

OFFICIAL-SENSITIVE (COMMERCIAL)**UK Shared Business Services Ltd (UK SBS)**

TRL LIMITED
Crowthorne House,
Nine Mile Ride,
Wokingham,
Berkshire,
RG40 3GA

Tuesday, 26 February 2019

Dear Sir/Madam,

Contract Title: Safe Use of Domestic Virtual Reality Systems
Contract Reference: UK SBS CR18195

The Contract shall be subject to the UK-Shared Business Services Ltd S1 Terms and Conditions for the Purchase of Services and the following Schedules:

Schedule 1	Special Conditions
Schedule 2	Purchase Order Form
Schedule 3	The Services
Appendix A	Specification
Appendix B	Bidder Response

Please note that this Contract is subject to signed Contract Acceptance

Yours Sincerely,


Category Manager
Research Team
UK Shared Business Services Ltd
Research@uksbs.co.uk

S1 - PRECEDENT CONTRACT FOR THE PURCHASE OF SERVICES

SECTION A

This Contract is dated Tuesday, 26 February 2019

Parties

- (1) Department for Business, Energy & Industrial Strategy (BEIS) of, 1 Victoria Street, London SW1H 0ET (The Contracting Authority).
- (2) TRL LIMITED, a company incorporated and registered in England with company number 03142272 and registered VAT number GB 664 625 321 whose registered office is at Crowthorne House, Nine Mile Ride, Wokingham, Berkshire, RG40 3GA (the Supplier).

Background

The Contracting Authority wishes the Supplier to supply, and the Supplier wishes to supply, the Services (as defined below) in accordance with the terms of the Contract (as defined below).

A1 Interpretation

A1-1 **Definitions.** In the Contract (as defined below), the following definitions apply:

Agent: Where UK Shared Business Services is not the named Contracting Authority is Parties (1), UK SBS has been nominated as agent on behalf of the Contracting Authority and therefore all communications both written and verbal will be received as issued by the Contracting Authority.

Associated Bodies and Authorised Entities: Associated Bodies and Authorised Entities include but are not limited to The Science and Technology Facilities Council, The Medical Research Council, The Engineering and Physical Sciences Research Council, The Economic and Social Research Council, The Natural Environment Research Council, The Arts and Humanities Research Council, The Biotechnology and Biological Sciences Research Council, UK SBS Ltd, Central Government Departments and their Agencies, Non Departmental Public Bodies, NHS bodies, Local Authority's, Voluntary Sector Charities, and/or other private organisations acting as managing agents or procuring on behalf of these UK bodies. Further details of these organisations can be found at: <http://www.ukpbs.co.uk/services/procure/contracts/Pages/default.aspx>

Business Day: a day (other than a Saturday, Sunday or public holiday) when banks in London are open for business.

Charges: the charges payable by the Contracting Authority for the supply of the Services in accordance with clause B4.

Commencement: the date and any specified time that the Contract starts

Conditions: the terms and conditions set out in this document as amended from time to time in accordance with clause C7-11.

Contract Number: CR18195

Confidential Information: any confidential information, knowhow and data (in any form or medium) which relates to UK SBS, the Contracting Authority or the Supplier, including information relating to the businesses of UK SBS, the Contracting Authority or the Supplier and information relating to their staff, finances, policies and procedures. This includes information identified as confidential in the Order or the Special Conditions (if any):

Contract: the contract between the Contracting Authority and the Supplier for the supply of the Services, in accordance with these Conditions, any Special Conditions and the Order only.

Contracting Authority: Department for Business, Energy & Industrial Strategy (BEIS), as specified at Section A (1) and any replacement or successor organisation.

Delivery Date (Services): the date or dates specified in the Order when the Services shall commence as set out in the Order and until the end date specified in the Order

Deliverables: all Documents, products and materials developed by the Supplier or its agents, contractors and employees as part of or in relation to the Services in any form, including computer programs, data, reports and specifications (including drafts).

Document: includes, in addition to any document in writing, any drawing, map, plan, diagram, design, picture or other image, tape, disk or other device or record embodying information in any form.

EIR: the Environmental Information Regulations 2004 together with any guidance and/or codes of practice issued by the Information Commissioner or relevant government department in relation to such regulations.

FOIA: the Freedom of Information Act 2000 and any subordinate legislation made under the Act from time to time, together with any guidance and/or codes of practice issued by the Information Commissioner or relevant government department in relation to such legislation.

Information: has the meaning given under section 84 of FOIA.

Intellectual Property Rights: all patents, rights to inventions, utility models, copyright and related rights, trademarks, service marks, trade, business and domain names, rights in trade dress or get-up, rights in goodwill or to sue for passing off, unfair competition rights, rights in designs, rights in computer software, database right, topography rights, rights in confidential information (including know-how and trade secrets) and any other intellectual property rights, in each case whether registered or unregistered and including all applications for and renewals or extensions of such rights, and all similar or equivalent rights or forms of protection in any part of the world.

Order: the Contracting Authority's order for the Services, as set out in the Contracting Authority's completed purchase order form (including any Specification) which is in the format of the pro forma order form attached at Schedule 2. For the avoidance of doubt, if the Contracting Authority's purchase order form is not in the format of the pro forma order form at Schedule 2, it will not constitute an Order.

Public Body: any part of the government of the United Kingdom including but not limited to the Northern Ireland Assembly and Executive Committee, the Scottish Executive and the National Assembly for Wales, local authorities, government

ministers and government departments and government agencies.

Request for Information: a request for Information or an apparent request under FOIA or EIR.

Scheme Effective Date: the date on which the United Kingdom Research and Innovation become a legal entity.

Services: the Services, including without limitation any Deliverables Deliverables and Supplies required to complete the Services, to be provided by the Supplier under the Contract as set out in the Order.

Special Conditions: the special conditions (if any) set out in Schedule 1.

Specification: any specification for the Services or Supplies, including any related plans and drawings that is supplied to the Supplier by the Contracting Authority, or produced by the Supplier and agreed in writing by the Contracting Authority.

Supplier or Suppliers: the parties to the contract as named in Section A (2).

Supplies: any such thing that the Supplier is required to Deliver, that does not require or include Services or Deliverables

Supplier's Associate: any individual or entity associated with the Supplier including, without limitation, the Supplier's subsidiary, affiliated or holding companies and any employees, agents or contractors of the Supplier and / or its subsidiary, affiliated or holding companies or any entity that provides Services for or on behalf of the Supplier.

TUPE: the Transfer of Undertakings (Protection of Employment) Regulations 2006 as amended or replaced from time to time.

UKRI: UK Research Council and Innovation, established as a body corporate in accordance with the Higher Education and Research Act 2017.

UK SBS: UK Shared Business Services Limited (a limited company registered in England and Wales with company number 06330639). Where UK SBS is not named as the Contracting Authority within section A (1), UK SBS will be acting as an agent on behalf of the Contracting Authority.

Working Day: any Business Day excluding 27, 28, 29, 30 and 31 December in any year.

A1-2 Construction. In the Contract, unless the context requires otherwise, the following rules apply:

A1-2-1 A person includes a natural person, corporate or unincorporated body (whether or not having separate legal personality).

A1-2-2 A reference to a party includes its personal representatives, successors or permitted assigns.

A1-2-3 A reference to a statute or statutory provision is a reference to such statute or provision as amended or re-enacted. A reference to a statute or statutory provision includes any subordinate legislation made under that statute or statutory provision, as amended or re-enacted.

A1-2-4 Any phrase introduced by the terms **Including, include, in particular** or any similar expression shall be construed as illustrative and shall not limit the sense of the words preceding those terms.

A1-2-5 The headings in these Conditions are for ease of reference only and do not affect the interpretation or construction of the Contract.

A1-2-6 A reference to **writing** or **written** includes faxes and e-mails.

A2 Basis of contract

- A2-1 Where UK SBS is not the Contracting Authority, UK SBS is the agent of the Contracting Authority for the purpose of procurement and is authorised to negotiate and enter into contracts for the supply of Services on behalf of the Contracting Authority. UK SBS will not itself be a party to, nor have any liability under, the Contract unless it is expressly specified as Contracting Authority in the Order.
- A2-2 The terms of this Contract, any Special Conditions and the Order apply to the Contract to the exclusion of all other terms and conditions, including any other terms that the Supplier seeks to impose or incorporate (whether in any quotation, confirmation of order, in correspondence or in any other context), or which are implied by trade, custom, practice or course of dealing.
- A2-3 If there is any conflict or inconsistency between the terms of this Contract, the Special Conditions (if any) and the Order (including any Specification), the terms of the Contract will prevail over the Special Conditions and the Special Conditions will prevail over the Order (including any Specification), in each case to the extent necessary to resolve that conflict or inconsistency.
- A2-4 The Order constitutes an offer by the Contracting Authority to purchase the Services in accordance with this Contract (and any Special Conditions). This offer shall remain valid for acceptance by the Supplier, in accordance with clause A2-5, for 28 days from the date of the Order. Notwithstanding that after 28 days the offer will have expired, the Contracting Authority may, at its discretion, nevertheless treat the offer as still valid and may elect to accept acceptance by the Supplier, in accordance with clause A2-5, as valid acceptance of the offer.
- A2-5 Subject to clause A2-4, the Order shall be deemed to be accepted on the date on which authorised representatives of both parties have signed a copy of this Contract, at which point the Contract shall come into existence. The Contract shall remain in force until all the parties' obligations have been performed in accordance with the Contract, at which point it shall expire, or until the Contract has been terminated in accordance with clause A3.

A3 Termination

- A3-1 The Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority may terminate the Contract in whole or in part at any time before the Services are provided with immediate effect by giving the Supplier written notice, whereupon the Supplier shall discontinue all work on the Contract. The Contracting Authority shall pay the Supplier fair and reasonable compensation for work-in-progress at the time of termination, but such compensation shall not include loss of anticipated profits or any consequential loss. The Supplier shall have a duty to mitigate its costs and shall on request provide proof of expenditure for any compensation claimed.
- A3-2 The Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority may terminate the Contract with immediate effect by giving written notice to the Supplier if:

- A3-2-1 the circumstances set out in clauses B2-1-1, C3 or C4-1 apply;
- A3-2-2 the Supplier breaches any term of the Contract and (if such breach is remediable) fails to remedy that breach within 30 days of being notified in writing of the breach; or
- A3-2-3 the Supplier suspends, or threatens to suspend, payment of its debts or is unable to pay its debts as they fall due or admits inability to pay its debts or (being a company) is deemed unable to pay its debts within the meaning of section 123 of the Insolvency Act 1986, or (being an individual) is deemed either unable to pay its debts or as having no reasonable prospect of so doing, in either case, within the meaning of section 268 of the Insolvency Act 1986, or (being a partnership) has any partner to whom any of the foregoing apply; or
- A3-2-4 the Supplier commences negotiations with all or any class of its creditors with a view to rescheduling any of its debts, or makes a proposal for or enters into any compromise or arrangement with its creditors; or
- A3-2-5 (being a company) a petition is filed, a notice is given, a resolution is passed, or an order is made, for or in connection with the winding up of the Supplier; or
- A3-2-6 (being an individual) the Supplier is the subject of a bankruptcy petition or order; or
- A3-2-7 a creditor or encumbrancer of the Supplier attaches or takes possession of, or a distress, execution, sequestration or other such process is levied or enforced on or sued against, the whole or any part of its assets and such attachment or process is not discharged within 14 days; or
- A3-2-8 (being a company) an application is made to court, or an order is made, for the appointment of an administrator or if a notice of intention to appoint an administrator is given or if an administrator is appointed over the Supplier; or
- A3-2-9 (being a company) a floating charge holder over the Supplier's assets has become entitled to appoint or has appointed an administrative receiver; or
- A3-2-10 a person becomes entitled to appoint a receiver over the Supplier's assets or a receiver is appointed over the Supplier's assets; or
- A3-2-11 any event occurs, or proceeding is taken, with respect to the Supplier in any jurisdiction to which it is subject that has an effect equivalent or similar to any of the events mentioned in clause A3-2-3 to clause A3-2-10 inclusive; or
- A3-2-12 there is a change of control of the Supplier (within the meaning of section 1124 of the Corporation Tax Act 2010); or
- A3-2-13 the Supplier suspends, or threatens to suspend, or ceases or threatens to cease to carry on, all or substantially the whole of its business; or
- A3-2-14 the Supplier's financial position deteriorates to such an extent that in the Contracting Authority's opinion the Supplier's capability to adequately fulfil its obligations under the Contract has been placed in jeopardy; or
- A3-3 Termination of the Contract, however arising, shall not affect any of the parties' rights and remedies that have accrued as at termination. Clauses which expressly or by implication survive termination or expiry of the Contract shall continue in full

force and effect.

A3-4 Without prejudice to clause A3-3, clauses B1, B2, B5, B6, B7, B8, B9, C1, C2, C3, C4, C6 and C7 shall survive the termination or expiry of the Contract and shall continue in full force and effect.

A3-5 Upon termination or expiry of the Contract, the Supplier shall immediately:

A3-5-1 cease all work on the Contract;

A3-5-2 Deliver to the Contracting Authority all Deliverables and all work-in-progress whether or not then complete. If the Supplier fails to do so, then the Contracting Authority may enter the Supplier's premises and take possession of them. Until they have been returned or delivered, the Supplier shall be solely responsible for their safe keeping and will not use them for any purpose not connected with this Contract;

A3-5-3 cease use of and return (or, at the Contracting Authority's or UK SBS's acting as an agent on behalf of the Contracting Authority's election, destroy) all of the Contracting Authority's Materials in the Supplier's possession or control; and

A3-5-4 Cease all use of, and delete all copies of, UK SBS's or the Contracting Authority's or UK SBS's confidential information.

A3-6 The Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority shall at any time have the right for convenience to terminate the Contract or reduce the quantity of Services to be provided by the Supplier in each case by giving to the Supplier reasonable written notice. During the period of notice the Contracting Authority may direct the Supplier to perform all or any of the work under the Contract. Where the Contracting Authority has invoked either of these rights, the Supplier may claim reasonable costs necessarily and properly incurred by him as a result of the termination or reduction, excluding loss of profit, provided that the claim shall not exceed the total cost of the Contract. The Supplier shall have a duty to mitigate its costs and shall on request provide proof of expenditure for any compensation claimed

SECTION B

B1 Supply of Services

B1-1 The Supplier shall from the date set out in the Contract and until the end date specified in the Contract provide the Services to the Contracting Authority in accordance with the terms of the Contract:

B1-2 The Supplier shall meet any performance dates for the Services (including the delivery of Deliverables) specified in the Order (including any Special Conditions and any applicable Specification) or notified to the Supplier by the Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority.

B1-3 In providing the Services, the Supplier shall:

B1-3-1 co-operate with the Contracting Authority in all matters relating to the Services, and comply with all instructions of the Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority;

- B1-3-2 perform the Services with the best care, skill and diligence in accordance with best practice in the Supplier's industry, profession or trade;**
- B1-3-3 use personnel who are suitably skilled and experienced to perform tasks assigned to them, and in sufficient number to ensure that the Supplier's obligations are fulfilled in accordance with this Contract;**
- B1-3-4 ensure that the Services and Deliverables will conform with all descriptions and specifications set out in the Contract (including any Special Conditions and any applicable Specification), and that the Deliverables shall be fit for any purpose expressly or impliedly made known to the Supplier by the Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority;**
- B1-3-5 provide all equipment, tools and vehicles and such other items as are required to provide the Services;**
- B1-3-6 use the best quality Supplies, materials, standards and techniques, and ensure that the Deliverables, and all Supplies and materials supplied and used in the Services or transferred to the Contracting Authority, will be free from defects in workmanship, installation and design;**
- B1-3-7 obtain and at all times maintain all necessary licences and consents, and comply with all applicable laws and regulations;**
- B1-3-8 observe all health and safety rules and regulations and any other security requirements that apply at any of the Contracting Authority's premises; and**
- B1-3-9 Not do or omit to do anything which may cause the Contracting Authority to lose any licence, authority, consent or permission on which it relies for the purposes of conducting its business, and the Supplier acknowledges that the Contracting Authority may rely or act on the Services.**
- B1-4 The Contracting Authority's rights under the Contract are without prejudice to and in addition to the statutory terms implied in favour of the Contracting Authority under the Supply of Goods and Services Act 1982 and any other applicable legislation.**
- B1-5 Without prejudice to the Contracting Authority's statutory rights, the Contracting Authority will not be deemed to have accepted any Deliverables until the Contracting Authority has had at least 14 Working Days after delivery to inspect them and the Contracting Authority also has the right to reject any Deliverables as though they had not been accepted for 14 Working Days after any latent defect in the Deliverables has become apparent.**
- B1-6 If, in connection with the supply of the Services, the Contracting Authority permits any employees or representatives of the Supplier to have access to any of the Contracting Authority's premises, the Supplier will ensure that, whilst on the Contracting Authority's premises, the Supplier's employees and representatives comply with:**
- B1-6-1 all applicable health and safety, security, environmental and other legislation which may be in force from time to time; and**
- B1-6-2 any Contracting Authority policy, regulation, code of practice or instruction relating to health and safety, security, the environment or access to and use of any Contracting Authority laboratory, facility or equipment which is brought to their attention or given to them whilst they are on Contracting Authority's premises by any employee or representative of the Contracting Authority's.**

B1-7 The Supplier warrants that the provision of Services shall not give rise to a transfer of any employees of the Supplier or any third party to the Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority pursuant to TUPE.

B2 Contracting Authority Remedies

B2-1 If the Supplier fails to perform the Services by the applicable dates, the Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority shall, without limiting its other rights or remedies, have one or more of the following rights:

B2-1-1 to terminate the Contract with immediate effect by giving written notice to the Supplier;

B2-1-2 to refuse to accept any subsequent performance of the Services (including delivery of Deliverables) which the Supplier attempts to make;

B2-1-3 to recover from the Supplier any costs incurred by the Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority in obtaining substitute Services from a third party;

B2-1-4 where the Contracting Authority has paid in advance for Services that have not been provided by the Supplier, to have such sums refunded by the Supplier; or

B2-1-5 To claim damages for any additional costs, loss or expenses incurred by the Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority which are in any way attributable to the Supplier's failure to meet such dates.

B2-2 These Conditions shall extend to any substituted or remedial Services provided by the Supplier.

B2-3 The Contracting Authority's rights under this Contract are in addition to its rights and remedies implied by statute and common law.

B3 Contracting Authority Obligations

B3-1 The Contracting Authority shall:

B3-1-1 provide the Supplier with reasonable access at reasonable times to the Contracting Authority's premises for the purpose of providing the Services; and

B3-1-2 Provide such information to the Supplier as the Supplier may reasonably request and the Contracting Authority considers reasonably necessary for the purpose of providing the Services.

B4 Charges and Payment

B4-1 The Charges for the Services shall be set out in the Order, and shall be the full and exclusive remuneration of the Supplier in respect of the performance of the Services. Unless otherwise agreed in writing by the Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority, the Charges shall include every cost and expense of the Supplier directly or indirectly incurred in connection with the performance of the Services.

- B4-2** Where the Order states that the Services are to be provided on a time and materials basis, the Charges for those Services will be calculated as follows:
- B4-2-1** the charges payable for the Services will be calculated in accordance with the Supplier's standard daily fee rates (as at the date of the Order), subject to any discount specified in the Order;
 - B4-2-2** the Supplier's standard daily fee rates for each individual person will be calculated on the basis of an eight-hour day worked between such hours and on such days as are agreed by the Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority and the Supplier;
 - B4-2-3** the Supplier will not be entitled to charge pro-rata for part days without the prior written consent of the Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority;
 - B4-2-4** the Supplier will ensure that every individual whom it engages to perform the Services completes time sheets recording time spent on the Services and the Supplier will use such time sheets to calculate the charges covered by each invoice and will provide copies of such time sheets to the Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority upon request; and
 - B4-2-5** the Supplier will invoice the Contracting Authority monthly in arrears for its charges for time, as well as any previously agreed expenses and materials for the month concerned calculated as provided in this clause B4-2 and clause B4-3
- B4-3** The Contracting Authority will reimburse the Supplier at cost for all reasonable travel, subsistence and other expenses incurred by individuals engaged by the Supplier in providing the Services to the Contracting Authority provided that the Contracting Authority's prior written approval is obtained before incurring any such expenses, that all invoices for such expenses are accompanied by valid receipts and provided that the Supplier complies at all times with Contracting Authority's expenses policy from time to time in force.
- B4-4** The Supplier shall invoice the Contracting Authority on completion of the Services. Each invoice shall include such supporting information required by the Contracting Authority to verify the accuracy of the invoice, including but not limited to the relevant purchase order number.
- B4-5** In consideration of the supply of the Services by the Supplier, the Contracting Authority shall pay the invoiced amounts within 30 days of the date of a correctly rendered invoice. Payment shall be made to the bank account nominated in writing by the Supplier unless the Contracting Authority agrees in writing to another payment method.
- B4-6** All amounts payable by the Contracting Authority under the Contract are exclusive of amounts in respect of value added tax chargeable for the time being (VAT). Where any taxable supply for VAT purposes is made under the Contract by the Supplier to the Contracting Authority, the Contracting Authority shall, on receipt of a valid VAT invoice from the Supplier, pay to the Supplier such additional amounts in respect of VAT as are chargeable on the supply of the Services at the same time as payment is due for the supply of the Services.
- B4-7** The Supplier shall maintain complete and accurate records of the time spent and materials used by the Supplier in providing the Services, and shall allow the Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority to inspect such records at all reasonable times on request.

B4-B The Supplier shall not be entitled to assert any credit, set-off or counterclaim against the Contracting Authority in order to justify withholding payment of any such amount in whole or in part. The Contracting Authority may, without limiting any other rights or remedies it may have, set off any amount owed to it by the Supplier against any amounts payable by it to the Supplier under the Contract.

B4-0 The Supplier acknowledges and agrees that it will pay correctly rendered invoices from any of its suppliers or other sub-contractors within [30] days of receipt of the invoice.

B5 Contracting Authority Property

B5-1 The Supplier acknowledges that all information (including confidential information), equipment and tools, drawings, specifications, data, software and any other materials supplied by the Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority to the Supplier (**Contracting Authority's Materials**) and all rights in the Contracting Authority's Materials are and shall remain at all times the exclusive property of the Contracting Authority and UK SBS (as appropriate). The Supplier shall keep the Contracting Authority's Materials in safe custody at its own risk, maintain them in good condition until returned to the Contracting Authority or UK SBS, and not dispose or use the same other than for the sole purpose of performing the Supplier's obligations under the Contract and in accordance with written instructions or authorisation from the Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority.

B6 Intellectual Property Rights

B6-1 In respect of any Supplies that are transferred to the Contracting Authority under this Contract, including without limitation the Deliverables or any part of them, the Supplier warrants that it has full clear and unencumbered title to all such items; and that at the date of delivery of such items to the Contracting Authority, it will have full and unrestricted rights to transfer all such items to the Contracting Authority.

B6-2 Save as otherwise provided in the Special Conditions, the Supplier assigns to the Contracting Authority, with full title guarantee and free from all third party rights, all Intellectual Property Rights in the products of the Services, including for the avoidance of doubt the Deliverables. Where those products or Deliverables incorporate any Intellectual Property Rights owned by or licensed to the Supplier which are not assigned under this clause, the Supplier grants to the Contracting Authority a worldwide, irrevocable, royalty-free, transferable licence, with the right to grant sub-licences, under those Intellectual Property Rights to maintain, repair, adapt, copy and use those products and Deliverables for any purpose.

B6-3 The Supplier shall obtain waivers of all moral rights in the products, including for the avoidance of doubt the Deliverables, of the Services to which any individual is now or may be at any future time entitled under Chapter IV of Part I of the Copyright Designs and Patents Act 1988 or any similar provisions of law in any jurisdiction.

B6-4 The Supplier shall, promptly at the request of the Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority, do (or procure to be done) all such further acts and things and the execution of all such other documents as the Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority may from time to time require for the purpose of securing for the Contracting Authority the full benefit of the Contract, including all right, title and interest in and to the Intellectual Property Rights assigned to the Contracting

Authority in accordance with clause B6-2.

B7 Indemnity

B7-1 The Supplier shall indemnify, and shall keep indemnified the Contracting Authority and UK SBS acting as an agent on behalf of the Contracting Authority, in full against all costs, expenses, damages and losses (whether direct or indirect), including any interest, fines, legal and other professional fees and expenses awarded against or incurred or paid by the Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority as a result of or in connection with:

B7-1-1 any claim made against the Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority by a third party arising out of, or in connection with, the supply of the Services, to the extent that such claim arises out of the breach, negligent performance or failure or delay in performance of the Contract by the Supplier, its employees, agents or subcontractors; and

B7-1-2 any claim brought against the Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority for actual or alleged infringement of a third party's Intellectual Property Rights arising out of, or in connection with, the receipt, use or supply of the Services; and

B7-1-3 Any claim whether in tort, contract, statutory or otherwise, demands, actions, proceedings and any awards arising from a breach by the Supplier of clause B1-7 of these Conditions.

B7-2 This clause B7 shall survive termination or expiry of the Contract.

B8 Insurance

B8-1 During the term of the Contract and for a period of 3 years thereafter, the Supplier shall maintain in force the following insurance policies with reputable insurance companies:

B8-1-1 professional indemnity insurance for not less than £2 million per claim;

B8-1-2 public liability insurance for not less than £5 million per claim (unlimited claims); and

B8-1-3 employer liability insurance for not less than £5 million per claim (unlimited claims); and

B8-1-4 product liability insurance for not less than £5 million for claims arising from any single event and not less than £5 million in aggregate for all claims arising in a year.

The Supplier shall ensure that the Contracting Authority's interest is noted on each insurance policy, or that a generic interest clause has been included.

B8-2 On request from the Contracting Authority's or UK SBS acting as an agent on behalf of the Contracting Authority, the Supplier shall provide the Contracting Authority or UK SBS with copies of the insurance policy certificates and details of the cover provided.

B8-3 The Supplier shall ensure that any subcontractors also maintain adequate insurance having regard to the obligations under the Contract which they are contracted to fulfil.

B8-4 The Supplier shall:

B8-4-1 do nothing to invalidate any insurance policy or to prejudice the Contracting Authority's entitlement under it; and

B8-4-2 notify the Contracting Authority if any policy is (or will be) cancelled or its terms are (or will be) subject to any material change.

B8-5 If the Supplier fails or is unable to maintain insurance in accordance with clause 0, the Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority may, so far as it is able, purchase such alternative insurance cover as it deems to be reasonably necessary and shall be entitled to recover all reasonable costs and expenses it incurs in doing so from the Supplier.

B9 Liability

B9-1 In this clause B9, a reference to the Contracting Authority or UK SBS's liability for something is a reference to any liability whatsoever which the Contracting Authority or UK SBS might have for it, its consequences, and any direct, indirect or consequential loss, damage, costs or expenses resulting from it or its consequences, whether the liability arises under the Contract, in tort or otherwise, and even if it results from the Contracting Authority's or UK SBS's negligence or from negligence for which the Contracting Authority's or UK SBS would otherwise be liable.

B9-2 The Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority is not in breach of the Contract, and neither the Contracting Authority nor UK SBS has any liability for anything, to the extent that the apparent breach or liability is attributable to the Supplier's breach of the Contract.

B9-3 Subject to clause B9-6, neither the Contracting Authority nor UK SBS acting as agent on behalf of the Contracting Authority shall have any liability for:

B9-3-1 any indirect or consequential loss or damage;

B9-3-2 any loss of business, rent, profit or anticipated savings;

B9-3-3 any damage to goodwill or reputation;

B9-3-4 loss, theft, damage or destruction to any equipment, tools, machinery, vehicles or other equipment brought onto the Contracting Authority's premises by or on behalf of the Supplier; or

B9-3-5 Any loss, damage, costs or expenses suffered or incurred by any third party.

B9-4 Subject to clause B9-6, the Contracting Authority and UK SBS's total liability shall be limited to the Charges.

- B9-5** Subject to clause B9-6, the Supplier's total liability in connection with the Contract shall be limited to £1,000,000.
- B9-6** Nothing in the Contract restricts either the Contracting Authority, UK SBS or the Supplier's liability for:
- B9-6-1** death or personal injury resulting from its negligence; or
 - B9-6-2** its fraud (including fraudulent misrepresentation); or
 - B9-6-3** Breach of any obligations as to title implied by Section 12 of the Sale of Goods Act 1979 or Section 2 of the Supply of Goods and Services Act 1982.

SECTION C

C1 Confidential Information

- C1-1** A party who receives Confidential Information shall keep in strict confidence (both during the term of the Contract and after its expiry or termination) all Confidential Information which is disclosed to it. That party shall only disclose such Confidential Information to those of its employees, agents or subcontractors who need to know the same for the purpose of discharging that party's obligations under the Contract, and shall ensure that such employees, agents or subcontractors shall keep all such information confidential in accordance with this clause C1. Neither party shall, without the prior written consent of the other party, disclose to any third party any Confidential Information, unless the information:
- C1-1-1** was public knowledge or already known to that party at the time of disclosure; or
 - C1-1-2** subsequently becomes public knowledge other than by breach of the Contract; or
 - C1-1-3** subsequently comes lawfully into the possession of that party from a third party; or
 - C1-1-4** is agreed by the parties not to be confidential or to be disclosable.
- C1-2** To the extent necessary to implement the provisions of the Contract (but not further or otherwise), either party may disclose the Confidential Information to any relevant governmental or other authority or regulatory body, provided that before any such disclosure that party shall make those persons aware of its obligations of confidentiality under the Contract and shall use reasonable endeavours to obtain a binding undertaking as to confidentiality from all such persons.
- C1-3** All documents and other records (in whatever form) containing Confidential Information supplied to or acquired by a party from the other party shall be returned promptly to the other party (or, at the election of the Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority, destroyed) on expiry or termination of the Contract, and no copies shall be kept.

C2 Transparency

- C2-1** The Supplier acknowledges that the United Kingdom Government's transparency agenda requires that contracts, such as the Contract, and any sourcing document, such as the invitation to sourcing, are published on a designated, publicly searchable website.
- C2-2** The Supplier acknowledges that, except for any information which is exempt from disclosure in accordance with the provisions of FOIA, the content of the Contract is not Confidential Information. The Contracting Authority and or UK SBS acting as an agent on behalf of the Contracting Authority shall be responsible for determining in their absolute discretion whether any of the content of the Contract is exempt from disclosure in accordance with the provisions of FOIA.
- C2-3** Notwithstanding any other term of the Contract, the Supplier hereby consents to the Contracting Authority and or UK SBS acting as an agent on behalf of the Contracting Authority publishing the Contract in its entirety, (but with any information which is exempt from disclosure in accordance with the provisions of FOIA redacted) including from time to time agreed changes to the Contract, to the general public.

If any of the situations in **C2-2-1, C2-2-2, C2-2-3**, apply the Supplier consents to the Contract or sourcing documents being redacted by UK SBS to the extent necessary to remove or obscure the relevant material and being published on the designated website subject to those redactions.

In this entire clause the expression "sourcing documents" means the advertisement issued by UK SBS seeking expressions of interest, any pre-qualification questionnaire stage and the invitation to tender.

C3 Force Majeure

- C3-1** If any event or circumstance that is beyond the reasonable control of the Supplier, and which by its nature could not have been foreseen by the Supplier or, if it could have been foreseen, was unavoidable; (provided that the Supplier shall use all reasonable endeavours to cure any such events or circumstances and resume performance under the Contract) prevent the Supplier from carrying out its obligations under the Contract for a continuous period of more than 10 Business Days, the Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority may terminate this Contract immediately by giving written notice to the Supplier

C4 Corruption

- C4-1** The Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority shall be entitled to terminate the Contract immediately and to recover from the Supplier the amount of any loss resulting from such termination if the Supplier or a Supplier's Associate:
- C4-1-1** offers or agrees to give any person working for or engaged by the Contracting Authority, UK SBS or any Public Body any favour, gift or other consideration, which could act as an inducement or a reward for any act or failure to act connected to the Contract, or any other agreement between the Supplier and Contracting Authority, or UK SBS or any Public Body,

including its award to the Supplier or a Supplier's Associate and any of the rights and obligations contained within it;

C4-1-2 has entered into the Contract if it has knowledge that, in connection with it, any money has been, or will be, paid to any person working for or engaged by the Contracting Authority, or UK SBS or any Public Body by or for the Supplier, or that an agreement has been reached to that effect, unless details of any such arrangement have been disclosed in writing to the Contracting Authority, or UK SBS before the Contract is entered into;

C4-1-3 breaches the provisions of the Prevention of Corruption Acts 1889 to 1916, or the Bribery Act 2010; or

C4-1-4 Gives any fee or reward the receipt of which is an offence under Section 117(2) of the Local Government Act 1972.

C4-2 For the purposes of clause C4-1, "loss" shall include, but shall not be limited to:

C4-2-1 The Contracting Authority's or UK SBS's costs in finding a replacement supplier;

C4-2-2 direct, indirect and consequential losses; and

C4-2-3 Any loss suffered by the Contracting Authority or UK SBS as a result of a delay in its receipt of the Services.

C5 Data Protection

C5-1 The Supplier shall comply at all times with all data protection legislation applicable in the UK from time to time.

C5-2 General Data Protection Regulations (GDPR)

The Supplier warrants that that it shall under this Contract :

Process only on documented instructions (Annex A) by the Contracting Authority, including regarding international transfers (unless, subject to certain restrictions, legally required to transfer to a third country or international organisation);

- provide all reasonable assistance to the Contracting Authority in the preparation of any Data Protection Impact Assessment (see <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?url=CELEX:32016R0679&from=EN> of the GDPR). Prior to commencing any processing. Such assistance may, at the discretion of the Contracting Authority, include:
 - a) systematic description of the envisaged processing operations and the purpose of the processing;
 - (b) an assessment of the necessity and proportionality of the processing operations in relation to the Services;
 - (c) an assessment of the risks to the rights and freedoms of Data Subjects; and
 - (d) the measures envisaged to address the risks, including safeguards, security measures and mechanisms to ensure the protection of Personal Data.
- ensure those processing personal data are under a confidentiality obligation (contractual or statutory);
- appoint a suitably qualified data protection representative to manage the data;

Contract Number: CR18195

- keep records of their data processing activities performed under this Contract in order to be able to provide information included in those records to the Data Protection Authorities, upon request. Records should include: (1) details of the data controller and data processor and their representatives; (2) the categories of processing activities that are performed; (3) information regarding cross-border data transfers and; and (4) a general description of the security measures that are implemented;
- take all measures required under the security provisions which includes pseudonymisation and encrypting personal data as appropriate;
- only use a sub-processor with Contracting Authorities formal written consent (specific or general, although where general consent is obtained processors must notify all and any changes to the Contracting Authority, giving them an opportunity to object);
- flow down the same contractual obligations to sub-processors as is imposed upon the Supplier by the Contracting Authority;
- notify Contracting Authority without undue delay data breaches;
- assist Contracting Authority in responding to requests from individuals (data subjects) exercising their rights;
- assist Contracting Authority in complying with the obligations relating to a security breach notification, Data Protection Impact Assessment and consulting with supervisory authorities;
- securely destroy (providing evidence that this has occurred e.g. a secure waste disposal certificate from a third party) or return as instructed by the Contracting Authority all personal data at the end of the Contract (unless storage is required by EU/member state law);
- make available to the Contracting Authority all information necessary to demonstrate compliance; allow/contribute to audits (including inspections by the Contracting Authority or a third party); and inform the Contracting Authority if its instructions infringe data protection law or other EU or member state data protection provisions.
- Where the Supplier is required to collect any Personal Data on behalf of the Contracting Authority, it shall ensure that it provides the data subjects from whom the Personal Data are collected, with a privacy notice in a form to be agreed with the Contracting Authority.

The Contracting Authority may require further assurances during the Contract through a series of questions as to Suppliers GDPR compliance.

Notwithstanding any other remedies available to the Contracting Authority, the Supplier shall fully indemnify the Contracting Authority as a result of any such breach of the General Data Protection Regulations (GDPR), by the Supplier or any other party used by the Supplier in its performance of the Contract, that results in the Contracting Authority suffering fines, loss or damages.

Annex A - Schedule of Processing, Personal Data and Data Subjects

This Schedule shall be completed by the Contracting Authority, who may take account of the view of the Supplier, however the final decision as to the content of this Schedule shall be with the Contracting Authority at its absolute discretion

The Supplier shall only process in accordance with the instructions as advised below and comply with any further written instructions with respect to processing by the Contracting Authority. Any such further written processing instructions required by the Contracting Authority shall be incorporated into this Schedule and shall be the subject of a formal

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amendment to this Contract.

1. Data Protection

The Supplier will be compliant with the Data Protection Legislation, as defined in the terms and conditions applying to this opportunity. A guide to The General Data Protection Regulation published by the Information Commissioner's Office can be found here.

The only processing that the Supplier is authorised to do is listed in Annex 1 by the Contracting Authority and may not be determined by the Supplier.

(1) The contact details of the Contracting Authority Data Protection Officer are:

The Contracting Authority Data Protection Officer
Department for Business, Energy and Industrial Strategy
1 Victoria Street
London
SW1H 0ET

Email: dataprotection@beis.gov.uk

(2) The contact details of the Supplier Data Protection Officer (or if not applicable, details of the person responsible for data protection in the organisation) are: [To be completed by the Supplier]

(3) The supplier shall comply with any further written instructions with respect to processing by the Contracting Authority.

(4) Any such further instructions shall be incorporated into this Annex 1.

Description	Details
Subject matter of the processing	<p>The processing is needed in order to ensure that the Contractor can effectively deliver the contract entitled <i>Safe Use of Domestic Virtual Reality Systems</i>.</p> <p>The processing of names and business contact details of staff of both the Authority and the Contractor will be necessary to deliver the Services exchanged during the course of the Contract, and to</p>

	<p>undertake Contract and performance management.</p> <p>The processing of the contact details of stakeholders consulted will be necessary to perform the contract.</p> <p>The Contract itself will include the names and business contact details of staff of both the Authority and the Contractor Involved in managing the Contract.</p>
Duration of the processing	<p>Processing will take place for the duration of the contract.</p>
Nature and purposes of the processing	<p>The nature of processing of the Authority and Contractor details will include the storage and use of names and business contact details of staff of both the Authority and the Contractor as necessary to deliver the Services and to undertake Contract and performance management. The Contract itself will include the names and business contact details of staff of both the Authority and the Contractor Involved in managing the Contract.</p> <p>The processing of the contact details of stakeholders consulted will be necessary to perform the contract.</p>
Type of Personal Data	<p>Names, business telephone numbers and email addresses, office location and position of staff of both the Authority and the Contractor as necessary to deliver the Services and to undertake Contract and performance management. The Contract itself will include the names and business contact details of staff of both the Authority and the Contractor Involved in managing the Contract.</p> <p>The contact details of stakeholders consulted.</p>
Categories of Data Subject	<p>Staff of the Authority and the Contractor, including where those employees are named within the Contract itself or involved within contract management.</p>
Plan for return and destruction of the data once the processing is complete UNLESS requirement	<p>The Contractor will provide the Authority with a complete and uncorrupted version of the Personal Data in electronic form (or such other format as reasonably required by the Authority) and erase from any computers, storage devices and storage media that are to be retained by the Contractor after the expiry of the Contract. The Contractor will certify to</p>

<p>under European Union or European member state law to preserve that type of data</p>	<p>the Authority that it has completed such deletion.</p>
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GDPR Questionnaire

The Supplier agrees that during any term or extension It shall complete and return the attached questionnaire as advised below.

Note: the Contracting Authority also reserves the right to amend or increase these frequencies, as it deems necessary to secure assurance with regards to compliance.

The Contracting Authority requires such Interim assurances to ensure that the Supplier is still compliant with the needs of the GDPR Act due to the implications of a breach.

The Supplier shall complete and return the questionnaire to the contact named in the Contract on the following date(s) from the Commencement of the Contract.

01/02/2019

The Supplier agrees that any financial burden associated with the completion and submission of this questionnaire at any time, shall be at the Suppliers cost to do so and will not be reimbursable.



GDPR Assurance
Questionnaire May1

C6 Freedom of Information

- C6-1 The Supplier acknowledges that the Contracting Authority and or UK SBS may be subject to the requirements of FOIA and EIR and shall assist and co-operate with the Contracting Authority and or UK SBS to enable them to comply with its obligations under FOIA and EIR.
- C6-2 The Supplier shall and shall procure that its employees, agents, sub-contractors and any other representatives shall provide all necessary assistance as reasonably requested by the Contracting Authority or UK SBS to enable the Contracting Authority or UK SBS to respond to a Request for Information within the time for compliance set out in section 10 of FOIA or regulation 5 of EIR.
- C6-3 The Contracting Authority and or UK SBS acting as an agent on behalf of the Contracting Authority shall be responsible for determining (in its absolute discretion) whether any Information:

C6-3-1 is exempt from disclosure in accordance with the provisions of FOIA or EIR;

C6-3-2 is to be disclosed in response to a Request for Information,

And in no event shall the Supplier respond directly to a Request for Information unless expressly authorised to do so in writing by the Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority.

C6-4 The Supplier acknowledges that the Contracting Authority and or UK SBS may be obliged under the FOIA or EIR to disclose information, in some cases even where that information is commercially sensitive:

C6-4-1 without consulting with the Supplier, or

C6-4-2 Following consultation with the Supplier and having taken its views into account.

C6-5 Where clause C6-4-2 applies the Contracting Authority and or UK SBS shall, in accordance with any recommendations issued under any code of practice issued under section 45 of FOIA, take reasonable steps, where appropriate, to give the Supplier advanced notice, or failing that, to draw the disclosure to the Supplier's attention as soon as practicable after any such disclosure.

C6-6 Where the Supplier organisation is subject to the requirements of the FOIA and EIR, C6-7 will supersede C6-2 – C6-5. Where the Supplier organisation is not subject to the requirements of the FOIA and EIR, C6-7 will not apply.

C6-7 The Contracting Authority and UK SBS acknowledge that the Supplier may be subject to the requirements of the FOIA and EIR and shall assist and co-operate with the Supplier to enable them to comply with its obligations under the FOIA and EIR.

C7 General

C7-1 Entire Agreement

C7-1-1 The Contract constitutes the entire agreement between the Contracting Authority and the Supplier in relation to the supply of the Services and the Contract supersedes any earlier agreements, arrangements and understandings relating to that subject matter.

C7-2 Liability

C7-2-1 Where the Contracting Authority is more than one person, the liability of each such person for their respective obligations and liabilities under the Contract shall be several and shall extend only to any loss or damage arising out of each such person's own breaches.

C7-2-2 Where the Contracting Authority is more than one person and more than one of such persons is liable for the same obligation or liability, liability for the total sum recoverable will be attributed to the relevant persons in proportion to the price payable by each of them under the Contract.

C7-3 Assignment and Subcontracting

C7-3-1 The Contracting Authority or UK SBS acting as an agent on behalf of the

Contracting Authority may at any time assign, transfer, charge, subcontract or deal in any other manner with any or all of its rights or obligations under the Contract.

C7-3-2 The Supplier may not assign, transfer, charge, subcontract or deal in any other manner with any or all of its rights or obligations under the Contract without prior written consent from the Contracting Authority's or UK SBS acting as an agent on behalf of the Contracting Authority.

C7-4 Further Assurance

C7-4-1 The Supplier will promptly at the request of the Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority do (or procure to be done) all such further acts and things, including the execution of all such other documents, as either the Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority may from time to time require for the purpose of securing for the Contracting Authority the full benefit of the Contract, including ensuring that all title in the Supplies is transferred absolutely to the Contracting Authority.

C7-5 Publicity

C7-5-1 The Supplier shall not make any press announcements or publicise this Contract in any way without prior written consent from the Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority.

C7-5-2 The Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority shall be entitled to publicise this Contract in accordance with any legal obligation upon Contracting Authority or UK SBS, including any examination of this Contract by the National Audit Office pursuant to the National Audit Act 1983 or otherwise.

C7-5-3 The Supplier shall not do anything or cause anything to be done, which may damage the reputation of the Contracting Authority or UK SBS or bring the Contracting Authority or UK SBS into disrepute.

C7-6 Notices

C7-6-1 Any notice or other communication given to a party under or in connection with the Contract shall be in writing, addressed to:

C7-6-1-a in the case of the Contracting Authority: Department for Business, Energy and Industrial Strategy, Address: 1 Victoria Street, London, SW1H 0ET, Email rd.procurement@bels.gov.uk; Email: ***rd.procurement@bels.gov.uk*** (and a copy of such notice or communication shall be sent to UK SBS Research Procurement Team; Address: ***Polaris House, North Star Avenue, Swindon, Wiltshire SN2 1FF***; Email: research@uksbs.co.uk and the Chief Procurement Officer, Polaris House, North Star Avenue, Swindon, Wiltshire SN2 1FF;

C7-6-1-b in the case of the Supplier: the address, fax number and email address set out in the Order, or any other address, fax number or

email address which that party may have specified to the other party in writing in accordance with this clause C7-6, and shall be delivered personally, or sent by pre-paid first-class post, recorded delivery, commercial courier, fax or e-mail.

C7-6-2 A notice or other communication shall be deemed to have been received: if delivered personally, when left at the address referred to in clause C7-6-1; if sent by pre-paid first-class post or recorded delivery, at 9.00 am on the second Working Day after posting; if delivered by commercial courier, on the date and at the time that the courier's delivery receipt is signed; or, if sent by fax or e-mail between the hours of 9.00am and 5.00pm on a Working Day, upon successful transmission (provided that the sender holds written confirmation automatically produced by the sender's fax machine of error free and complete transmission of that fax to the other party's fax number), or if sent by fax or e-mail outside the hours of 9.00am and 5.00pm on a Working Day, at 9.00am on the next Working Day following successful transmission (provided that the sender holds written confirmation automatically produced by the sender's fax machine of error free and complete transmission of that fax to the other party's fax number).

C7-6-3 This clause C7-6-3 shall only apply where UK SBS is not the Contracting Authority. In such cases, UK SBS may give or receive any notice under the Contract on behalf of the Contracting Authority and any notice given or received by UK SBS will be deemed to have been given or received by the Contracting Authority.

C7-7 Severance

C7-7-1 If any court or competent authority finds that any provision of the Contract (or part of any provision) is invalid, illegal or unenforceable, that provision or part-provision shall, to the extent required, be deemed to be deleted, and the validity and enforceability of the other provisions of the Contract shall not be affected.

C7-7-2 If any invalid, unenforceable or illegal provision of the Contract would be valid, enforceable and legal if some part of it were deleted, the provision shall apply with the minimum modification necessary to make it legal, valid and enforceable.

C7-8 Waiver. A waiver of any right or remedy under the Contract is only effective if given in writing and shall not be deemed a waiver of any subsequent breach or default. No failure or delay by a party to exercise any right or remedy provided under the Contract or by law shall constitute a waiver of that or any other right or remedy, nor shall it preclude or restrict the further exercise of that or any other right or remedy. No single or partial exercise of such right or remedy shall preclude or restrict the further exercise of that or any other right or remedy.

C7-9 No Partnership, Employment or Agency. Nothing in the Contract creates any partnership or joint venture, nor any relationship of employment, between the Supplier and either the Contracting Authority or UK SBS. Nothing in the Contract creates any agency between the Supplier and either the Contracting Authority or UK SBS.

C7-10 Third Party Rights. A person who is not a party to this Contract shall not have any rights under or in connection with it, except that UK SBS and any member of the UK SBS, Associated Bodies or Authorised Entities that derives benefit under this Contract may directly enforce or rely on any terms of this Contract.

C7-11 Variation. Any variation to the Contract, including any changes to the Services, these Conditions, the Special Conditions or the Order, including the introduction of any additional terms and conditions, shall only be binding when agreed in writing by the Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority and the Supplier.

C7-12 Governing Law and Jurisdiction.

C7-12-1 Subject to clause C7-12-2, the Contract, and any dispute or claim arising out of or in connection with it or its subject matter or formation (including non-contractual disputes or claims), shall be governed by, and construed in accordance with, English law, and the parties irrevocably submit to the exclusive jurisdiction of the courts of England and Wales.

C7-12-2 The Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority shall be free to enforce its intellectual property rights in any jurisdiction.

C7-13 Modern Slavery Act 2015

C7-13-1 During the Term or any extension of the Contract, the Contracting Authority is committed to ensuring that its supply chain complies with the above Act.

C7-13-2 The Supplier shall provide a report covering the following but not limited to areas as relevant and proportionate to the Contract evidencing the actions taken, relevant to the Supplier and their supply chain associated with the Contract.

C7-13-2-a Impact assessments undertaken

C7-13-2-b Steps taken to address risk/actual instances of modern slavery and how actions have been prioritised

C7-13-2-c Evidence of stakeholder engagement

C7-13-2-d Evidence of ongoing awareness training

C7-13-2-e Business-level grievance mechanisms in place to address modern slavery

C7-13-2-f Actions taken to embed respect for human rights and zero tolerance of modern slavery throughout the organisation

C7-13-3 The Contracting Authority or UK SBS when acting as an agent on behalf of the Contracting Authority reserves the sole right to audit any and all reports submitted by the Supplier to an extent as deemed necessary and the Supplier shall unreservedly assist the Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority in doing so.

Note: the Contracting Authority also reserves the right to amend or increase the frequency of reporting, as it deems necessary to secure assurance in order to comply with the MSA.

The Contracting Authority requires such interim assurances to ensure that the Supplier is compliant and is monitoring its supply chain, so as to meet the requirements of the above Act.

The Supplier shall complete and return the report to the contact named in the Contract on the following date(s) from the Commencement of the Contract.

01/02/2019

The Supplier agrees that any financial burden associated with the completion and submission of this report and associated assistance at any time, shall be at the suppliers cost to do so and will not be reimbursable.

C7-14 Changes In Costs Resulting from Changes to Government Legislation, Levies or Statutory Payments

The Contracting Authority will reimburse during any term or extension (or, where such costs, awards or damages arise following termination/expiry) of this Agreement, any increases in the Supplier's cost of providing the Services by reason of any modification or alteration to the Government legislation duties or levies or other statutory payments (including but not limited to National Insurance and/or VAT and/or introduction of or amendment to working time minimum wages). Subject always to open book access to the Supplier's records and always after a period of due diligence carried out by the Contracting Authority, relevant and proportionate to the value concerned.

C7-15 Taxation Obligations of the Supplier

C7-15-1 The relationship between the Contracting Authority, UK SBS and the Supplier will be that of "independent contractor" which means that the Supplier is not an employee, worker, agent or partner of the Contracting Authority or UK SBS and the Supplier will not give the Impression that they are.

(1.) The Supplier in respect of consideration shall at all times comply with the income tax Earnings and Pensions Act 2003 (ITEPA) and all other statutes and regulations relating to income tax in respect of that consideration.

(2.) Where Supplier is liable to National Insurance Contributions (NICs) in respect of consideration received under this contract, it shall at all times comply with the Social Security Contributions and Benefits Act 1992 (SSCBA) and all other statutes and regulations relating to NICs in respect of that consideration.

(3.) The Contracting Authority may, at any time during the term, completion extension or post termination of this contract, request (Supplier) to provide information which demonstrates how Supplier complies with its obligations under tax and National Insurance Clauses (1) and (2) above or why those clauses do not apply to it.

C7-15-2 As this is not an employment Contract the Supplier will be fully responsible for all their own tax including any national insurance contributions arising from carrying out the Services.

C7-15-3 A request under Clause (3) above may specify the information which Supplier shall provide and the period within which that information must be provided.

C7-15-4 In the case of a request mentioned in Clause (3) above, the provision of

inadequate information or a failure to provide the information within the requested period, during any term or extension, may result in the Contracting Authority terminating the contract.

- C7-15-5** Any obligation by Supplier to comply with Clause (1) and (2) shall survive any extension, completion or termination and Supplier obligations to indemnify the Contracting Authority shall survive without limitation and until such time as any of these obligations are complied with.
- C7-15-6** The Contracting Authority may supply any information, including which it receives under clause (3) to the commissioners of Her Majesty's Revenue and Customs for the purpose of the collection and management of revenue for which they are responsible.
- C7-15-7** If the Contracting Authority or UK SBS acting as an agent on behalf of the Contracting Authority has to pay any such tax under clauses (1) and (2) then the Supplier will pay back to the Contracting Authority or UK SBS in full, any money that the Contracting Authority or UK SBS has to pay, and they will also pay back the Contracting Authority or UK SBS for any fine or other punishment imposed on the Contracting Authority or UK SBS because the tax or national insurance was not paid by the Supplier.

OFFICIAL-SENSITIVE (COMMERCIAL)

Schedule 1 Special Conditions

Not Used

Schedule 2 Pro forma purchase order form

The format of the Proforma Purchase Order will be as follows. Please note that the Purchase Order form will be submitted directly to your chosen email address on completion of the receipt of the signed contract and will contain the confirmed value of goods and services as well as the Purchase Order number that must be used for Invoicing purposes.

Purchase Order 00

(Contracting Authority Logo)

Order	
Order Date	
Revision	0
Revision Date	
Payment Terms	As per terms and conditions

Supplier:

Tel:

Fax:

PLEASE QUOTE THE PURCHASE ORDER NUMBER ON ALL CORRESPONDENCE. PROVIDER NOT QUOTING THE PO NUMBER WILL BE RETURNED UNPAID

For all purchase order queries, please contact POPAR@ukshared.gov.uk
For all invoicing queries, please contact finance@uksbs.co.uk

Ship to: Contracting authority ship to address

Invoice to: Contracting Authority Invoice Address

Line	Part Number/Description	Delivery Date	Quantity	UOM	Unit Price (GBP)	Tax	Net Amount (GBP)
1							

Total

Grand Total

Wherever a UK SBS Contract number is cited within the narrative description of the Purchase Order that Purchase Order is subject to the Terms and Conditions relating to that Contract, otherwise, the Purchase Order is subject to the Terms and Conditions incorporated herein by reference. For a copy of the Terms and Conditions please see <http://www.ukshared.gov.uk/ukshared/procurement/6607-01/terms.pdf>

Commercial In Confidence



VAT Registration Number GB 619 367 925

(Contracting Authority) , Polarix House, North Star Avenue Swindon, United Kingdom SN2 1EU

OFFICIAL-SENSITIVE (COMMERCIAL)**UK Shared Business Services Ltd (UK SBS)****D4-2 The Contract price is payable according to the following schedule:-**

Milestone	Amount
[REDACTED]	[REDACTED]

D4-3 All invoices should be sent to finance@services.uksbs.co.uk or **Billingham (UKSBS Queensway House, West Precinct, Billingham, TS23 2NF)**. [REDACTED]

Annex 1 Specification

1. Background

The Office for Product Safety and Standards (The Office) was created in January 2018 by the Department for Business, Energy and Industrial Strategy (BEIS), and takes forward the work of the previous Regulatory Delivery directorate. Responsibilities of The Office include:

- a. Giving detailed advice on the interpretation of safety related regulations, and sits on many standards making committees.
- b. Responding to incidents where the safety of a consumer product is called into question.
- c. Offering policy advice to HMG on product safety issues.
- d. Enforcement of a wide range of other product standards and regulations, including WEEE, RoHS, Ivory and Conflict Mineral regulations.
- e. Support of businesses through an expanded "Primary Authority" scheme to act as a single point of information for a wide variety of regulations impacting business.
- f. The work of the former national Measurement Organisation is also within the Office, which brings a world class test and measurement capability.

The project detailed here is being recruited as part of the BEIS Office for Product Safety and Standards (The Office) Strategic Research Programme (SRP) that was launched in March 2018. This programme provides high quality strategic science-based research to strengthen the evidence base for Safety and Standards policy development, delivery and enforcement, giving business the confidence to innovate and protecting consumers from unsafe products. The wide range of evidence-based research supported by the SRP helps to address critical questions relating to current product safety, and/or issues that might arise due to future market developments.

This project concerns the safe use of domestic Virtual Reality (VR) systems, which are growing in capability and popularity. VR is the use of computer technology to create a simulated environment, most commonly with the user wearing a fully immersive headset. Industry forecasts that VR growth will be exponential and will move from the present early adopters to an established market by 2020. For many VR users, the transposition into and from a simulated environment can give rise to effects that can occur both during and following use.

Effects during VR use can include the loss of spatial awareness, dizziness and disorientation, and nausea. Short-term effects following VR use can include eye soreness and trouble focussing, impaired hand-eye coordination and depth perception, and prolonged nausea.

The requirement is for a contractor to summarise the current state of knowledge on the safety risks due to the use of domestic VR systems, ways to mitigate the subsequent hazards, and to define further research requirements to address the current gaps in knowledge.

2. Aims and Objectives of the Project

The key aim of this work is to establish the current state of knowledge on the risks to the user of domestic VR systems, and to identify ways to mitigate these risks.

The objectives of this work are to:

- Provide an evidence-based understanding of the risks and hazards that a domestic user is exposed to during the use of VR systems.

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- Provide an evidence-based understanding of the risks and hazards that a domestic user is exposed to following the use of VR systems. In particular, this should include an analysis of the additional hazards that might occur during subsequent use of machinery or driving.
- Assess possible mitigating measures and their efficacy in protecting the user from harm.
- Identify further research requirements to develop the evidence base of this subject.

3. Suggested Methodology

The work will comprise a desk-based review of the current available literature, supplemented by interviews with relevant sector contacts.

The contractor is expected to undertake the following steps:

- 1.) Define the types of VR systems likely to be used in a domestic environment, and identify the practical risks and hazards posed to the user.
 - a) During the use of VR systems.
 - b) Following the use of VR systems.
- 2.) Evaluate suggested mitigation techniques and their efficacy in protecting the user from harm.
- 3.) Define any further work necessary to fill gaps in the evidence base.

The scope excludes the longer term psychological or other effects to the user due to the use of VR systems.

4. Deliverables

Deliverables

The contractor shall deliver the following reports:

Initial Report: This will comprise an overview of the main subjects to be investigated, which will be approved by the BEIS Project Monitoring Officer (PMO) 22 March 2019

Draft Final Report: This will comprise the findings and analysis of Steps 1 – 3. The aim is that this draft shall be reviewed by the BEIS PMO and returned to the contractor within 2 weeks of receipt. 19 April 2019

Final Accepted Report suitable for publication. 10 May 2019

Project Management

There will be regular project meetings with the Project Manager. Indicatively these will be once a month, either by phone or in person, depending on the needs of the project. Short monthly progress reports should be supplied, which should state recent work activity, and formally flag up any problems that might lead to delay.

There shall be a formal kick off meeting at BEIS London office on 29 January 2019.

The Bidder should also budget for creating and delivering a presentation at an end of project workshop at BEIS.

Annex 2 Supplier response

1 Our Proposed Approach

The review will take a systematic approach. The rationale for selecting this approach is that systematic reviews have been accepted as being the best way to establish an unbiased and robust view of evidence in any given area, especially where formal conclusions need to be drawn (see e.g., www.cochrane.org). This approach ensures that only the most relevant and high quality evidence is used to draw conclusions.

Our proposed approach to this literature review offers:

- A defined structure with parallel searches that will enable us to focus on the different areas targeted by your objectives
- A structured approach to reviewing literature, with clear inclusion criteria
- An internal workshop to provide expert-led recommendations based on the available evidence
- A team of expert researchers with experience of working with virtual reality technology

The aim of this work is to establish the current state of knowledge on the risks to the user of domestic VR systems, and to identify ways to mitigate these risks. The objectives of this work are to given in Table 1.

Table 1. Objectives of the research

No.	Objective
1	To provide an evidence-based understanding of the risks and hazards that a domestic user is exposed to <i>during the use</i> of VR systems
2	To provide an evidence-based understanding of the risks and hazards that a domestic user is exposed to <i>following the use</i> of VR systems. This will include an analysis of the additional hazards that might occur during subsequent use of machinery or driving.
3	Assess possible mitigating measures and their efficacy in protecting the user from harm
4	Identify further research requirements to develop the evidence base of this subject

There will be three key phases to this work. Phase 1 will include the systematic literature review, Phase 2 will cover the interviews with sector contacts, and Phase 3 will present any gaps found in the literature. The details of these phases are outlined in the following sections.

1.1 Literature review

The literature review has been designed with the intention of achieving the objectives detailed in Table 1 and will follow a systematic approach consisting of the following stages:

1. Define search terms and search literature

The search terms will be agreed with BEIS (at or shortly after the kick-off meeting). We will also agree and apply specific inclusion criteria to ensure that studies included are clearly relevant to the objectives. Dividing the objectives into two work packages will facilitate the search process as it will be possible to produce two sets of search terms that are more focused and better reflect the different elements of each review.

We anticipate including any literature that relates to at least one of the key objectives directly. In addition, we recommend that ‘grey’ (i.e. unpublished) literature is included as – with recent advances in VR technology and its use – there will likely be literature that falls into this category.

We propose that most of the literature searches are date-restricted to capture more recent findings; the exceptions to this are any seminal reviews or meta-analyses that fall outside of the specified date ranges but appear to be essential to understanding the field.

The search terms will be used in combination with each other and each written in such a way to capture the multiple versions of key words (e.g. evaluat* would capture both evaluate and evaluation). An example of what these search terms would look like is provided in Table 2.

Table 2. Proposed of search terms

1 st Level		2 nd Level
"Virtual Reality" OR		Risk* OR
"VR" OR		Hazard* OR
"Sony PlayStation VR" OR		Exposure OR
"Oculus Rift" OR	AND	Effect* OR
"HTC Vive" OR		Use* OR
"Samsung Gear VR" OR		Harm* OR
"Lenovo Mirage Solo"		Protect*

TRL has access to a range of databases and sources that will be used to undertake the review of the literature. These databases allow us to obtain literature from a range of specific sectors such as behavioural psychology (e.g. ScienceDirect, PubPsych, ISI Web of Knowledge and PsychInfo) and more general sources such as Google Scholar and BASE¹.

The initial search will provide us with a list of titles and abstracts, which will be reviewed and scored according to the inclusion criteria. Following the initial review, an assessment will be made as to whether the search terms should be refined to ensure that the most appropriate literature is being identified. All iterations will be recorded.

A shortlist of papers will then be identified and full texts will be sourced for a full review. As well as the sourced literature, the reference lists of these documents will also be examined to identify whether any further literature can be obtained. Once the full texts have been obtained, the literature will be

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reviewed in full using an excel spreadsheet. Each source will be represented in a row, and the method, findings and conclusions of the research summarised in columns. The inclusion criteria presented in Table 3 will once again be applied and only those meeting these criteria will be included in the full review and report. This will allow us to visualise and identify any gaps in the literature. A gap in knowledge will represent a finding in itself, but researchers will use this opportunity to discuss with BEIS whether changes to the search terms or additional searches are required.

2. Apply inclusion criteria

In order to ensure that only literature of the highest quality and relevance is included in the review, specific inclusion criteria will be used to assess the suitability of the identified literature. The criteria will be applied two-fold, once during the initial review of abstracts and again during the full text review.

Each document identified will be given a score for relevance (e.g. how useful it is to answer the research questions) and quality (e.g. whether it was retrieved from a peer-reviewed journal or a non-academic magazine article). The final inclusion criteria will be agreed with BEIS (at or shortly after the kick-off meeting). Scoring will be undertaken by multiple researchers to ensure consistency, with any disagreements arbitrated by the Technical Reviewer. An example of a set of inclusion criteria for the relevance of the literature and the quality of the research, are provided in Table 3.

Table 3. Example relevance and quality criteria for the literature review

Inclusion criteria	Score = 1	Score = 2	Score = 3
Relevance	Not relevant to the objectives of the project	Some indirect relevance to the objectives of the review	Directly relevant to the objectives of the review
Quality	Non-scientific article (e.g. online source, newspaper or magazine article)	Non-peer reviewed scientific article	Peer-reviewed scientific article (e.g. journal paper or conference procedure)

The highest grading will be given to papers that are peer-reviewed scientific articles of high relevance to the review objectives. Those that are of high quality are expected to use appropriate outcome measures, measured objectively (and ideally directly observed), adequate experimental controls and appropriate statistical analyses. Of course, given the emerging nature of some aspects of VR technology, allowances will be made for literature that is recent and offers an interesting contribution to the review, albeit with caveats if quality is not high. This scoring system will allow us to determine the criteria for inclusion. We would anticipate that no evidence with a score of 1 would be included in the review. For example, we would only include literature with a score of 3 in at least one of the criteria and a score of at least 2 for each of the other criteria. However, excluded studies will be discussed with BEIS and a list provided in case either party wishes to make an exception.

The outcome of this stage will be a final set of literature for full review. BEIS will be allowed to share their thoughts on the final shortlist of papers, as well as those that have been excluded, to ensure they are happy with those that are being carried forward for full review. If a much greater number of papers is identified for full review, we will consider a further filter process (in consultation with

BEIS) and/or options for 'lighter touch' reviews of some papers to ensure the breadth of the literature is captured using the allocated resources.

3. Review full text for selected papers

Once the full texts have been obtained, the literature will be reviewed in full using an MS Excel spreadsheet (and will be delivered with the report). Each source will be represented in a row, and the method, findings and conclusions of the research summarised in columns. The inclusion criteria presented in Table 3 will once again be applied and only those meeting these criteria will be included in the full review and report. This will allow us to visualise and identify any gaps in the literature. A gap in knowledge will represent a finding in itself.

1.2 Interviews with relevant sector contacts

TRL has successfully completed prior work and engagement with companies who have relevant knowledge and experience in this sector. These include UK and internationally- based companies who provide VR application platforms (e.g. Unity), VR design applications (e.g. Drive Design), as well as automotive companies who employ VR solutions in their development process (e.g. Volvo). Royal Holloway University of London have been involved in the Story Futures project (<https://storyfutures.com>), which involves many relevant partners Story Futures is a large creative cluster project that RHUL is one of the leads. In addition, both TRL and RHUL have contacts (and have worked with) Tobii who have a VR eye tracking platform.

The interviews would be conducted once the final set of literature has been compiled, and alongside the full text reviews. The focus of the interviews will be on sharing the initial literature search findings with the relevant sector contacts and asking for their thoughts and opinions on the accrued literature. This will allow for discourse and discussion of whether our findings fall in line with what relevant sector experts would expect, and additionally allow for them to share any extra information that may not have been generated from the literature search. The interviews will therefore supplement the literature search and review, having the potential to fill in knowledge gaps, and will be of particular importance in the eventuality of their being only a small amount of literature generated from the literature search. There will be up to 8 telephone interviews. This style of interview was chosen on the basis of efficiency and cost effectiveness.

1.3 Assessing gaps in the literature

Following the identification and review of relevant scientific papers and analysis of interviews from relevant sector contacts, we will produce a research table to present any gaps. The purpose of a research table is to detail new research that TRL recommends to address important gaps in the existing evidence on the safe use of domestic VR systems.

The research table will:

- Provide an evidence review summary
- Identify evidence gaps that research should address
- Provide high-level detail of the proposed options for new research
- Assess the impact this new research / evidence will have on the safe use of VR

- Set out the approximate timelines and costs associated with each research option.

The BEIS will be able to use the research table to determine which of the new research options best address its priorities and should therefore be taken forward to fill the gaps.

TRL has experience² conducting systematic literature reviews with a view of identifying evidence gaps and providing novel proposed approaches to subsequently fill these gaps.

Table 4 provides an example of a research table that TRL has previously produced, as an outcome of a literature review looking at variable speed limits (VSLs) on motorways. In this example, we have clearly provided a 'evidence review summary' of the gaps in the current research (for that topic in question) and proposed how the gap might be addressed with additional work.

We proposed to create a similar table, as an outcome of this research. The table headings and topic areas will be agreed with BEIS.

² Evidenced through successful delivery of research project outcomes to Highways England, the Department for Transport, the European Commission and IOSH.

Table 4 Example of a literature gaps research table

No.	Research Topic	Evidence Review Summary	Proposal(s) for new research	Impact	Timescales
1	<p>Strategies for managing congestion on highways – Including why when the hard shoulder is open do we use 60mph instead of national speed limit?</p>	<ul style="list-style-type: none"> • No evidence found as to why 60mph is used instead of the National Speed Limit when the hard shoulder is opened • Applying VSL when lane occupancy is below congestion critical levels causes an increase in travel time by decreasing flow efficiency • 50mph found to contribute to the most efficient traffic flow when critical occupancy densities reached • 40mph more effective with regards to safety at high occupancy rates • VSLs lead to a lower risk of a breakdown in traffic flow at mean road capacity volumes 	<p>a) An on-road / traffic modelling study into how different VSLs affect traffic flow and traffic safety under different traffic conditions in order to determine optimal speed limits for those conditions</p>	<p>a) Improved and evidence-based congestion management system that provides better journey times for road users</p>	<p>a) Medium term</p>

1.4 Deliverables

Table 4 details the format and delivery date of each of the planned deliverables to be produced from this project. This includes an initial report, a draft final report and an accepted final report, as well as an end of project presentation that will be delivered as part of a workshop.

Table 5. Deliverable format and delivery date

No.	Deliverable	Format	Delivery date
D1	Initial report	Word document	22 March 2019
D2	Final draft report*	Word document	19 April 2019
D3	Final accepted report (suitable for publication)	Word document	10 May 2019
D4	End of project workshop	Presentation, plus PowerPoint slide deck	TBC

*including research table describing the gaps in literature

1 Key Resources and Staff to Deliver

KEY POINTS

The success of this work, rests on bringing together a team experienced in undertaking work in VR and its applied impacts and contexts. For this reason, we have created a team which includes:

- Subject matter experts from Royal Holloway who will provide valuable guidance and expert knowledge in the general VR field to help shape the final review.
- A lead Researcher is expert at conducting systematic literature reviews, and on working on VR projects in applied settings.
- A Senior (Divisional Chief Scientist) *Technical Reviewer* who will oversee the technical quality of inputs and outputs, and support the project team in acting as a third party championing the needs of the client. All TRL written deliverables will be approved by the Technical Reviewer, ensuring a high deliverables which meets or exceeds the requirements and maximises the value of the end product.
- A PRINCE2 and APM qualified *Project Manager* with experience leading VR projects, and managing a wide range of subcontractors.
- We have selected a small project team to help keep costs down. If additional support is required, we have a robust team of additional researchers who would ensure that the skills and expertise are available throughout the project lifetime.

This work will be undertaken by the following personnel in key roles, for whom we have provided a brief outline of their relevant capabilities and experience. Table 1 provides a description of the key tasks and responsibilities for each role as outlined in Figure 1.

Table 1. Description of responsibilities for key roles in the project team

Role	Key responsibilities
Project Manager	The main point of contact for all operational issues Responsible for the day-to-day running of the project and for ensuring that all tasks are delivered to time, budget and are of the highest quality
Technical Reviewer	Responsible for ensuring that the project outputs and all deliverables are thoroughly reviewed, promoting high technical quality at all stages Responsible for ensuring that the research approach selected is valid, robust and will deliver the required outputs from the client's perspective All deliverables are reviewed by the Technical Reviewer before submission
Lead Researcher	Responsible for leading and overseeing all research activities Works closely with the Project Manager, Technical Reviewer and team
Researchers	Provides a supporting role to the lead researcher.

1.1 Royal Holloway Virtual Reality Lab

The VR lab at Royal Holloway brings together a world class interdisciplinary team of researchers from Psychology and Computer Science. This shared workspace between disciplines is unique to Royal Holloway and made possible by the investment of the university in the physical space, located within the Dept. of Psychology, hardware, such as the HTC Vive headset, combined with Tobii eye tracking technology and motion trackers in the room as well as the software necessary to create this shared resource. Within Psychology experts on visual perception, including motion and depth perception and eye movements, experts in vestibular and visual sensory integration, experts in attention and mental workload as well as those interested in the aesthetic experience work side by side with computer science experts in visualization, graphics and cognitive assistance.

1.2 The Project Team



Figure 1 shows the structure of our project team. [REDACTED] is one of TRL's highly experienced **Project Managers**. She is an accredited project manager and a PRINCE2 Practitioner. She will manage this project and will be the single point of contact and accountability throughout. She has extensive experience of managing projects in human factors, has successfully delivered a wide range of applied human factors projects.

Alongside [REDACTED] and independent of the project delivery team is [REDACTED] **Technical Reviewer**. He will be responsible for ensuring that the research approach selected is valid, robust and will deliver the required outputs from the client's perspective. [REDACTED] is an applied cognitive and social psychologist with nearly two decades' experience in transport, security, and human-technology integration. He is TRL's Chief Scientist for Transportation. He has a track record of delivering projects which impact directly on government policy. He has written over 100 journal articles and customer reports since 2002, and has presented at numerous national and international conferences.

[REDACTED], **Lead Researcher**, works within the Behavioural Change team at TRL. He is qualified to Masters level in psychology and research. He has a high level of skill and extensive experience in conducting systematic literature reviews, recently becoming involved with the construction and delivery of an internal training course on the subject. Further to this, [REDACTED] also has experience in working with VR and AR having run a behavioural trial using augmented footage viewed through a VR headset. He is currently developing a technical skillset for augmenting recorded video footage with text and 3D-models which is to be applied within future research trials, as well as a developing understanding of VR and its capabilities within research.

As **Researchers**, [REDACTED] will support [REDACTED] throughout the project.

██████ is a Human Factors Researcher within the HF & Simulation team at TRL. He has an MSc in Safety and Human Factors in Aviation and a BSc (Hons) Psychology, giving him a strong educational grounding in cognitive ergonomics, human factors and safety assessment in safety critical environments. He has a focus on the use of simulation to assess human/task performance. ██████ has produced deliverables for clients including Network Rail, Transport for London, Department for Transport, Highways England and major automotive manufacturers focused on distraction, usability, and the acceptability of new technologies.

██████ is a Human Factors Researcher who applies her expertise to transport challenges, with a focus on understanding behavioural responses to technologies, vehicles and road environments. She has provided Human Factors expertise for multinational projects and research activities, both in projects focused on driver performance (for example driving simulation studies examining driving through different road works layouts) and those focused on driver behaviour (for example studies of novel human machine interface designs and their impact on driver response and preference).

Subject Matter Expert ██████████, a Senior Psychology Lecturer from Royal Holloway University of London will provide expertise and guidance in VR. ██████ completed her PhD at University College London, with her research project titled 'A computational and psychophysical study of motion induced distortions of perceived location'. She has provided consultancy work on a recent TRL research project which had a focus of measuring the appropriate amount of motion in roadside video advertisements. Further to this, she has several published journal articles in the area of vision psychology, including topics relating to the detection of different stimuli, detection of orientation variance, and perception of motion. Her experience with this topic area will prove highly beneficial for the current project.

1.3 Project Examples

Project examples have been included to provide evidence of how our skills, knowledge and experience have been utilised to successfully deliver complex project.

Reducing Incursions from Breakdowns and Driver Confusion, Highways England (2018)

This project demonstrates our experience of undertaking a literature review and conducting a trial using immersive technology

For this project, TRL worked with Highways England to identify opportunities to reduce incursions into roadwork areas caused by driver confusion and vehicle breakdowns. The outputs of the project resulted in recommended changes to Highways England policies. We conducted a review of the literature to identify causes for road works incursions. This data was supplemented by stakeholder interviews and focus groups with road users to identify the reasons behind intentional and unintentional incursions. Virtual Reality (VR) headsets were used to present highly immersive 360 degree footage to trial participants. The trial was used to identify key risk scenarios and test potential mitigations from a road users' perspective.

Human Factors Review of variable Signs and Signals Policy, Highways England (2017/16)

This project demonstrates our experience of undertaking a literature reviews.

TRL provided human factors evidence supporting the requirements described in Highways England's variable signs and signals (VSS) policy. This was based on prioritisation of gaps in the current evidence which were revealed following an analysis of the policy. This evidence was drawn from recent research identified in the literature, and entirely new research conducted by TRL during this project which took the form of driving simulator study. Overall, the review of the VSS policy suggested it was generally compliant with human factors best practice. However, from previous evidence and the new evidence obtained from the driving simulator study, a few aspects of the policy were identified which could benefit from improvements.

HGV Blind Spots Virtual Reality (VR) App Development - Commercial Vehicle Incident Prevention Programme, Highways England (2018)

This project demonstrated that TRL has experience of developing, testing and promoting access to VR apps. TRL has existing relationships with VR app developers.

TRL developed a VR app to raise awareness of the risk of blind spots relating to large vehicles, such as HGVs. In partnership with Invert Reality, a specialist VR developer, TRL and Highways England created, tested and launched a VR app. The app contains a suite of scenarios which highlight the risk to other road users when in HGV blind spot areas. The VR app was developed and trialled amongst HGV drivers and other stakeholders to ensure validity, relevance, and wider user experience factors. Five evidence based scenarios were developed covering the key considerations and high risk manoeuvres associated with driving a large commercial vehicle. This included mirror adjustment, joining the motorway on a slip road, changing lanes and keeping a safe distance. Components of the testing process explored potential adverse effects experienced by users.

A review of Interventions which seek to Increase the safety of young and novice drivers, Department for Transport (2015/16)

This project demonstrates our experience of undertaking a systematic literature review.

TRL conducted a review of the literature to establish which technology, education and other 'engagement-based' approaches to young and novice driver safety showed most promise for evaluation in a wider programme of research in GB. TRL reviewed the literature for evidence of effectiveness of different types of intervention, and for links between collision risk and the behaviours typically used in evaluations. TRL applied a robust inclusion criteria to large sample of available literature by using the Maryland Scientific Methods Scale (SMS). The SMS scale allowed TRL to evaluate the robustness of the evidence in a transparent way that could be reviewed by the client and other interested parties in this domain.

StoryFutures, Arts and Humanities Research Council's Creative Industries Clusters Programme (2019)

This project demonstrates the development of immersive/VR use cases and highlights our industry connections.

Led by Royal Holloway, University of London, StoryFutures is part of the Arts and Humanities Research Council's Creative Industries Clusters Programme, funded through the Industrial Strategy Challenge Fund. StoryFutures places innovative storytelling at the heart of growth in next generation technologies and audience-facing experiences. It brings together universities, world-leading Creative Screen and Technology companies. StoryFutures partners include film, TV, gaming, VFX and Immersive, including: BBC Studios, Pinewood Studios, National Film and Television School, Immerse UK, Resource Productions, BFI, Connect TVT, Imaginarium Studios, The National Gallery, Sony Interactive Entertainment Europe, Creative Engine, Screen South, BSAC, BTVLEP, and nDreams. The project will develop use-case prototypes and pilots that respond to industry wide barriers to growth in Immersive and beyond.

The Impact of movement in roadside stimuli on distraction in drivers in an urban environment, Advertising Company (2018)

This project demonstrates an existing and effective working relationship between TRL and

RHUL.

TRL and [REDACTED] worked together on this study examined the role of movement in roadside stimuli (such as videos and animations) in capturing attention in drivers. The work involved a review of the literature on driver distraction, the development of an objective movement metric to quantify the amount of movement in such stimuli and a simulator study in TRL's DigiCar simulator.

1 Understanding the Environment

1.1 Introduction

We are very pleased to provide this proposal in response to your recent invitation to quote (ITQ) for the Virtual Reality study. As one of the largest and most comprehensive independent transport 'Centres of Excellence' in the world, TRL has a dedicated team of human factors specialists with extensive experience in areas relating to the evaluation and development of human-machine interfaces (HMI) and other technologies such as VR and simulation, and has a proven track record of delivering robust, scientific project work. We are excited by the prospect of working with the Department for Business, Energy and Industrial Strategy (BEIS) and believe our proposal presents a strong match to your requirements, offering the best combination of technical quality and value for money. This document provides the proposed methodology, along with relevant assumptions, and the resource that would be needed in order to deliver the work. We trust that this proposal meets with your expectations, and look forward to working with you in close partnership on this project.

This proposal is valid for 60 days from the 15 January 2019.

1.2 Study objectives

This work will establish the current state of knowledge on the risks to users of virtual reality (VR) systems in a domestic environment, and to identify ways to mitigate any potential risks. The study will address the following key objectives:

- Provide an evidence-based understanding of the risks and hazards that a domestic user is exposed to during the use of VR systems
- Provide an evidence-based understanding of the risks and hazards that a domestic user is exposed to following the use of VR systems. In particular, this will include an analysis of the additional hazards that might occur during subsequent use of machinery or driving
- Assess possible mitigating measures of their efficacy in protecting the user from harm

The output formed on the basis of the above objectives will provide BEIS with high quality science-based evidence of the exposed hazards during and following VR use, defining further research that is necessary to address any identified knowledge gaps. TRL is at the forefront of innovative technological research which is why we believe we are best positioned to conduct this piece of work. We have substantial experience in conducting systematic literature reviews, supported by a robust structure which will ensure that only the most impactful literature is taken forward into the review. TRL has access to a comprehensive repository of academic peer reviewed journals. As part of our robust framework for developing reviews we have involved Royal Holloway University of London's (RHUL) VR experts/SMEs to provide further technical input. This also supports the researchers in giving access to additional specialist journals on vision and VR. RHUL's support in providing extensive VR knowledge and experience of immersive technology will complement the review and provide unique collaborative, academia-industry input. This will support the Department's Strategic Research Programme (SRP) in building a strong, evidence base for the development of a Safety and Standards policy to protect consumers from unsafe products.

1.3 What is presented in VR?

Virtual reality requires recreating the sensory cues we rely on when perceiving the real world (Steuer, 1992). To understand the effects of VR on user safety and assess potential risk mitigations, it is essential to have an understanding of 'normal' sensory perception.

Our perception of the space around us is based largely on multiple types of visual and vestibular inputs (Dichgans & Brandt, 1978; Sadato et al., 1996), as well as motor and haptic senses. A significant factor to informing our sense of spatial and situational awareness in the real world is visual processing of depth (Ambruster et al., 2008; Ward et al., 2016) and motion (Riecke et al. 2006; Laycock et al., 2007). Cues that contribute to depth perception can be divided into two categories: visual and oculomotor. Visual depth can be signalled by static 2D image based cues (such as perspective), static 3D cues from stereoscopic vision and motion-based visual cues which are caused by the relative movement between an object and a person, allowing the individual to make an accurate estimate of depth. Oculomotor depth cues are made up of accommodation (i.e. the eye's ability to adjust optical power to keep objects in focus) and convergence (i.e. rotation of the eyes to maintain a binocular vision to allow accurate, uninterrupted depth estimations). A significant part of making the transition between VR and reality with minimal sensory impact is accurately recreating these visual depth cues and importantly the relationships between them.

Accomplishing a smooth transition between the virtual environment and reality is the key to providing an innovative, safe solution to aid both an ageing population and the potential integration of human-machine interfaces (HMI) in future mobility and other application areas.

1.4 Known problems

In addition to visual depth cues it is important to understand how other sensory processes such as vestibular cues interact with cues from a VR device and the impact this has on the users' safety and wellbeing. Some known problems with using VR in a domestic environment are outlined below.

1.4.1 During use

Research has shown that visual-vestibular conflict can lead to postural instability and motion sickness (Dichgans & Brandt, 1978; Akiduki et al., 2003), often termed 'cybersickness' in the VR context. This is when visual cues do not align with vestibular cues. The impact of this could be significant on the ability to maintain a stationary position whilst using VR and may potentially hinder prolonged, safe use (e.g., without any sign of motion sickness). Furthermore, gait (the way in which an individual walks/sways) instability has been shown to increase during VR use. The literature evidences reduced stride lengths, increased step widths and higher stride velocity when using VR compared with a normal environment (Hollman et al., 2006), showing decreased stability.

1.4.2 Short term acute effects

In addition to issues that can occur during use (see 1.4.1), research has shown possible short term effects of using VR for a prolonged period of time (>10 minutes). The visual system is demonstrated to be able to cope sufficiently with continuous adaptation of accommodation and convergence (see 1.3), although this has been shown to induce a moderate level of visual stress. This could lead to short term eyestrain and cause subsequent headaches (Mon-Williams & Wann, 1998). The literature also points to potential issues with performing visually-demanding tasks immediately after VR exposure.

This has obvious relevance to things like driving. Prolonged sickness/after-effects (up to a few hours after VR use) have also been shown, with Lampton et al. (1994) finding increased US army dropout rates from VR-induced sickness, increasing from 4% (without VR) to 16% (VR), with 94% of these dropouts occurring with only a 10 minute exposure. This demonstrates the potential risk of using VR immediately prior to a following high risk task.

VR is being increasingly used within the automotive industry and will undoubtedly play a significant role in the development of future mobility services. In response to this, short term effects should be studied using objective, physiological measurements as well as subjective, self-report and behavioural observation techniques to ensure VR systems are safe to use in any domestic or other environment. The constant conflict between the visual system detecting visual depth cues (i.e. motion and oculomotor) and an opposing sensory vestibular input (i.e. visual system detecting movement with the vestibular system detecting a static position) (Nichols & Patel, 2002) reinforces the physiological issues attached to domestic VR use and its importance in developing any mitigations to improve user safety.

1.4.3 Long term chronic effects

Although the scope of this work excludes understanding the long-term effects of using VR, the literature supports the notion of VR leading to postural instability, although shows it can actually improve balance and reduce risk of falling in older chronic stroke patients. Cho et al. (2012) found through application of virtual reality balance training (VRBT) a significant improvement in dynamic balance as part of a functional recovery programme; although in contrast showed no significant improvement in static balance. This is supported by Singh et al. (2012) who found VR balance games to reduce the risk of falls amongst older adults (aged 56 and above). This has a positive impact on improving safety in an ageing population as well as providing an innovative application in both a domestic and clinical environment. However further investigative work into the safety concerns with the use of VR should be performed to ensure its safe use and application to domestic and industry environments.

In addition to the physical/physiological long-term effects of prolonged VR use, research has shown a potential 'blurring' of reality and virtual worlds through multiplayer online games (Turkle, 1994). One explanation for gaming motivation across the general population is the ability to recreate an individuals' self in a virtual environment without any direct link with their real self. This can include playing someone of opposite gender, sexuality, or appearance, with actions in the virtual environment having no impact or consequence in the real world; essentially being able to 'try out' new identities (Turkle, 1994).

1.5 Examining possible mechanisms to explore mitigation

1.5.1 Cybersickness and postural instability

The mechanisms underlying cybersickness are thought to be to do with mismatch between vestibular and visual cues (Laviola Jr, 2000) as well as oculomotor and visual cues, in particular the mismatch between vergence and accommodation that can occur in the stereo displays of a VR set (Hoffman et al., 2008). As such, work has investigated the exact nature of this mismatch and some suggestions have been made in how to for example to induce artificial vestibular cues or make use of a motion platform (Laviola Jr, 2000). Recent technological solutions to correct for vergence and accommodation rely on making use of in- built eye trackers (increasingly likely to become a feature of VR headsets) to alter the plane of focus (Aksoy & Petrov, 2017, Konrad et al. 2018).

1.5.2 *Aftereffects*

One of the underlying mechanisms of sensory aftereffects induced by VR the important physiological mechanism termed sensory adaptation (Stanney & Kennedy, 1998). Our sensory cortex is highly tuned to its current environment and extremely sensitive to changes in input. In effect our brain is constantly recalibrating to best match and maximize the information it can extract from the current environment (Clifford et al. 2007). This is extremely useful and an example of this is how easily we can cope with very large differences in lighting between environments that cameras struggle with. However sometimes it takes some time to adjust from one environment to the other and if in the VR environment the laws of physics are 'broken', adapting to this environment may have detrimental aftereffects.

Another type of recalibration that occurs is a result of how heavily the information from each of the senses is weighted in VR and in the real world. Humans in general rely on their visual sense more heavily than the other senses, but this may become particularly true in VR, where if the visual sense does not match the vestibular, during experiencing VR the vestibular cue may become down-weighted (Lambrey & Berthoz, 2003). Thus after use of VR this may persist for a while leading to imbalance and postural control problems.

To mitigate these effects the first step would be to match the contribution of the sense as closely as possible to what occurs in the real environment, focusing in those aspects which are known to adapt to as suggested above. Furthermore some work has suggested that the relative weighting of the senses can be manipulated by introducing noise (Laviola Jr, 2000),

i.e. making the sense of vision or balance deliberately less reliable and thus reducing conflict and re-weighting.

As we have seen, long term effects can be beneficial, and VR may be used for example as rehabilitation in stroke patients, so although the above risks may still apply, questions of balance and postural control be more important in this case.

1.5.3 *Social mechanisms of interaction and addiction*

One thing to consider is that it may not always be possible to mitigate the effects of using virtual reality, but in the case of positive long term effects such as rehabilitation the emphasis may be on encouraging groups of users (such as the elderly) to engage by tailoring 'gamification' to their interests (Flores et al. 2008). However, one must consider the possible negative side of making the VR experience as immersive as possible. Not surprisingly research has shown with video games that the more immersive they were rated as being, the higher the likelihood of addiction-like symptoms from playing them (Seah & Cairns, 2008). As VR games promise to provide the most immersive possible experience, blurring real with virtual, it becomes necessary to consider how this can be balanced against possible addiction.

Literature discussed thus far demonstrates the importance of conducting a comprehensive systematic review of the current state of knowledge on the safety implications during and post-VR exposure. A main feature of the systematic literature review proposed in this document is the identification of gaps. The output will allow us to develop subsequent research topics to fill any gaps in relation to the effects of VR use; subsequently informing policy on the safe use of VR in domestic environment(s).

1.6 Knowledge relevant to the project

TRL and RHUL in combination provides a unique combination of skills, knowledge and experience that are ideally suited to this project. As a partnership, our knowledge and experience in recent project work will ensure that the project objectives are met. TRL and RHUL offer the following skills, knowledge and experience:

- Understanding of virtual reality systems; TRL has experience of developing virtual reality apps as well as using VR systems to identify risks and potential mitigations. RHUL have industry connections with companies specialising in Virtual Environments and are currently working on project exploring the barriers to the growth of immersive technologies.
 - Skilled at conducting evidence-based reviews; proven experience of conducting thorough, meticulous and systematic literature reviews. In addition to the evidence-based review, TRL can perform a gap analysis to identify whether potential gaps in knowledge exist and how these can be addressed.
 - Experienced at conducting interviews with subject matter experts; TRL frequently conducts, analyses and presents findings from interviews.
 - Acute understanding of motion sickness; the physical side-effects of VR use closely align with those of simulator sickness. As a result of having a full motion simulator, TRL has an in-depth understanding of simulator sickness, early indicators for identifying simulator sickness and the mitigations that can minimise or eliminate the negative effects. Our knowledge and experience in this area has enabled us to achieve noticeably low-incidence rate of sickness in our simulator trials.
 - Multi-disciplinary skilled staff; TRL offers a unique combination of psychologists, human factors specialists, and risk management experts that can work collaboratively to identify short, mid and long term issues associated with VR use – both during and after the use of technology. Specialists at RHUL will complement our team.
 - Identifying risks and hazards and assessing possible mitigating measures; TRL has previously worked with Institution of Occupational Safety and Health (IOSH) and Health and Safety Executive (HSE).
 - World-renowned expertise in transportation systems; TRL is one of the largest and most comprehensive independent transport 'Centres of Excellence' in the world. TRL brings a unique combination of understanding behaviour, with knowledge of the risks associated with interacting with transport systems. These expertise will provide valuable insight into the potential short term effects of using VR. This will be pertinent as we believe that mobility and transportation will be one of the key use case in which VR effects will need to be considered.
-

1 Project Plan and Timescales

1.1 Our Approach to Managing the Project

██████████ will be the Project Manager and the main point of contact throughout the work. We have selected ██████████ as the Project Manager because she has a proven track record for delivering high quality projects on time and to budget. As the Project Manager, she is accountable for the risk management, quality and timeliness of the work package. She will ensure that BEIS are regularly updated on the project. By taking a 'no surprises' approach to project management, part of ██████████'s role will be to keep you updated at every stage of the project. This project management approach involves:

- Regular progress meetings with BEIS and key members of the TRL (and RHUL team, as required). We note that the Invitation to Quote suggests monthly progress meetings. However, through experience we believe that more regular communication is key to the success of the work. Therefore, we propose these meetings are held every two weeks via TRL's teleconferencing facilities.
- Highlight reports sent on a monthly basis. Highlight reports will be discussed at every second two-weekly update meeting (i.e. monthly) and will include an update on progress, milestones, deliverables and an updated risk register with any notable changes
- The use of MS Project to accurately track tasks against time and progress. This ensures issues are recognised and managed early.

In addition, we propose two face-to-face meetings at the BEIS London office:

1. Inception meeting on 29th January 2019 to discuss and agree the project milestones, deliverables and schedule. Our proposed list of deliverables is shown in the detailed programme plan Table 1.
2. Final meeting, to present the results of the work and discuss the final deliverable. The timing of this meeting will be agreed with BEIS.
- 3.

1.2 Timescales

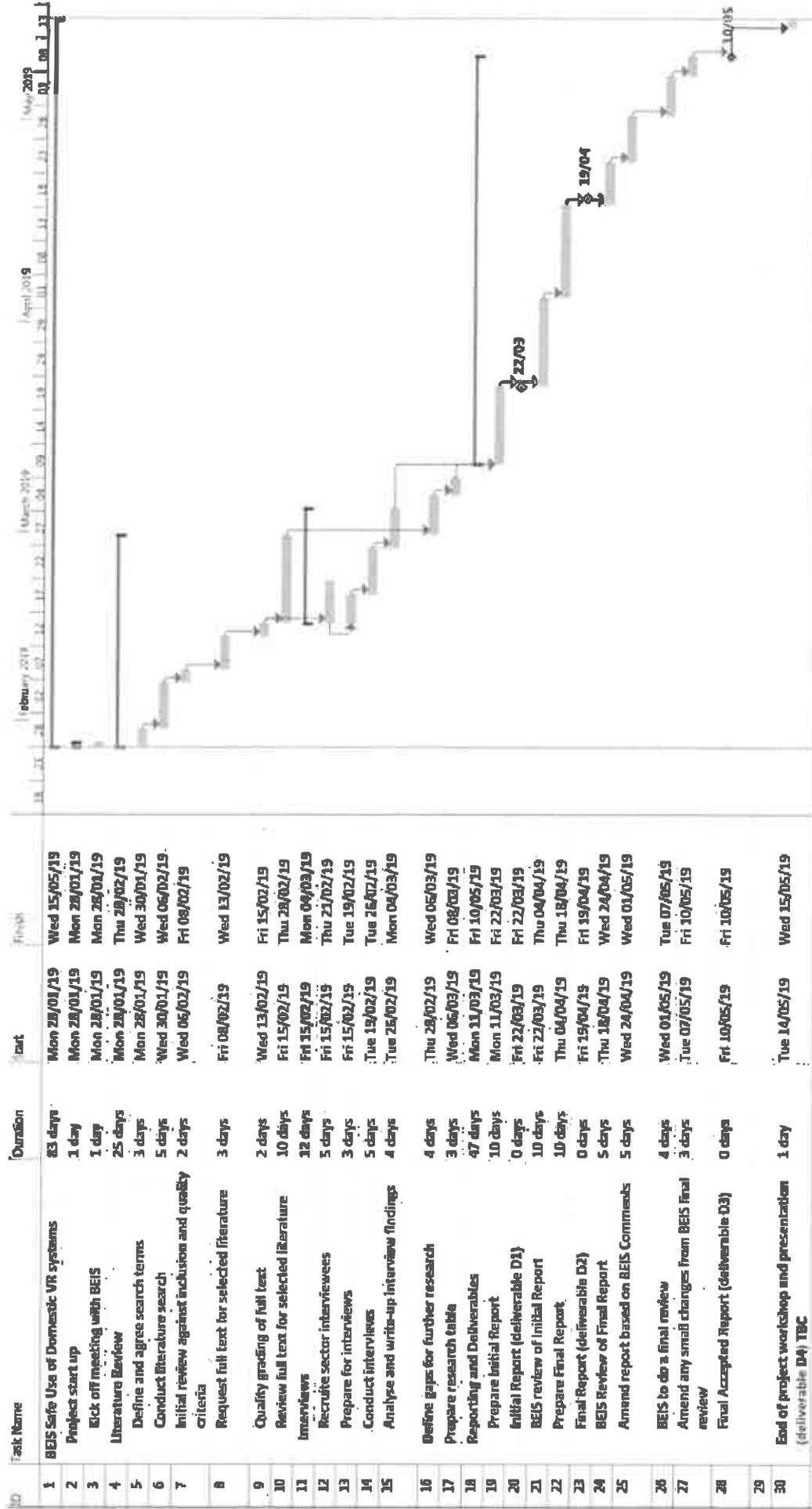
The duration of this project is 4 months. The project plan assumes that the project will start on 28th January 2019 with a kick off meeting being held on 29th January 2019. The literature review will be conducted in February with interviews running concurrently into the beginning of March 2019. This ensures that the first initial report can be signed off by 22nd March. Within the timescale we have made a number of assumptions, these are;

- Search terms will be defined and agreed between TRL and BEIS by the 04/02/2019. Any delay on this may impact the project timescales.
- We have assumed that BEIS will provide feedback on the reports by the dates specified below (assuming delivery by the dates in . A delay in providing comments could impact the project timescales. The BEIS review points have been included in the timescales (Table 1).

- Review of initial report: 20/03/2019
- Review of updated report: 18/04/2019
- Review of final report: 06/05/2019

- The end of project workshop and presentation will be conducted following delivery of the final report. We can review this assumption if the workshop and presentation are required sooner.

Table 1 Project Plan



1.3 Allocation of Effort

To demonstrate that TRL has the ability, resources and time available to deliver the project in the timescales outlined in Table 1 we have included a breakdown of the allocation of planned work (shown in Table 2).

Table 2 Allocation of effort across tasks

Staff	Level	Allocation of days for project tasks				
		Desk analysis	Drafting of initial report	Drafting of final report	Create and deliver presentation	Project management
[REDACTED]					1	6
		2	0.5	0.5	1	
		16	8.5	6	1.5	
		1	1	1		
		9.25	1			
		13	1			

*Level 2 (Researcher) up to Level 8 (Master)

1.4 Quality Assurance

We are committed to ensuring that our services fully meet the expectations of our customers, and that our work is of the highest standard commensurate with our international reputation.

1.4.1 Technical review and proof reading

Excellence in Science and Engineering is at the heart of our work. At the proposal stage, a Technical Reviewer (TR) is selected and assigned to the project. The TR's role is to ensure the technical quality of the project tasks meet both the needs of the client and established scientific criteria. The TR on this project is [REDACTED], who has experience in guiding the technical quality of projects in this technical area. During the project the TR:

- Regularly reviews progress to:
 - Provide early warning if a project has quality problems;
 - Ensure the project team are continuing to address the customer's requirements;
 - Ensure staff with appropriate skills and knowledge are assigned to the project;
- Reviews the technical quality of written outputs before they are sent to the customer, evaluating them for timeliness, underlying quality of research, structure, standard of writing (including formatting, spelling and grammar), how they could be interpreted and the scale of any revisions needed; and
- In conjunction with the Project Manager, considers any customer comments on the output and advises on drafting appropriate responses.

1.4.2 Risk Management

We believe that the management of risk is an essential process in the successful delivery of all of our work. The delivery of this work has a number of associated risks. Initial perceived risks associated with delivering the work are listed in the table below. Each risk is evaluated in terms of Probability and Impact, an owner is assigned, and a strategy is developed to manage it. This information is entered in to the project's Risk Register and updated throughout the life of the project.

TRL's experience in undertaking similar projects means that we have a sound understanding of the likelihood of occurrence and potential impact of different types of risk in different types of project. For this proposal we have identified and appraised the major risks, their likely impact (before management) on meeting our proposed timetable, costs and/or level of quality, and the residual risk following management. Risks are identified and managed using the following five steps:

1. Define the scope of work (outlined in this proposal and agreed at Inception)
2. Identify all risks within this scope
3. Assemble and analyse risk data from all project team members, including RHUL
4. Evaluate risks and identify treatment and mitigating actions, including assigning risk owners
5. Take action to minimise and mitigate against risks

The risk register will be reviewed at the inception meeting and additional risks added and, where necessary, alternative mitigations discussed and agreed. The risk register will be reviewed as part of the review cycle and revised as required (apart from risks and issues rated "high" – which will be reviewed on a weekly basis). These reviews will include:

- reviewing all currently assigned risks to remove any that failed to materialise
- reviewing the relevance of the previously agreed strategy against each 'live' risk
- identifying any new risks that have come to light since the last review

The Project Manager [REDACTED], will be responsible for the Risk Management Process. Responsibility for individual risks can be delegated to other team members; these responsibilities are recorded in the Risk Register. The Project Manager will be responsible for re-issuing the Risk Register as and when it is revised. Any changes or updates to the table will be shared with BEIS and the Risk Register will be made available for BEIS review, as required

The table below indicates the most important risks we have identified for this project and demonstrates the mitigations we would use to deal with them.

Risk	Prob.	Impact	Mitigation
Too much or too little literature	Med	Med	Existing robust process will be followed. Prioritisation of gaps for additional research.
Turnover of key staff	Low	Med	TRL has a significant resource pool we would draw upon in this event.
Interview recruitment challenges	Low	High	The recruiter chosen has previous experience and will start recruitment early

OFFICIAL-SENSITIVE (COMMERCIAL)

For and on behalf of T.R.L Limited
(The Supplier)

Signed

Name

Position

Date

[Redacted signature area]

27th February 2019

For and on behalf of
(The Contracting Authority)

Signed

Name

Position

Date

[Redacted signature area]

[Redacted name]

[Redacted position]

4 March 2019

UKSBS

Shared Business Services

OFFICIAL-SENSITIVE (COMMERCIAL)

UK Shared Business Services Ltd (UK SBS)

THIS IS THE LAST PAGE OF THESE TERMS & CONDITIONS