>10%) by a foreign company or individual. The analysis will consider '**gross FDI**' in the sense that a UK entity where more than 10% has been acquired by a foreign stakeholder is in scope even if the shares have been acquired from a different foreign stakeholder.

The list of organisations forms the basis for further analysis in Phase 2 that will ultimately determine interview candidates. Preparation of this type of list is a familiar task to us, with *The Case for Space 2015* an early example.

**Figure 2 Space FDI (2015)**

Box 1) Companies with applications interest now relocated to UK/Harwell

**ACRI/ARGANS (from France)** An EO service company from Sophia-Antipolis, established a subsidiary ARGANS in UK, based in the south-west of England and are active in ARTES applications

**Added Value Solutions (from Spain)** Conceive mechanisms, covering design, manufacturing, integration, test and delivery

**Cyth systems (from USA)** Engineering and systems integration company that designs and builds embedded control systems, automated test systems, machine vision systems and robotic systems for use in the aerospace and defence industry

**Elecnor Deimos (from Spain)** Wide-ranging technology and aerospace company, active in ARTES applications

**Exact Earth (from Canada/Spain)** Major EO service provider

**GMV (from Spain)** In the process, not yet official, but reflecting the general move of GMV activities to its operations in other countries (e.g. Poland and Portugal)

**MDA (from Canada)** At this stage mostly just a business development presence

**Neptec (from Canada)** Mostly upstream but some downstream-relevant technologies, with an office now opened at Harwell

**PlanetLabs (from USA)** Also based at the Catapult, they support an EO constellation ("Dove") of nano-satellites, for evaluation purposes

**Rhea Group (expansion of UK activities)** Wide-ranging interests, presence in UK partly aimed at increasing their downstream activities

**SENER (from Spain)** UK office registered but has not yet chosen a location (could be Harwell, Bristol, Stevenage)

**Starlab (from Spain)** Working in space and neuroscience and active in ARTES applications

**Thales Alenia Space (expansion of UK activities)** TAS office in Harwell set up in 2014, focused on applications and other UK-oriented ARTES opportunities. Separate to rest of TAS operation but draws on resources from R&D arm in Reading

**Terma UK (from Denmark)** Space prime working across all phases of space mission lifecycle

**Terradue (expansion of UK activities)** Focused on e-infrastructures and earth sciences. Interested in the UK's growing high-tech and space applications potential

**Telespazio-Vega (expansion of UK activities)** Building up downstream and applications-oriented operations, liaising with ESA on ARTES applications and linking with other Telespazio-Vega operations in Germany, Italy and Romania

**Zero Gravity (from USA)** ISS-based technologies for plant stem cell research, new UK company located since February 2014 at the Satellite Applications Catapult

*Source: ESA (2014) Socio-Economic Analysis ARTES Applications & IAP (presentation)*

***Source: London Economics (2015), The Case for Space 2015***

### Task 1.3 – Preparation of interview guide

The success of the project is closely linked with the suitability of the interview guide. We have therefore designated a specific task to its preparation and will draw on LE's past experience with **general FDI analyses** and **space-specific expertise** to ensure all relevant aspects of an FDI decision are considered in the survey. In addition to **high-level data on the investment**, without prejudice to the research to be undertaken, **general influencing factors** might include:

## Table 2 Potential general factors influencing FDI decision

| | | |
|---|---|---|
| Production costs | Corporate tax rate | Specific tax incentives/subsidies |
| Existing skills base | Availability of public funding | Presence of firms in similar domain |
| Cost of trade | Domestic demand | Language |
| Distance from HQ | Distance from other markets | Presence of university in related area |
| Availability of infrastructure | Fundamentals of M&A target | |

***Source: London Economics (2017). Quantifying the factors which influence Life Science companies' decisions to invest in R&D and manufacturing in a specific country when capital is internationally mobile. A report for BEIS.***

Beyond the general factors proposed in Table 2, we are acutely aware of the **space-specific** considerations likely to affect organisations in the space industry. These include access to grants – both from **ESA and domestic UK programmes** such as UK Space Agency and Innovate UK – as well as access to soft support functions, facilities and other infrastructure. It is important to develop the understanding of the attraction of these space-specific factors, and to ensure their relative importance is appreciated.

## Table 3 Potential space-specific factors influencing FDI decision

| SA-related factors | National space-specific factors |
|---|---|
| Attractiveness by ESA programme | :tractiveness by national programme* |
| Importance of funding | /ailability of CoEs**, Catapults, UKspace, etc. |
| Importance of access to partners | /ailability of facilities and centres |
| Importance of access to facilities | :cess to suppliers and customers |
| Importance of incubation (BIC) | /ailability of domestic incubation |
| Other benefits of ESA | |

Note: *: e.g. IPP, SSGP, Emerging and Enabling Technologies, other. **: Centres of Excellence

However, while the conversation with a company that has invested in the UK is more than likely to be positive (as the company chose the UK), it is also relevant to understand the factors that counted against the UK. All the companies identified as FDI-relevant in the UK must have decided that the **positives** outweigh the **negatives**, but it is nonetheless relevant to identify and articulate these negatives as well as the strengths of competitors in the attempt to persuade more space companies to invest in the UK. These points will be addressed through questions such as those below:

- What factors counted against the UK?
- What factors have impressed you in other EEA countries that the UK could learn from?
- Which other EEA countries were considered for your investment? What attracted you to those countries?
- Do you have any other comments or suggestions to increase UK FDI attractiveness?

We will draw on the wealth of experience with FDI and interview processes amassed by the wider LE team, as colleagues external to the project team will pilot the interview guide.

# Task 1.4 – Development of case study template

To improve the efficiency of Phase 3 we will already develop a template for the **10 case studies of investments in the UK** at this early stage. This activity serves two important purposes. Firstly, it ensures that the **interview guide is tailored to extract the information** that is required for an **engaging and informative case study**, including any background information that could add value. Knowing the structure and content of the final output focuses the mind of the interviewer and ensures consistency over case studies and interviewers. Secondly, preparing the template in advance of the first interview ensures that we can schedule interviews as soon as Phase 2 commences, which increases the likelihood that an interviewee is available.

The task will also prepare a case study template to cover **2-3 mini case studies** designed to provide information from companies that considered but **decided against investing in the UK.**

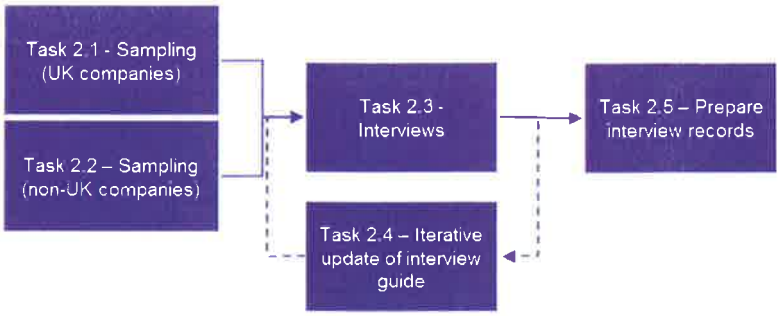
### Task 1.5 – Method development

This task will pull together all lessons from the review tasks to develop the approach, enhance the research methodology and calibrate the project plan to maximise return from the subsequent primary research phase to deliver valuable insights in the Final Report. The task will also deliver the first formal deliverable: ***Interim Method Plan Report***.

### Phase 2: Primary research with space companies

Phase 2 is where **most of the effort/resources** for this project are committed. The objective of the phase is to generate sufficient information to identify the underlying factors that determine a space company's decision to invest in the UK and to rank those factors in order of importance. To achieve this objective, we have devised five tasks as shown in Figure 3**Error! Reference source not found.**.

**Figure 3 Tasks in Phase 2**

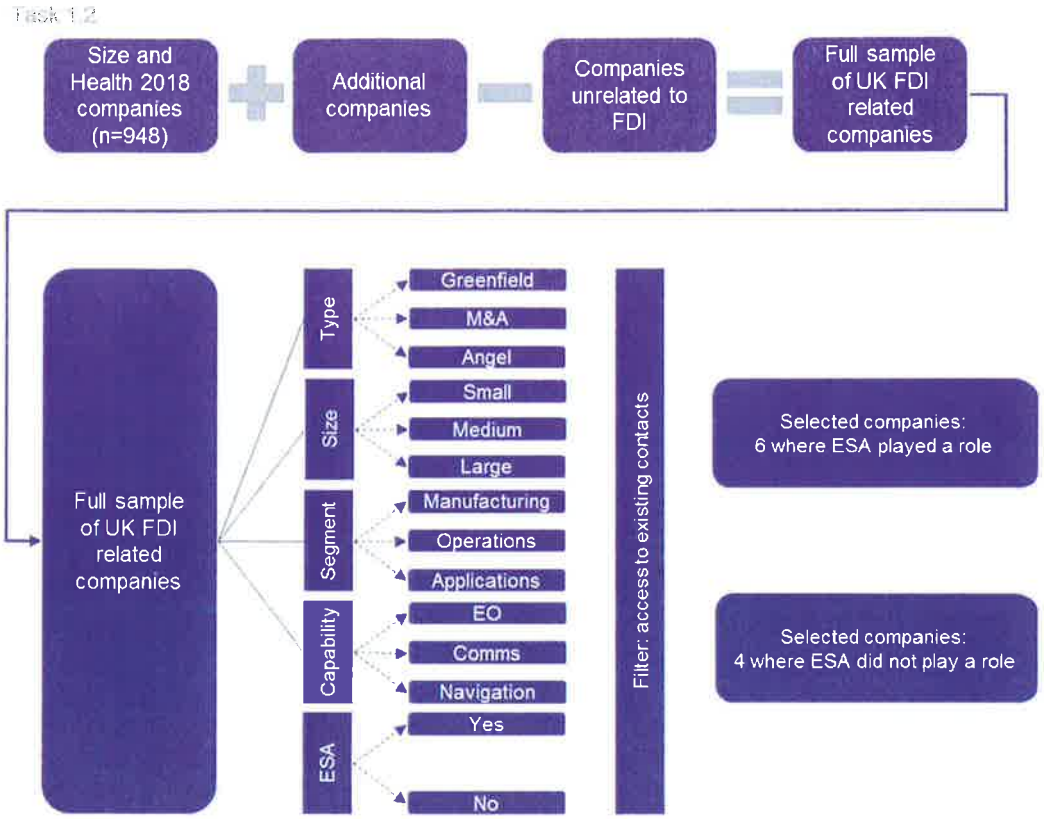



**Task 2.1 – Sampling (investors in UK)**

The outcome of sampling in Task 2.1 will have important bearing on the possible insights to be gathered in the research. The objective is to sample companies to ensure that a wide range of company characteristics are represented among the case studies and interviewees. The activity starts from the list of companies associated with FDI events that is compiled in Task 1.2, and applies a range of filters to the list to ensure wide representation. The filters to be used include: **type of investment** (greenfield, brownfield, angel investment), **company size** (considering the UK entity as well as the foreign parent), **value chain segment**, **capability**, **year of event** (prioritising recent events where the decision makers are more likely to be in the same position and available), ex ante perceived **relevance of ESA** in the decision (to apply this filter, we request a list of UK ESA grantees from UKSA).

The end-to-end sampling process can be represented by Figure 4.

Figure 4 End-to-end sampling tree (investors in UK)




*Source: London Economics*

Given the number of filters and the desired sample of 10 companies for in-depth case studies, it is likely that individual companies will be required to tick multiple filter categories. The final filter on access to existing contacts is selected to increase the efficiency of the activity. Companies at which we know decision makers personally, or where we are able to receive an introduction from other contacts (e.g. UKSA) are more likely to be willing to speak to us than if we have to make a cold call. We note, however, that this particular filter is '*leaky*', i.e. if a company offers coverage that cannot otherwise be achieved, we will naturally contact them even if we do not have existing contact details.

**Task 2.2 – Sampling (non-UK investors)**

The ITT requests information based on interviews with companies that considered, but decided against, investment in the UK. Identification of those companies is inherently complicated as no investment was made.

We will focus the attention on companies that considered a greenfield investment or an M&A deal. We will, however, not consider foregone increased investment from existing foreign-owned companies as we understand this to be against the spirit of the question.
From an identification perspective, we will draw on three separate sources: i) **Government contacts,** e.g. in DIT and regional development agents with responsibility for space, who might be able to share details of companies they have supported in making a decision to locate to the UK; ii) **rumours** that are available from M&A and FDI databases (e.g. a rumoured take-over that did not materialise is a prime candidate); iii) **new FDI in other EEA countries** is a third option that could identify potential companies that might have considered the UK. The order of these sources is indicative of their preference.

It is important to remember that foreign companies that chose not to invest in the UK have limited incentive to participate in a UK study. Whilst we will endeavour to convince them that participation in the study might eventually lead to a change in conditions that could have changed the decision-makers' minds, the leverage is limited, so the degree of engagement with this set of companies is a risk that we will seek to mitigate by drawing on personal and intermediate relationships.

**Task 2.3 – Interviews**

The first activity in task 2.3 is to gather the necessary contact details to be able to engage companies in interviews. We are in a strong position with a large contact database sourced for the *Size and Health of the UK Space Industry 2018*. However, whilst the majority of these contacts have been sourced from the public domain, **consistent with GDPR**, we will ensure that any contact details received from stakeholders for the specific purpose of that study will be excluded from the present activity which will need to find alternative sources.

The objective of the task is to undertake interviews that are sufficient to populate **10 one-page company-specific case studies** as well as any further information required for the report (including interviews with **2-3 non-investing companies for mini-case studies**). Our experience suggests that we will need to speak to **2-to-3 people from each company** to ensure all aspects of the decision are suitably illuminated, leading to an expected **total of 20-30 interviews** over the course of the project. Interviews will be performed **face-to-face or by telephone** by a core member of the project team. We prefer face-to-face interviews, so have allowed a **small travel budget** to Harwell and other clusters where multiple interviews could be scheduled on the same day. In previous stakeholder consultations we have experienced that it is reasonably easy to meet London-based stakeholders in person either in our offices or at their locations (no travel costs within London).

Each interview will last approximately **1 hour** and cover the decision-making process behind the choice of investment location. The focus on real, as opposed to hypothetical, investment location choices is preferred as interviews are more likely to generate robust evidence and because they are less subject to strategic responses (specifically, to influence the UKSA's investment in ESA).

The qualitative interviews will be semi-structured – investment decision-makers will be invited to provide **initially an open-ended response** on how an investment choice was made. The interviewer will **only then prompt on specific factors** as required. This semi-structured interview format ensures that the interviewer does not lead the nature of the response.

There is potential for selection bias in the sample of investment decision-makers. It is those decision-makers who volunteer to participate in a qualitative interview that will be relied upon for the findings of the study. The volunteers may differ from those that do not volunteer, and these differences may be material to the findings.

There are two relevant observations to make: Firstly, the choice of investment decision makers is necessarily limited to those who volunteer to participate. Secondly, as investment decision makers will be asked to describe a past investment choice, there is less scope to relate this to forward-looking UKSA decisions. Nonetheless, a caveat will be made accordingly.

**Task 2.4 – Iterative update of interview guide**

This task is included explicitly to ensure iterative updates of the interview guide are undertaken. It is important that factors or information quoted by one interviewee be included in the prompts for subsequent interviewees. This approach maximises the number of factors discussed with the greatest number of interviewees.

### Task 2.5 – Prepare interview records

The final task of Phase 2 is to prepare interview summary records. These need to be typed in a standardised format to ensure all interviews have equal representation in the report. In the case of telephone interviews, rough notes are typed during the call and fleshed-out afterwards. For face-to-face interviews, notes would typically be written on paper, and so additional time is required to type the interview records. A standard template for interview records will be prepared following agreement on the template for the case studies (Task 1.4).

## Phase 3: Analysis and reporting

The following deliverables will be prepared according to the format and deadlines agreed at KOM – suggestions below. All deliverables will be written in plain English following BEIS publication guidelines. Our Quality Assurance process will guarantee quality outputs.

| Title | Content | Due date |
|---|---|---|
| Draft Final Report | ■ Executive summary;<br>■ An accessible and **visually-engaging** report (innovative graphs, diagrams, etc.) presenting the key findings with appropriate level of disaggregation by FDI type (max 15 pages);<br>■ 10 one-page company-specific case studies of FDI (of which six where ESA was a primary factor in their investment decision).<br>■ 2-3 company-specific mini-case studies covering companies that considered but decided against investment in the UK. | 8/03/2019 |
| Final Report | ■ Quality assured final report that will be published (with sensitive information redacted if required), including a technical report/section detailing the methodology of the research and analysis. | 22/03/2019 |
| Collected data | ■ Datasets to support those to be published in the final report (including interview records) in an accessible format (Excel) if appropriate. | 26/03/2019 |
| Progress updates | ■ Regular (weekly/fortnightly) updates by phone on emerging finding and project progress. | |
| Interim method plan report | ■ Interim method plan report containing synthesis of findings from phase 1 and their impact on phase 2 (see Task 1.5). | T0+3w |
| Summary poster/ infographic | ■ Graphically engaging poster/infographic showing the results of the study. | 26/03/2019 |
| Slide pack summary | ■ Slide pack summary to support dissemination. | 26/03/2019 |

### Task 3.1 – Analyse interview records

Having undertaken major survey and interview-led studies recently (e.g. for UKSA, Size and Health of the UK Space Industry, Economic evaluation of the Space for Smarter Government Programme (SSGP) and for Innovate UK, Value of satellite-derived Earth Observation capability to the UK Government today and by 2020, The economic impact on the UK of a disruption to GNSS), we are experienced in analysing qualitative data inputs.

**Figure 5 Stages in thematic data analysis**


Source: Marshall, Catherine and Gretchen B. Rossman (1999). Designing qualitative research. 3rd ed. London: Sage Publications.

Interview records will be the subject of **thematic analysis** using the approach shown in Figure 5. As the gathered data is in the form of interview records, we intend to initiate the process through a discussion among all interviewers, who will each report on general findings from their interviews. These **categories and themes** will then be the focus of a search of the interview records to verify the degree to which the categories or themes can be considered general. This process will be repeated **iteratively** to **test the emergent understanding of the data**. Any **alternative identified explanations** of the results in these discussions will then be added to the list of themes and categories to ensure all relevant themes are identified and that we appreciate the degree to which they can be considered general.

All categories and **themes will be quantified as much as possible**, but special attention will be given to the factors covered in the interview guides. A **visual presentation** of the responses is foreseen through the **count / frequency** of respondents citing each factor (category or theme). To ensure the findings of the study are as representative as possible, we **offer to weight** these counts **by the size** of the UK entity, size of foreign owner, or size of investment (if such information is shared by the stakeholder/available from sources).

Whilst open-ended, free-text questions are initially difficult to present in a visually engaging manner, the **thematic analysis** will glean any common trends, and tools (e.g. word cloud) could be used to summarise the results if its sentiment is consistent with the findings, following the teachings of **grounded theory**, a mechanism to ensure findings are grounded in the results of the qualitative research.

### Task 3.2 – Prepare Draft Final Report

A key task in Phase 3 is the preparation of a full draft final report to synthesise the findings of the primary research. The report will follow the structure agreed at the KOM, in particular focussing on **visual representation of the results**. Our team have substantial experience with these types of reports in both the FDI and space domain, including those listed below:


Available at https://ec.europa.eu/docsroom/documents/32601/attachments/1/translations/en/renditions/native; https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/575786/LE-SHUKSI_2016-INFOGRAPHIC-_FINAL_S2C171116.pdf; https://londoneconomics.co.uk/wp-content/uploads/2018/07/LE-IUK-Value-of-EO-to-UK-Government-FINAL-forWeb.pdf; http://www.ukspace.org/wp-

content/uploads/2015/07/LE-Case-for-Space-2015-Case-Studies.pdf;
https://www.gsa.europa.eu/system/files/reports/gnss_mr_2017.pdf

The report will contain an executive summary, a synthesis of findings (max 15 pages) and a case study section covering the 10 company-specific case studies of companies that have invested in the UK (six where ESA was a key consideration, and four where it was less relevant), as well as 2-3 mini-case studies of companies that considered but decided against investing in the UK. To allow review of the final report (described below), the due date for the Draft Final Report is 8th March. This implies a very tight timeline for interviews, so we flag here the possibility that a few interviews might remain outstanding at the time of submission.

**Task 3.3 – Prepare Final Report**

The final report will contain the same categories of content as the Draft Final Report, and these will differ only by the UKSA's comments and any information from the completion of the full interview programme. To allow review of the Final Report, the due date is 22nd March.

**Task 3.4 – Elaborate collected data into shareable format**

From experience we know that the purpose of collected data determines the structure and format of sources. It is therefore important to remain conscious that the data should be kept in a shareable format that allows the reader to understand the data without knowing its "backstory". We will ensure the data achieves a presentational level that allows it to be shared.

**Task 3.5 – Prepare summary poster/infographic**

Results of any study are most effective and impactful when presented in an easily digested format such as an infographic. Drawing on experiences in both the FDI and space domains (and the wider LE team) lets us provide an **engaging and vibrant summary** of the results.

**Task 3.6 – Prepare slide pack summary**

We remain available to support the UKSA with preparation of a slide pack summary of the findings. In our experience, suitable content, layout and language of such a deliverable are determined by the audience, so we request further details from the UKSA on such matters before preparing the deliverable. The KOM or later progress updates or meetings can be used to agree these matters.

### Phase 4: Support to dissemination

We have added this Phase 4 as we appreciate the importance of sharing our findings – particularly with qualitative research. Beyond the acceptance of the formal deliverables, we will remain available should the UKSA require our support in the dissemination of findings – e.g. any announcement, or at an opportune UK space-related conference or networking event.

## Proj 1.2 Staff to deliver

London Economics (LE) is a leading independent economic consultancy, with a dedicated team of professional economists specialised in the application of best practice economic and financial analysis to the space sector. Over ten years, LE has established itself as the leading firm of specialist space economists in the UK/Europe. LE has detailed knowledge of the UK space industry (incl. contacts), the UKSA policy context, and detailed expertise in the

collection of qualitative and quantitative data through interviews. In parallel with the space team, LE also have a team of staff dedicated to analyses of the financial sector, with a wide range of projects on FDI in the UK and Europe, specifically for SMEs and in general. We have combined the two work areas to ensure we address all requirements from both domains.

**Presentation of the team**

[redacted] (Divisional Director) leads LE's space team and has managed all our recent projects. Notable examples include *Size and Health of the UK Space Industry 2014, 2016, 2018*; *Economic evaluation of the Space for Smarter Government Programme (SSGP); Economic Evaluation of the International Partnership Programme; Value of satellite-derived Earth Observation capability to the UK Government today and by 2020; and The economic impact on the UK of a disruption to GNSS*; which all featured stakeholder consultation through surveys and interviews as a core input. Beyond these specific projects, [redacted] has led and authored more than 80 projects combining the economics of space, is a recognised expert, and widely known in the UK space industry. He holds an M.Sc. in Economics and an M.A. and B.A. in Economics and Business from the University of Dublin, Trinity College. [redacted] extensive network will help bring potential interviewees on side. [redacted] role as **Project Director** is quality assurance, defining the path to success, and to ensure the project progresses as planned.

[redacted] (Associate Director) specialised in the economics of space more than seven years ago and has been involved in LE's recent projects (listed above). Earlier in his tenure at LE, he contributed to projects evaluating FDI for both the European Commission and the Foreign and Commonwealth Office and led on the FDI analysis for *The Case for Space 2015* and *EU Market Share Analysis of the Downstream GNSS Industry (and industry database)*. He holds and M.Sc. and a B.Sc. in Mathematics-Economics from the University of Aarhus in Denmark. [redacted] role as **Project Manager** is the day-to-day management of the project, defining internal milestones to meet the external deadlines, preparatory activities, and reporting, as well as communication with the UKSA. He too has a strong network in the industry, and will use this throughout the project to identify and engage the best suited people.

[redacted] (Associate Director) is responsible for projects carried out by its *Financial Markets and Institutions* team. In the area of FDI, [redacted] has advised the European Commission on its capital markets policy over five years through analyses of developments in foreign direct investments. He has contributed to the UK's Industrial Strategy for life sciences by analysing the FDI location decisions of pharmaceutical companies. Most recently, he has supported DIT to model the economic impacts of FDI on the UK economy,

with the results being used by DIT to support their value-based investment promotion strategy. Prior to joining London Economics, [redacted] worked as a consultant for the World Bank. [redacted] holds degrees from Cambridge University and the London School of Economics. [redacted] role as **Expert Advisor** is to assist the project team with all aspects related to definitions and terminology. [redacted] extensive knowledge of the literature in the field of FDI will help the project team ensure the appropriate aspects of theory are taken into account.

[redacted] (Economic Consultant) has more than five years of experience delivering economic analysis related to the space industry. [redacted] has played a key role on LE's space projects since he joined three years ago and led the consultation element on multiple projects. [redacted] holds a B.Sc. in Economics from the University of Bristol. [redacted] will use his experience in the role **Lead Analyst** to ensure all lessons learnt from more than 100 consultations in the last two years are reflected in the interview guide and case study template.

[redacted] (Economic Analyst) joined LE a year ago from the European Space Agency and has contributed to a wide variety of projects since then. [redacted] primary contribution is Task 1.2, where his detailed understanding of the database of companies amassed as part of the *Size and Health* study sets him on a strong path to **researching** the UK space industry from the perspective of FDI using databases. In the second phase, [redacted] will **interview** companies for which ESA is anticipated to be part of the attraction to the UK given his intimate knowledge of the European institution.

[redacted] (Economic Consultant) specialises in high-tech sectors. In previous projects, he has analysed FDI for the Department for International Trade and investigated the use of industry 4.0 in space manufacturing as well as blockchain and high-performance computing through stakeholder consultation. [redacted] also prepared analysis of foreign ownership for *Size and Health 2016* and will advise on the design of the interview guide, ensuring that any lessons learnt from his recent experiences are taken into account, and will be available for interviews.

[redacted] (Economic Analyst) is a recent addition to the LE team. [redacted] holds an MSc in Economics from University College London and a BSc in Economics from the University of Lausanne, with a year abroad at the University of British Columbia. [redacted] will support the **interview** process and manage contact databases, scheduling and recording.

| Consultant team | Job title | Activities | Total days |
|---|---|---|---|
| [redacted] | Divisional Director | Project Director | 3 |
| [redacted] | Associate Director | Project Manager | 8 |
| [redacted] | Associate Director | Special Advisor | 1.25 |
| [redacted] | Economic Consultant | Lead Analyst | 7.5 |
| [redacted] | Economic Consultant | Interviewer/Advisor | 2.5 |
| [redacted] | Economic Analyst | Interviewer/Researcher | 15.75 |
| [redacted] | Economic Analyst | Interviewer/Researcher | 21.75 |

**Risk management**

The short timeline for the project combined with the significant effort required and reliance on stakeholders to donate their time for the benefit of the project means that risks need to be identified and mitigated.

| Risk | Impact | Likelihood | Mitigation |
|---|---|---|---|

| | | | |
|---|---|---|---|
| Illness to key staff | Moderate | Low | Project manager and project director share an office and remain in constant communication. One could take over from the other. |
| Unavailability of resources | Moderate | Low | LE's staffing process involves all PMs across the firms negotiating. The proposed staff members have been secured in these negotiations, but other staff are available should they be required. |
| Inability to identify ESA grantees | Moderate | Moderate | ESA grants are not always advertised, so it might be complicated to identify candidates for the case studies where ESA was an important factor. **We request a list from the UKSA to mitigate this risk.** |
| Unavailability of stakeholders | High | Moderate | A key risk to the project, which is only as strong as its interview records. We have set our strongest team to draw on all networks at our disposal and intend to contact known government officials for assistance. The mitigated risk is therefore considerably lower but could be mitigated further through UKSA's participation. |

## Proj 1.3 Understanding the Project Environment

The UK's government long-term objective for the space industry is to **generate 10% of the income created in the space market by 2030**, up from 5.1% in 2016-2017. To achieve this, **the national effort notably aims to attract up to £3 billion additional inward investment**.

To understand this ambitious goal, it is useful to remember that **inward foreign direct investment (FDI) represents an investment from a foreign investor into a UK enterprise**. This happens when a foreign investor either sets up a version itself in the UK, acquires at least 10% of the shares of a UK entity, acts as an angel investor (e.g. in a start-up), or re-invests profits earned in a UK subsidiary into the company itself (as opposed to repatriation).

Theoretically, FDI is attractive as economic theory suggests that **FDI may increase productivity, employment, and wages** of the economy. Empirical analyses corroborate this conclusion and show that FDI is crucial to the UK's economy. For instance, the Department for International Trade estimates **that 2,072 FDI projects were initiated in the UK over the period 2017-2018, ultimately leading to 75,968 new jobs**. UK businesses in receipt of FDI support 4 million jobs in the UK and contribute £335 billion to the economy. Additionally, these businesses are more productive than firms with no FDI link across all industry groups.

FDI location decisions are driven by various factors, including the size of the economy and the potential for growth, the capacity of the labour market to supply the necessary skills and workers, the potential for clustering effects and knowledge spillovers, the presence of existing supply chains, available transports and infrastructures, the financial support offered by the government, political stability, the wider regulatory framework, wage, tax, and exchange rates.

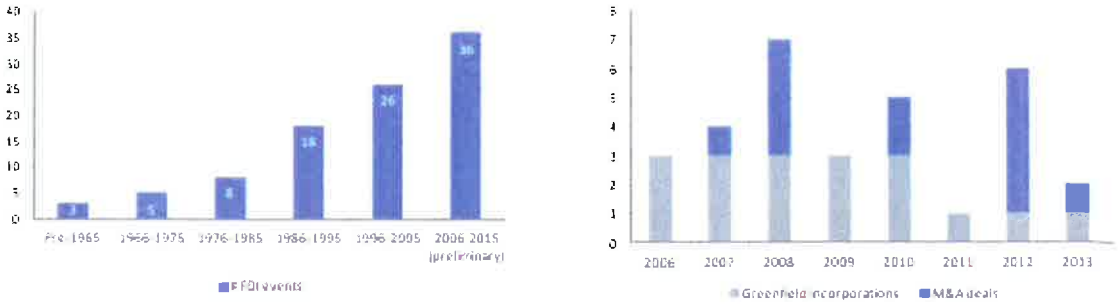
**In 2017, inward FDI was equal to £81.9 billion**. Though FDI has decreased from its 2011 levels (£104.6 billion), it has reversed the downward trend observed during the 2011-2016 period. Over this period, FDI fell to its lowest level in 2016 at £58.4 billion. Although the exchange rates have shown substantial variations over the last years, the observed variations in FDI are primarily driven by fundamental economic factors, such as profitability and the overarching investment environment.

The UKSA's aim to increase inward FDI by £3 billion is ambitious given the fierce competition offered by competitor countries such as other EEA members of similar size or

tax and business environments designed to attract FDI, notwithstanding the potential game-changing nature of the emergence of private-capital in the space industry.

**Nevertheless, the UK has been increasingly successful at luring foreign investors.** When defined as either greenfield incorporation of subsidiaries or M&A activity, Figure 1 highlights the surge in space-related FDI events over recent decades.

**Figure 1 FDI events in the UK space industry**



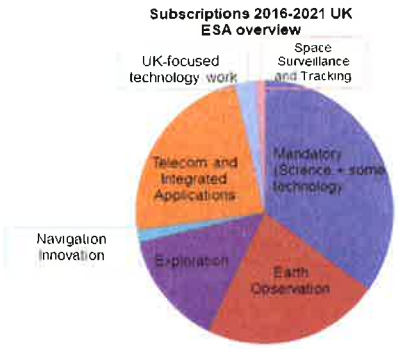

Source: London Economics (2015). The Case for Space 2015

Given the high cost and global focus of space projects, international collaboration through ESA remains a crucial element for the UK space sector. Such partnerships help to overcome potential scale and technical challenges inherent in developing space programmes. **Hence, access to ESA allows the UK to adopt a strategic approach to future investments**, a stance which would have been difficult to maintain otherwise given the absence of a joined-up long-term national space programme prior to the establishment of the UKSA. One of ESA's objectives is to provide industrial support to the European space industry. It does so by geo-returning the contribution of each member state, less an administrative fee that is used to fund ESA's central functions. The access to geo-return is described anecdotally as a major attraction of FDI, as foreign-based '**geo-return tourists**' establish in the UK.

However, it is important to consider other attractions of ESA beyond the financial perspective, i.e. the technical support it offers. ESA procurement is a centralised machine that employs highly qualified people who offer support and guidance to develop the best possible output. Paired with the mechanism to work cross-border and thus identify and engage the most suitable supplier in Europe, this process benefits industry as an important means of accessing the most cost-effective supplier, but equally a large and formalised market for (niche) products.

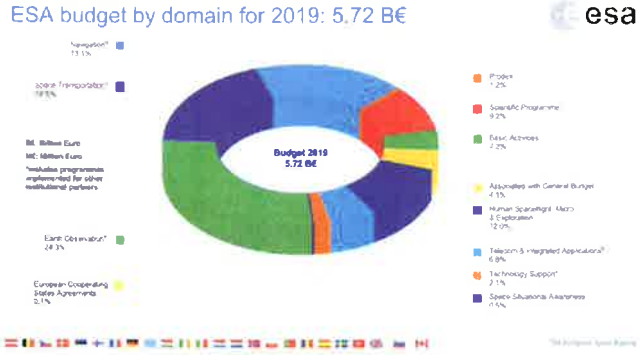
In terms of ESA membership, most European countries are ESA members, so, on the face of it, the UK might not offer anything special. However, ESA's system of mandatory and voluntary programmes means that **countries differentiate based on the profile of the national industrial base**. The UK's contribution to *telecoms and integrated applications*, for example, represents a share of the country's ESA subscription that is almost four times that of ESA's total budget. Any space company with particular capabilities in the telecoms domain might identify the UK as a desirable location to seek to reap the benefits of that investment.

**Figure 2 UK ESA subscriptions 2016-21 & ESA budget by domain 2019**




***Source: Statement of work***

***Source: European Space Agency, https://www.esa.int/About_Us/Welcome_to_ESA/Funding***



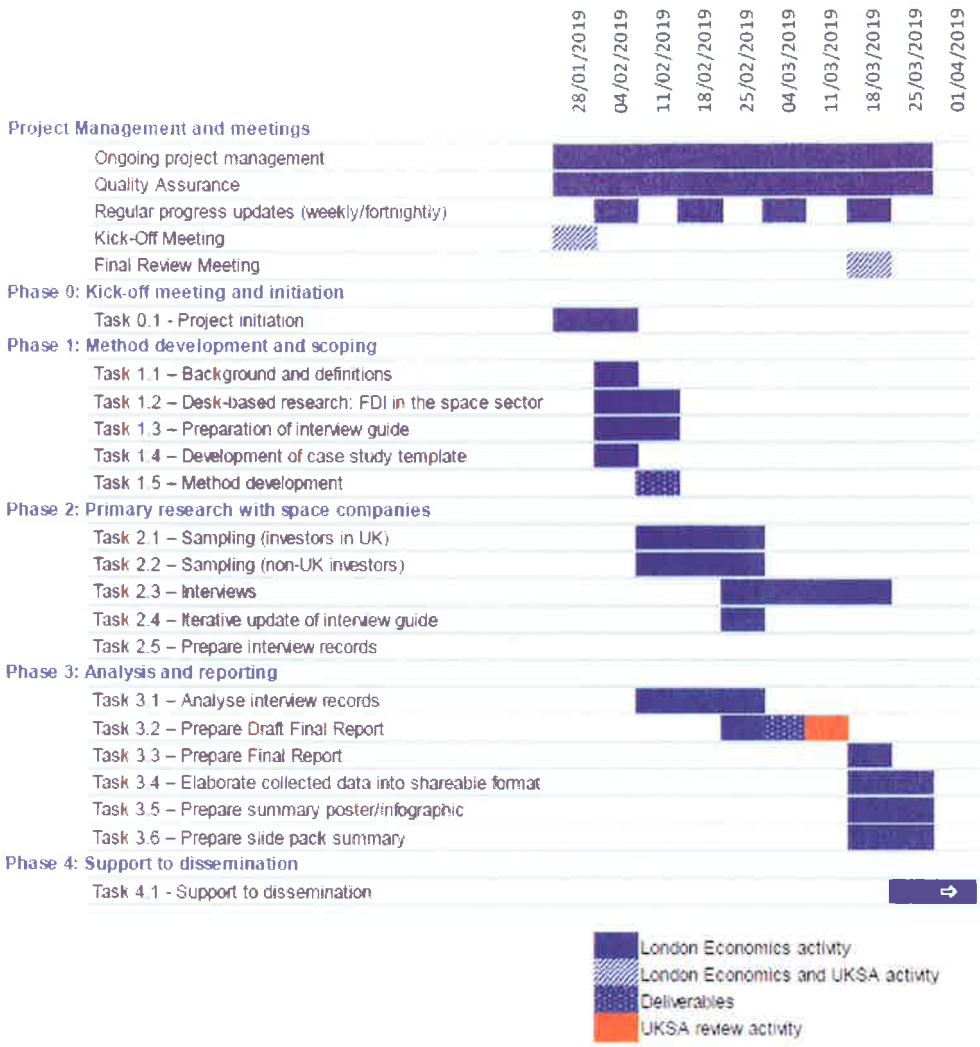

This importance of ESA membership is discussed in the Space Sector Report,[1] which mentions that **substantial increases in investments made in ESA played a role in stimulating the growth of FDI in space-related events**. A key objective of this research is to ascertain whether there is a causal link underlying the correlation between increases in ESA subscriptions and FDI events.

Other suggested factors include the government's financial support for R&D, the creation of the Satellite Applications Catapult, the presence of the Harwell incubator and ESA, the proactive approach adopted by the government in creating international partnerships, the strength of the existing UK space economy and the potential for knowledge spillovers, and the attractive investment environment.

The importance of these other factors will also be identified as part of the project, and their importance relative to ESA could help the Government refine the channels it employs in its FDI strategy and could inform the UK's position at the ESA Ministerial Council Meeting in December 2019.

## Proj 1.4 Project Plan and Timescales

To ensure we are able to deliver the findings of the project within the proposed timeline, we devised the following project plan, considering interdependencies. The short timeline means that we need to ensure concurrent activities are implemented in the most efficient way, allowing the different team members to focus on their individual activities.




## Milestones and deadlines

The table below summarises the milestones identified for the project:

| Title | Content | Date |
|---|---|---|
| Kick-Off Meeting | ▪ Kick-Off Meeting to ensure expectations align between UKSA and project team. | 29/01/2019 |
| Interim method plan report | ▪ Interim method plan report containing synthesis of findings from phase 1 and their impact on phase 2 (see Task 1.5). | T0+3w |
| Interim meeting or call | ▪ Whilst not formally required, we remain available should the UKSA desire an additional meeting to discuss the plan. | T0+4w |
| Draft Final Report | ▪ Executive summary;<br>▪ An accessible and **visually-engaging** report (innovative graphs, diagrams, etc.) presenting the key findings with appropriate level of disaggregation by FDI type (max 15 pages);<br>▪ 10 one-page company-specific case studies of FDI (of which six where ESA was a primary factor in their investment decision).<br>▪ 2-3 company-specific mini-case studies covering companies that considered but decided against investment in the UK. | 8/03/2019 |
| Final Report | ▪ Quality assured final report that will be published (with sensitive information redacted if required), including a technical report/section detailing the methodology of the research and analysis. | 22/03/2019 |

| | | |
|---|---|---|
| Collected data | ▪ Datasets to support those to be published in the final report (including interview records) in an accessible format (Excel) if appropriate. | 26/03/2019 |
| Progress updates | ▪ Regular (weekly/fortnightly) updates by phone on emerging finding and project progress. | |
| Summary poster/ infographic | ▪ Graphically engaging poster/infographic showing the results of the study. | 26/03/2019 |
| Slide pack summary | ▪ Slide pack summary to support dissemination. | 26/03/2019 |
| Final review meeting | ▪ Meeting to review draft final report | w/c 18/03/2019 |

**Time management approach**

We understand the urgency of the project and have devised a detailed GANTT to ensure all activities can commence immediately upon award of the project. The proposed team for this project is relatively large to enable concurrent activities, and we have appointed a project manager and a project director to ensure all progress is tracked against defined internal plans. We have weekly team meetings to take stock of ongoing projects and will use these to ensure progress is tracked in a structured and orderly manner.

The wider team at London Economics is available to assist in the unlikely case that the project slips behind schedule. Additional staff (with experience in both space and FDI-related matters) are on hand, and can be allocated at separate weekly staffing meetings, ensuring we are able to recover lost time in such unlikely event.