

Subsidy Advice Unit Report on the proposed Connectivity in Low Earth Orbit Programme subsidy scheme

Referred by the UK Space Agency

19 January 2024

Subsidy Advice Unit

Part of the Competition and Markets Authority

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1. Introduction

- 1.1 This report is an evaluation prepared by the Subsidy Advice Unit (SAU), part of the Competition and Markets Authority, under section 59 of the Subsidy Control Act 2022 (the Act).
- 1.2 The SAU has evaluated the assessment of compliance from the UK Space Agency (UKSA) of the Connectivity in Low Earth Orbit (C-LEO) programme with the requirements of Chapters 1 and 2 of Part 2 of the Act (the Assessment).¹
- 1.3 This report is based on the information provided to the SAU by UKSA in its Assessment and evidence submitted relevant to that Assessment. The SAU has also received and reviewed a third-party submission from an industry participant.
- 1.4 This report is provided as non-binding advice to the UKSA. The purpose of the SAU's report is not to make a recommendation on whether the scheme should be implemented, or directly assess whether it complies with the subsidy control requirements. UKSA is ultimately responsible for making the scheme, based on its own assessment, having the benefit of the SAU's evaluation.
- 1.5 A summary of our observations is set out at section 2 of this report.

The referred scheme/subsidy²

- 1.6 The C-LEO programme subsidy scheme (the C-LEO Scheme) will provide up to £93.75 million of grant funding to support research and development (R&D) for firms based in Great Britain (GB) to develop their Low Earth Orbit (LEO) satellite communications capabilities.
- 1.7 Applicants will be able to apply individually or as part of a consortium and request funding for up to £25 million per project, with the percentage of total project costs eligible for funding³ based upon the size and nature of the organisations involved. For large enterprises this will be 25%, for medium enterprises 35% and small

¹ Chapter 1 of Part 2 of the Act requires a public authority to consider the subsidy control principles and energy and environment principles before deciding to give a subsidy. The public authority must not award the subsidy unless it is of the view that it is consistent with those principles. Chapter 2 of Part 2 of the Act prohibits the giving of certain kinds of subsidies and, in relation to certain other categories of subsidy creates a number of requirements with which public authorities must comply.

² [Referral of the Connectivity in Low Earth Orbit Programme by the UK Space Agency \(UKSA\) - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/news/referral-of-the-connectivity-in-low-earth-orbit-programme-by-the-uk-space-agency-uksa)

³ Eligible costs will comprise personnel costs, costs of equipment and instruments (to the extent employed on the project), costs of buildings and land (to the extent employed on the project), costs of external consultancy and knowledge assets, project operating costs and overheads. All costs must be incurred through the delivery of the project to be considered eligible.

enterprises 45%, with an additional 15% made available where projects demonstrate effective collaboration.⁴

- 1.8 UKSA expects to run three or four annual funding calls (where applicants are invited to apply for funding under the C-LEO Scheme and a certain number of applications are approved for funding). It is expected that the first call will take place in 2024, with the final call taking place in 2026 or 2027.
- 1.9 Although organisations from Northern Ireland could seek funding under the C-LEO wider programme, this referral and report relates to the C-LEO Scheme which is open for companies based in GB only.

SAU referral process

- 1.10 On 28 November 2023, UKSA requested a report from the SAU in relation to the C-LEO Scheme.
- 1.11 UKSA explained⁵ that the C-LEO Scheme is a Subsidy Scheme of Particular Interest (SSoPI) because it allows for the provision of one or more Subsidies of Particular Interest (SOPI) to be given.⁶ In particular, UKSA stated that it expects to provide a subsidy greater than £10 million to a single enterprise under the C-LEO Scheme, and therefore is in excess of the SOPI threshold of £10 million.
- 1.12 The SAU notified UKSA on 5 December 2023 that it would prepare and publish a report within 30 working days (i.e., on or before 19 January 2024).⁷ The SAU published details of the referral on 6 December 2023.⁸

⁴ As set out in further details at paragraph 3.47 below, the Assessment states that the C-LEO Scheme has been influenced by the Research, Development and Innovation streamlined route, in particular with regards to the subsidy ratios. Effective collaboration is defined at paragraphs 7.5 and 7.6 of the [Research, Development and Innovation Streamlined Subsidy Scheme](#).

⁵ In the information provided under section 52(2) of the Act.

⁶ Within the meaning of regulation 3 of [The Subsidy Control \(Subsidies and Schemes of Interest or Particular Interest\) Regulations 2022](#) which sets out the conditions under which a subsidy or scheme is considered to be of particular interest.

⁷ Sections 53(1) and 53(2) of the Act.

⁸ [Referral of the Connectivity in Low Earth Orbit Programme by the UK Space Agency \(UKSA\) - GOV.UK \(www.gov.uk\)](#)

2. Summary of the SAU's observations

- 2.1 The Assessment uses the four-step structure described in the Statutory Guidance for the United Kingdom Subsidy Control Regime (the [Statutory Guidance](#)) and as reflected in the SAU's Guidance on the operation of the subsidy control functions of the Subsidy Advice Unit (the [SAU Guidance](#)).
- 2.2 We consider that UKSA has clearly articulated the policy objective and set out a series of relevant market failures including information asymmetries in capital markets for LEO satellite technology, which is supported with relevant evidence.
- 2.3 The Assessment also explores, and discounts, a range of potential alternatives to the subsidy. UKSA has clearly described the counterfactual and provided supporting evidence, explaining its methodological approach and how it concludes that in the absence of the C-LEO scheme, the levels of investment would be lower and occur over a much longer timeframe.
- 2.4 We consider that UKSA could strengthen parts of its Assessment, in particular:
- (a) In Step 1, by incorporating further evidence in support of some of the described market failures including the potential for spillover effects and better explaining the network/co-ordination barriers that the C-LEO Scheme seeks to overcome and how this will be achieved.
 - (b) In Step 2, by further explaining why the Advanced Research in Telecommunications Systems (ARTES) evaluation was an appropriate framework to apply.
 - (c) In Step 3, by more closely following the approach set out in the Statutory Guidance to demonstrate how the total subsidy scheme was assessed to be proportionate to the overall objective. The Assessment would also be strengthened by further explanation of how the subsidy design will help to offset the concentration of market power in favour of firms that may be smaller but more innovative.
 - (d) In Step 4, by considering further the potential for negative impacts of the C-LEO Scheme on international trade and investment.
- 2.5 As set out in paragraph 1.9 above whilst UKSA's C-LEO wider programme will also make provision for Northern Ireland, this referral and report relate only to the C-LEO Scheme as it operates in GB. The Assessment and relevant evidence are sufficiently disaggregated such that the assessment against the principles (and the supporting evidence cited) is specific to the referred aspects of the scheme.
- 2.6 Our report is advisory only and does not directly assess whether the C-LEO Scheme complies with the subsidy control requirements. The report does not

constitute a recommendation on whether the scheme should be implemented by UKSA. We have not considered it necessary to provide any advice about how the proposed scheme may be modified to ensure compliance with the subsidy control requirements.⁹

⁹ Section 59(3)(b) of the Act.

3. The SAU's Evaluation

3.1 This section sets out our evaluation of the Assessment, following the four-step framework structure used by UKSA.

Step 1: Identifying the policy objective, ensuring it addresses a market failure or equity concern, and determining whether a subsidy is the right tool to use

3.2 The first step involves an evaluation of the Assessment against:

- (a) Principle A: Subsidies should pursue a specific policy objective in order to (a) remedy an identified market failure or (b) address an equity rationale (such as local or regional disadvantage, social difficulties or distributional concerns); and
- (b) Principle E: Subsidies should be an appropriate policy instrument for achieving their specific policy objective and that objective cannot be achieved through other, less distortive, means.¹⁰

Policy objective

3.3 The Assessment states that the policy objective of the C-LEO Scheme is to future-proof GB's competitive edge in the high-value Satellite Communications (SatComs) sector by enabling its diversification into the high-growth and strategically important high-volume constellation market.¹¹ It sets out a series of sub-objectives which explain in more detail the intended aims and outcomes of the C-LEO Scheme. These include to:

- (a) accelerate the commercialisation and rapid industrialisation of key technologies and industry capabilities necessary for GB firms to meet demand for high-volume constellation production;
- (b) enable GB firms to secure a significant and sustained share of the high-value contracts due in the next 4-5 years that will drive the future sector supply chain;
- (c) develop GB's on-shore industrial capabilities in R&D-intensive activities of the constellation value chain; and

¹⁰ Further information about the Principles A and E can be found in the [Statutory Guidance](#) (paragraphs 3.32 to 3.56) and the [SAU Guidance](#) (paragraphs 4.7 to 4.11).

¹¹ A satellite constellation is a group of satellites working together as a system.

(d) catalyse private sector investment in GB's high-volume constellation sector by signalling the UK's commitment to the long-term growth of the SatComs sector.

3.4 UKSA has provided information in support of its Assessment, including a Full Business Case, which further explains that the C-LEO Scheme will attain the policy objective by assisting firms to overcome challenges in financing the necessary R&D to transition to high volume LEO SatComs development and manufacturing and to thereafter secure a significant and sustained share of future high-value C-LEO markets.

3.5 In our view, the Assessment clearly sets out the policy objective, which is supported with well-focussed and relevant evidence.

Market failure

3.6 The Statutory Guidance sets out that market failure occurs where market forces alone do not produce an efficient outcome.¹²

3.7 The Assessment states that developing the capability to deliver a high-volume LEO constellation is a significant challenge. Currently, GB suppliers could not deliver at the scale required for LEO constellations without significant redevelopment and/or the creation of new production facilities. It identifies the following specific market failures which the subsidy scheme aims to overcome.

Information asymmetries

3.8 The Assessment states that, given the character and technical nature of LEO satellite technology, the information required to make informed investment decisions is often restricted to a small set of knowledgeable entities - primarily government or incumbent firms. This, coupled with high levels of uncertainty and long payback periods make accessing capital markets difficult.

3.9 The Assessment cites an industry survey which found that that the largest barrier to expanding LEO constellation activity is access to finance. UKSA explains that the C-LEO Scheme will act as a signal to private investors that these innovative projects are credible.

Market power and barriers to entry

3.10 The Assessment states that transitioning to mass production requires high upfront costs, which acts as a barrier to entry and stifles innovation. It argues that the C-LEO Scheme will help all organisations (especially small and medium sized

¹² [Statutory Guidance](#), paragraphs 3.35-3.48

enterprises which typically find it harder to access the finance needed to scale-up their businesses) overcome the high upfront costs of transitioning to mass production. The Assessment states that this is particularly important as the SatComs market is characterised by a small number of relatively large companies. We return to this market concentration point in Step 3.

Externalities

- 3.11 The Assessment states that R&D into space technologies has the potential to generate significant spillover effects which private investors do not take into account when considering the level of investment to make. UKSA explains that the C-LEO Scheme will help boost the volume of Research, Development and Innovation (RD&I) undertaken towards a level that is more socially beneficial.

Network failures

- 3.12 The Assessment states that innovation in the SatComs market is hindered by a lack of coordination between researchers, innovators and investors and that the C-LEO Scheme will help to address these coordination failures by funding ambitious consortium projects within the SatComs market.

Market Failure Conclusion

- 3.13 In our view, the Assessment adequately explains and provides supporting evidence for the market failures which the C-LEO Scheme is designed to address, in particular asymmetries in capital markets for LEO satellite technology. The Assessment could be strengthened by incorporating further evidence in support of the other market failures identified including the potential for spillover effects, as we note that, whilst some evidence is presented in the business case which quantifies generic spill-over effects from R&D, this is not specific to SatComs. The Assessment could also better explain the network/co-ordination barriers that the C-LEO Scheme seeks to overcome and how this will be achieved.

Equity Objective

- 3.14 The Statutory Guidance sets out that equity objectives seek to reduce unequal or unfair outcomes between different groups in society or geographic areas.¹³
- 3.15 The Assessment states that the C-LEO Scheme will contribute towards an equity objective which is to prevent potential job losses that may arise from displacement or relocation of firms to markets in other countries where a subsidy is provided. It refers to the potential creation/protection of 2,000 jobs over the life of the

¹³ [Statutory Guidance](#), paragraphs 3.49-3.53.

programme, however notes that a disproportionate amount of funding under the C-LEO Scheme will be received by organisations in London. This is discussed further in Step 4.

- 3.16 In our view the Assessment explains the market failure associated with the primary policy objective more clearly than the equity objective, which is not well explained. The Assessment could be improved by focusing on the identified market failures or by more fully explaining and evidencing the intended equity objective and what specific contribution the C-LEO Scheme will make to addressing it.

Consideration of alternative policy options and why the C-LEO scheme is the most appropriate and least distortive instrument

- 3.17 In order to comply with Principle E, public authorities should consider why the decision to give a subsidy is the most appropriate instrument for addressing the identified policy objective, and why other means are not appropriate for achieving the identified policy objective.¹⁴
- 3.18 The Assessment states that the C-LEO Scheme is UKSA's preferred means of delivering its policy objective, as it provides a clearly communicable and quantifiable lever for companies to access funding, whilst supporting the delivery of national R&D objectives.
- 3.19 It goes on to set out the alternatives considered by UKSA. These include (i) potential regulatory measures/approaches, (ii) the direct provision by Government of satellites as well as (iii) the provision of equity funding and/or loans instead of grants.
- 3.20 The Assessment concludes that regulatory measures are not a feasible lever to influence the relevant commercial decisions because of the existing defined standards for spacecraft, and that the design specifications of any satellites would be set by the company procuring the satellites.
- 3.21 It also concludes that Government could not provide the satellites directly due to the commercial nature of the activity, the scale of cost involved, and its lack of expertise and manufacturing capability in the sector.
- 3.22 The Assessment describes equity funding as being 'generally agreed to be the best approach for Government because it is less risky'. However, it concludes that equity funding would be challenging to administer effectively across multiple companies, likely less attractive to companies who may not need to give up equity if they based their activity elsewhere and would involve trialling a new way of

¹⁴ [Statutory Guidance](#), paragraphs 3.54-3.56

investing within UKSA, which would not be practical in the time or at the scale required to meet the policy objectives.

- 3.23 The Assessment also briefly references consideration of loans which were rejected for similar reasons, explaining that UKSA is not currently set up to offer this kind of funding and would require engagement through a partner and potentially further approvals from HM Treasury.
- 3.24 It argues that grant funding is generally more successful at de-risking R&D projects for companies, which means improved additionality, inward funding and a lower chance of organisations deploying their R&D activities in other countries. As such, it concludes that the C-LEO Scheme is the most appropriate intervention.
- 3.25 In our view, the Assessment adequately sets out why the C-LEO Scheme is an appropriate means of achieving the policy objective and gives consideration to a number of alternatives and the reasons for their rejection. The reasoning behind the rejection of other regulatory levers however could have been better explained.

Step 2: Ensuring that the subsidy is designed to create the right incentives for the beneficiary and bring about a change

- 3.26 The second step involves an evaluation of the assessment against:
- (a) Principle C: First, subsidies should be designed to bring about a change of economic behaviour of the beneficiary. Second, that change, in relation to a subsidy, should be conducive to achieving its specific policy objective, and something that would not happen without the subsidy; and
 - (b) Principle D: Subsidies should not normally compensate for the costs the beneficiary would have funded in the absence of any subsidy.¹⁵

Counterfactual assessment

- 3.27 In assessing the counterfactual, the Statutory Guidance explains that public authorities should assess any change against a baseline of what would happen in the absence of the subsidy (the 'do nothing' scenario).¹⁶ This baseline would not necessarily be the current 'as is' situation (the 'status quo') but what would likely happen in the future – over both the long and short term – if no subsidy were awarded.
- 3.28 The Assessment sets out that GB firms have played a significant role in the development of key LEO capabilities and that these capabilities are highly

¹⁵ Further information about Principles C and D can be found in the [Statutory Guidance](#) (paragraphs 3.57 to 3.71) and the [SAU Guidance](#) (paragraphs 4.12 to 4.14).

¹⁶ [Statutory Guidance](#), paragraphs 3.60-3.62.

dependent on those firms having the capacity to transform Intellectual Property (IP) into saleable products and services.

3.29 It describes the following counterfactual in the absence of the C-LEO Scheme:

- (a) In the short term, if firms are unable to access R&D support to help turn this IP into products, they will miss out on commercial success. Thereafter they may quickly lose key personnel, taking their knowledge and skillset with them, resulting in firms potentially losing their innovative edge in design.
- (b) In the longer term, if firms continue to bid unsuccessfully for commercial contracts, they will cease to attract key personnel which will further erode their commercial success. They may then be incentivised to move investment overseas to take advantage of subsidy support from other countries, thereby removing high-skilled jobs and services from the local economy. Similarly, domestic high-value IP would be less likely to be translated into scaled up saleable products and more likely to be attracted overseas by other countries' support offers.

3.30 The Assessment provides evidence from an evaluation of the ARTES project¹⁷ which found that, in the absence of government funding, 77% of organisations would not have gone ahead with their projects, 16% would have gone ahead with a longer timeframe and reduced scope, and 6% would have proceeded with alternative funding.

3.31 By applying the findings of the ARTES evaluation, UKSA estimated how total investment in the context of the C-LEO Scheme compares against the counterfactual (i.e. no subsidy) up to 2032 and presented its results graphically. This showed that in the counterfactual, investment takes place over a much longer timeframe than under the C-LEO scheme. This methodological approach is further discussed in paragraph 3.40 below.

3.32 In our view, UKSA has clearly described the counterfactual and provided supporting evidence, explaining its methodological approach and how it concludes that in the absence of the C-LEO scheme, the levels of investment would be lower and occur over a much longer timeframe. The Assessment could be strengthened by further explanation of why the ARTES evaluation was an appropriate framework to apply.

¹⁷ £60 million of funding assigned through the European Space Agency's (ESA) programme of ARTES. The ARTES programme offers varying degrees of research and development support to space-related projects with different levels of operational and commercial maturity
https://www.esa.int/Applications/Connectivity_and_Secure_Communications/ARTES/About_ARTES.

Changes in economic behaviour of the beneficiary

- 3.33 The Statutory Guidance sets out that subsidies must bring about something that would not have occurred without the subsidy.¹⁸ In demonstrating this, public authorities should consider the likely change or additional net benefit. An example of this could be an increase in the scale or scope of a project or activity.
- 3.34 The Assessment sets out that the C-LEO Scheme will change the beneficiaries' economic behaviour by enabling them to overcome market inefficiencies by developing their existing IP into products for high volume manufacturing. The scheme's objectives will be achieved by growing GB firms' design capability in high-volume manufacturing which will improve commercial competitiveness and the likely success of bidding for future constellation opportunities.
- 3.35 In support of the Assessment, UKSA has provided a Full Business Case which explains that by de-risking technology development and improving design maturity, market access for firms in the development of LEO constellations is enhanced. The scale of the C-LEO Scheme is also likely to drive new and sustained collaborations between participating companies and this will help selected firms to develop competitive bids in future procurements in the SatComs sector.
- 3.36 We consider that, taken together, the Assessment and supporting information adequately explain the change in economic behaviour of potential beneficiaries. This could have been strengthened further by including evidence from potential beneficiaries of identified future projects enabled by the subsidy.

Additionality assessment

- 3.37 According to the Statutory Guidance, 'additionality' means that subsidies should not be used to finance a project or activity that the beneficiary would have undertaken in a similar form, manner, and timeframe without the subsidy.¹⁹ For schemes, public authorities should also, where possible and reasonable, ensure the scheme's design can identify in advance and exclude those beneficiaries for which it can be reasonably determined that they would likely proceed without subsidy.²⁰
- 3.38 The Assessment outlines that the C-LEO Scheme will accelerate the commercialisation and industrialisation of key technologies and industry capabilities for GB firms to meet demand for high-volume constellation production, which in turn would increase the profile and reputation of the GB space sector internationally. The Assessment further argues that the C-LEO Scheme will deliver

¹⁸ [Statutory Guidance](#), paragraph 3.64.

¹⁹ [Statutory Guidance](#), paragraphs 3.63-3.67.

²⁰ [Statutory Guidance](#), paragraph 3.69

additional benefits such as job protection/creation, increase in skills and capabilities, increasing collaboration across the space sector.

- 3.39 The Assessment states that although there is some market access to finance, it is unlikely to be considered sufficient to create or retain technological capability as set out above. The C-LEO Scheme as designed (for £93.75 million) attracts a further £93.75 million of privately matched investment which would generate the required economic benefits.
- 3.40 As set out in paragraph 3.30, UKSA conducted an evaluation of the ARTES scheme which identified that approximately 6% of firms involved in the ARTES scheme would have proceeded with their projects (with a similar timeframe and scope) absent the subsidy. UKSA has referred to this 6% as 'deadweight', i.e. those firms with projects that would have occurred absent the subsidy. This 6% of firms translated to 9% of total funding from these firms. UKSA has applied this methodological approach to the proposed C-LEO scheme and assumed, similarly, that 9% of funding may occur absent the subsidy.
- 3.41 The Assessment explains that a significant component (21%) of the investment activity to which the funding will be provided would have occurred but only over longer periods than the C-LEO programme and that 9% would occur within the same timeframe without the subsidy. The Assessment argues that delaying investment would mean that beneficiaries are more likely to lose out on upcoming constellation contracts.
- 3.42 We further note that the Statutory Guidance states that public authorities should demonstrate that the benefits justify bringing forward projects that would have happened without the subsidy²¹ and that, for schemes, public authorities should seek to design schemes that they expect to bring about additionality in a high proportion of beneficiaries.²²
- 3.43 We consider that the Assessment adequately explains how the C-LEO Scheme encourages further private investment (match funding) which may not have occurred absent the scheme. The Assessment also explains how the scheme intends to bring forward investment to a significantly earlier point than it would have otherwise. We have also found that the Assessment has explained and quantified the economic benefits associated with the scheme.
- 3.44 However, the Assessment, having helpfully identified the potential for significant "deadweight," could be strengthened by explaining what, if any, consideration was given to designing the parameters of the C-LEO Scheme to minimise this effect

²¹ [Statutory Guidance](#), paragraph 3.64.

²² [Statutory Guidance](#), paragraph 3.70.

and/or why it had concluded that the anticipated lack of additionality for 9% of funding was, in its view, acceptable.

Step 3: Considering the distortive impacts that the subsidy may have and keeping them as low as possible

3.45 The third step involves an evaluation of the assessment against:

- (a) Principle B: Subsidies should be proportionate to their specific policy objective and limited to what is necessary to achieve it; and
- (b) Principle F: Subsidies should be designed to achieve their specific policy objective while minimising any negative effects on competition or investment within the United Kingdom.²³

Proportionality and limited to what is necessary

3.46 The Assessment contains a description of several factors which relate to the proportionality of the subsidy with respect to the stated policy objectives, including that the:

- (a) provision of funds to individual entities or consortia would be contingent on showing an effective commercialisation strategy with proof of market demand for the technology developed, and subject to satisfying eligibility criteria guaranteeing substantive GB benefit;
- (b) subsidy would be delivered over a period of four years, which accommodates the timeframe required to feasibly carry out the R&D required and for these developments to become marketable;
- (c) size of the total subsidies is modest in relation to the market size and its growth; and
- (d) detailed monitoring and evaluation process will consider proportionality after subsidies have been awarded and that this will inform the design of any future expansion of the program.

3.47 In addition, the Assessment states at various points that the C-LEO Scheme has been influenced by the RD&I streamlined route²⁴ with regard to the level of subsidy awarded, the subsidy intensities, the ratio of private to government investment and the type of project costs claimable. Whilst UKSA may have found streamlined route eligibility and guidance a useful reference point in its

²³ Further information about the Principles B and F can be found in the [Statutory Guidance](#) (paragraphs 3.72 to 3.108) and the [SAU Guidance](#) (paragraphs 4.15 to 4.19).

²⁴ [Subsidy Control Act 2022: Streamlined Routes](#)

Assessment, we note that generally this guidance is intended for smaller subsidies.

- 3.48 Whilst the Assessment does not directly address whether the C-LEO Scheme is limited to the minimum necessary, some relevant information is provided in an appended Economic Case Methodology. This document explains that the overall amount of C-LEO Scheme funding is based on market insight gained through managing the UK contribution to the ESA ARTES programme and reflects the 'engineering requirements and the limits of what can be achieved by the SatCom sector in the timeframe'. However, little further detail is provided.

Proportionality and minimum necessary Conclusion

- 3.49 In our view, whilst the Assessment provides some explanation as to the proportionality of the C-LEO Scheme, it would be strengthened by following the approach set out in Statutory Guidance more fully to demonstrate how the C-LEO scheme was assessed to be proportionate to the overall objective.
- 3.50 More detailed costings would have been informative with regard to whether the subsidy is the minimum necessary. In addition, the Assessment should discuss how this scheme fits in with similar available schemes²⁵ (and how double compensation can be avoided).
- 3.51 Finally, the Assessment could have provided further explanation and evidence as to whether the design components of the RD&I streamlined route are adequate to ensure proportionality, considering the significantly higher value of the scheme.

Assessment of the effects on competition and investment

- 3.52 Whilst the Assessment does not closely follow the recommended approach of the Statutory Guidance, it usefully sets out the characteristics and design of the C-LEO Scheme including timing, what costs the subsidy can be used for, the monitoring and evaluation plan and a brief description of the eligibility criteria. The elements of the subsidy design that minimise the potential for distortion of competition or investment include:
- (a) the overall size of the subsidy scheme which is modest in relation to the market size and therefore would not have a disproportionate impact on competition;
 - (b) awards made will be match funded; and

²⁵ The Assessment provides that the C-LEO Scheme will be supported by two additional elements which include the ARTES programme and work to develop an 'in-kind contribution' in collaboration with other government departments.

(c) awards will be time limited to a four-year period.

- 3.53 However, we note that the Assessment contains limited discussion of the specific market in question and how this had been defined. We consider that a more systematic consideration of relevant market characteristics, such as the key competing firms, products and services, input and related markets would have enabled a more detailed analysis of the effects of the subsidy on competition and investment and enabled a fuller analysis of the potential distortions that might result from the subsidy.
- 3.54 Similarly though the Assessment describes job creation which will result from the subsidy, it may have benefitted from a fuller discussion of the impact of this on the labour market, e.g. whether skills shortages may create distortions in related sectors that rely on similar skills or whether there may be distortions to the regional labour markets due to a disproportionate amount of C-LEO funding going to organisations in London and the South East, compared to the rest of GB.
- 3.55 The Assessment would also have been strengthened by further explanation of the selection process and other mechanisms by which market power could be offset by subsidy allocation. This is particularly true in light of the discussion in the Assessment of the potential for the subsidy to limit the market power of established companies within the sector in favour of those with strong potential IP and R&D that may be smaller but more innovative.
- 3.56 During its evaluation the SAU received a third-party representation from an industry participant who stated its support for the proposed scheme in terms of providing an incentive for firms to collaborate. However, it also commented that the scope of the scheme should be widened to include more technologies, as this would make the scheme less restricted and more competitive. The SAU is not in a position to comment on the merits of this proposal; however, we would encourage UKSA to consider this further as appropriate.
- 3.57 We also note that throughout the Assessment UKSA refers to the potential for firms to be incentivised to move investment overseas to take advantage of similar types of subsidy support from other countries. A fuller identification of the relevant market(s) and in particular their geographic dimension within the Assessment would have facilitated UKSA's assessment of potential distortions of international trade and investment in Step 4 (see paragraph 3.68 below).

Effects on Competition Conclusion

- 3.58 Overall, in our view the evaluation of the subsidy's impact on competition and investment could be improved by a more detailed market assessment to identify potential distortive effects. Furthermore, given that a key objective of the C-LEO Scheme is to offset the concentration of market power, more explanation of how

the subsidy design would achieve this would have strengthened the assessment. Finally, in light of the international nature of SatComs, the Assessment would be improved by a more detailed analysis of the effects of this subsidy on international trade and investment.

Step 4: Carrying out the balancing exercise

- 3.59 The fourth step involves an evaluation of the assessment against subsidy control Principle G: subsidies' beneficial effects (in terms of achieving their specific policy objective) should outweigh any negative effects, including in particular negative effects on: (a) competition or investment within the United Kingdom; (b) international trade or investment.²⁶
- 3.60 The Assessment identifies the expected benefits of the scheme. These include that by undertaking R&D, the Technology Readiness Levels²⁷ of the funded projects will increase and this will stimulate further downstream investments as the projects being developed progress towards deployment. Additionally, higher levels of R&D are expected to increase the skills and capabilities of the workforce, promote higher levels of collaboration between organisations and enhance the sector's international profile and reputation.
- 3.61 The Assessment further articulates that, as the funding is expected to positively impact the growth of the grant recipients, this will lead to an increase in revenue (aiming to reach £2 billion by 2028) while also supporting and creating 2,000 jobs. It states that the benefit-cost ratio of the C-LEO Scheme will be 1.3.²⁸
- 3.62 The Assessment considers two possible negative effects of the C-LEO scheme. Firstly, that not all applicants will be successful in being awarded funding and undertake their proposed project, which will disadvantage these organisations compared to organisations who were successful. However, we note that this effect is likely to be mitigated by the fact that funding will be awarded through a competitive process.
- 3.63 Secondly, in the immediate term, UKSA anticipates that a disproportionate amount of funding under the C-LEO Scheme will be received by organisations in London and the South East, compared to the rest of GB. However, the Assessment states that the benefits of the C-LEO Scheme will promote sectoral growth and present

²⁶ See [Statutory Guidance](#) (paragraphs 3.109 to 3.117) and [SAU Guidance](#) (paragraphs 4.20 to 4.22) for further detail.

²⁷ Technology readiness levels are a type of measurement system used to assess the maturity level of a particular technology.

²⁸ The benefit-cost ratio (BCR) is a ratio used in a cost-benefit analysis to summarize the overall relationship between the relative costs and benefits of a proposed project. If a project has a BCR greater than 1.0, the project is expected to deliver a positive net present value (NPV) and should be considered. In its analysis, the UKSA have compared what they consider the monetisable benefits and costs of the C-LEO Scheme and concluded it will have a positive NPV. The BCR is sensitive to variables including the "deadweight" calculation of 30% (see paragraph 3.40 and 3.41) However, even assuming deadweight at the upper end (greater than 50%), the UKSA calculated that the BCR would still be greater than 1.0.

opportunities for firms with the ability to manufacture the supported technologies, which may lead to a wider geographic distribution of firms in the future.

- 3.64 The effects on international trade are also considered but, we note, only in so far as identifying a positive effect given the expectation that GB industry will be able to compete more effectively against international competitors who are described as currently receiving a higher level of support from the relevant national governments.
- 3.65 The Assessment concludes that the benefits of the C-LEO scheme outweigh the negative impacts.
- 3.66 We consider that the benefits of the C-LEO scheme have been adequately explained. However, the Assessment could be strengthened by a more fully articulated description of the expected jobs impact, how this will be realised and how it contributes to the equity objective set out in Step 1. In addition, how UKSA expect the C-LEO Scheme to potentially lead to a wider geographic distribution of firms could have been more fully explained.
- 3.67 While the Assessment acknowledges potential negative effects, it would have been strengthened if it had more closely followed the Statutory Guidance²⁹ and considered potential negative competitive impacts of the C-LEO Scheme in the balancing exercise (see paragraph 3.58)
- 3.68 The Assessment would also be significantly strengthened by consideration of the potential for negative impacts of the C-LEO Scheme on international trade and investment within Step 4 (see paragraph 3.57). Currently only the potential positive effects for GB industry being able to compete more effectively with international competitors are considered.

Other Requirements of the Act

- 3.69 This step in the evaluation relates to the requirements and prohibitions set out in Chapter 2 of Part 2 of the Act, where these are applicable.³⁰ UKSA confirmed that no other requirements or prohibitions set out in Chapter 2 of Part 2 of the Act applies to the scheme.

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²⁹ [Statutory Guidance](#), paragraph 3.113-3.117

³⁰ [Statutory Guidance](#), chapter 5.