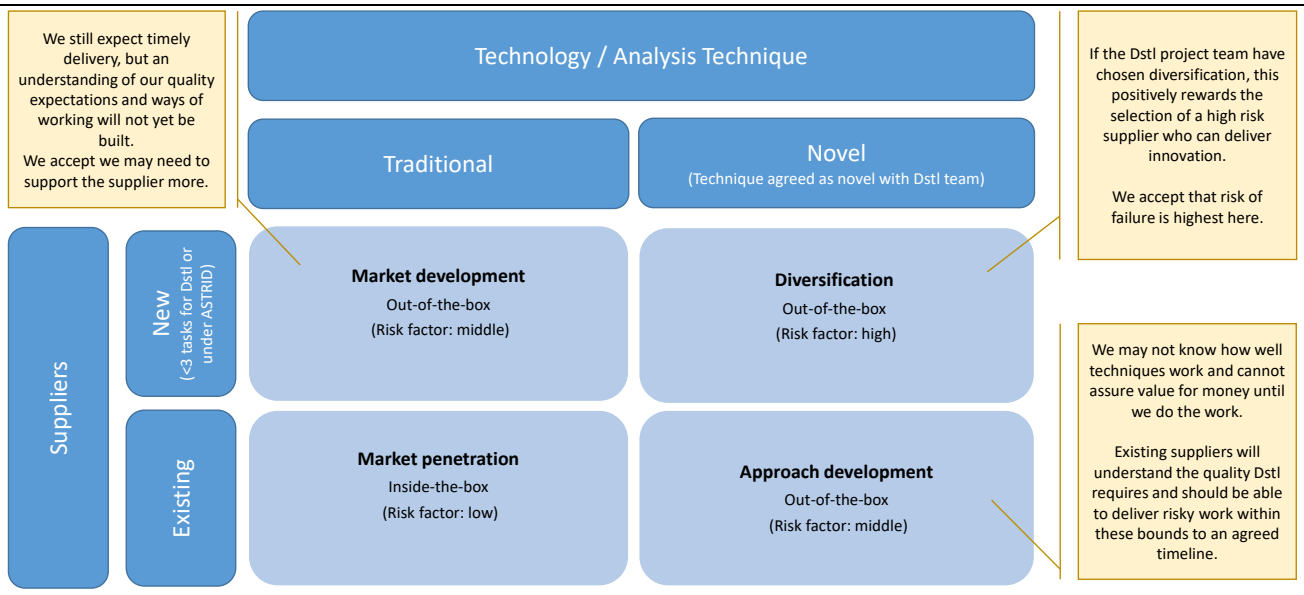
Statement of Requirement (SOR)

Contact & Project Information:

Project Manager	Name	**[Redacted under FOI exemption Personal Information]**		
	Email	**[Redacted under FOI exemption Personal Information]**		
	Telephone number	**[Redacted under FOI exemption Personal Information]**		
Technical Partner	Name	**[Redacted under FOI exemption Personal Information]**		
	Email	**[Redacted under FOI exemption Personal Information]**		
	Telephone number	**[Redacted under FOI exemption Personal Information]**		
iCas project number	**[Redacted under FOI exemption Commercial Interest]**			
Owning division	**[Redacted under FOI exemption Commercial Interest]**	**Delivering division**	[Redacted under FOI exemption Commercial Interest]	
Programme	[Redacted under FOI exemption Commercial Interest]			
Indicative task budget(s) £k	Core / initial work:	[Redacted under FOI exemption Commercial Interest]	Options / follow on work:	[Redacted under FOI exemption Commercial Interest]

Innovation risk appetite:	[Redacted under FOI exemption Commercial Interest] **Choose an item.**
Narrative (if applicable):	The analysis purpose (exploitation) is a standard one (generation of insights to support Concept Development & of evidence to inform future Balance of Investment decisions & Capability Audit); novelty in methodology is less important than reliability of delivery (to time, to cost, to quality) for reputational reasons – which drives this work towards risk minimisation.
Using the Ansoff matrix below, please indicate your risk appetite with regards to accepting innovative bids/solutions. The type of analysis/experimentation technique is included within 'Technology/Product'.	



Use of Outputs:

This section is used to inform risks, liabilities, mitigations and exploitation. Questions 1-10 below should be a Yes/No/NA response. Please indicate if the questions do not make sense in the context of your task.

Intended uses (including the approximate time before use and any key decisions that will use the output):

The ultimate purpose of this task is to provide a **quantified understanding** of what combinations of what potential capability "interventions" (of technological and non-technological nature) to the current Forward/Reverse Lands Supply Chains (LSC) from 3rd to 1st Line ("End-2-End (E2E)") could achieve what improvements in distribution performance (efficiency, productivity) &/or what reduction in Logistic Demand to be serviced by said LSC in c.2035 for what investment in order to:

- **Inform** generally the **Logistics Capability Development (Log Capdev) planning undertaken within AHQ** by [Redacted under FOIA Section 26 – Defence];
- **Inform** specifically the generation of a holistic **Future-Material Distribution Land (F-MDL) Strategy** for Log Capdev by [Redacted under FOI exemption Commercial Interest] to be implemented after delivery of the current Material Distribution Land 2025 (MDL25) Equipment Programme (ISD 2030+).

Possible uses:

The evidence generated by this study also has potential to **provide evidence** to support **Capability Audit reviews** and **Balance of Investment Decisions/Business Cases** for acquisition of identified desirable CSS "interventions" or other modifications of capability development plans.

Excluded uses:

This work is not intended to:

- be used in [Redacted under FOIA Section 26 – Defence]
- To represent Equipment Support (ES) aspects of Land CSS – other than as they relate to the reduction in demand for movement of ES Material (ES Mat) through the LSC.
- To represent rearward medical evacuation capabilities for casualties.

Risk Assessment Process: Project teams are required to complete the ASTRID Liabilities spreadsheet that will look at the direct and indirect risks associated with the work. The assessment must be completed at the outset before the draft SOR is submitted, this will prevent delays and lessen negotiations when the proposal is received. The risk assessment spreadsheet can be found in the document list on the: Some generic risks are pre-filled so please ensure they apply to your task and delete/add as necessary. Each risk must be assessed in turn and a score entered in the spreadsheet. They will be automatically marked and a colour code produced. Please enter the results in the boxes below. A completed copy of the spreadsheet must be attached to this SOR when submitting it to the for review and approval to release to CORDA.

[Redacted under FOI exemption Commercial Interest]	

In the event that a direct risk is scored as “Green” or “Yellow” the risk will be capped at pre-agreed limits of liability and the project team may continue with the submission of their requirement to CORDA once all necessary approvals have been issued by the In the event that a direct risk is identified as “Amber” or “Red” project teams should discuss the requirement with their Commercial POC before the task is submitted.

[Redacted under FOI exemption Commercial Interest]	

In the event that the indirect risk is “Excluded” project teams may continue with the submission of their requirement to CORDA once all necessary approvals have been issued by the In the event that the indirect risk is identified as “Included” project teams should discuss their requirement with their Commercial POC before the task is submitted.

Levels of Technical Assurance:

The framework can offer three levels of Technical Assurance Support, and you have the ability to determine which level is suitable for your task.

Full guidance listing the types of support under each level (and the trade-offs) can be found in the “ASTRID Guide – Levels of Assurer Support” or in the document list on the.

It may be that the level of support you require changes in the early discussion phase. Please ensure the final version of your SOR has the correct level indicated.

Please indicate below which level you require

Minimum ☐	Standard ☒	Enhanced ☐

Statement of Requirement (SoR)

Project's document ref	**Operational Analysis to Inform Development of a Future Material Distribution Land (F-MDL) Strategy – SoR**
Version number	**1.0**
Date	**09/09/2021**

1.	**Requirement**
1.1	**Title (including AST/ prefix)**
	AST/066 – Operational Analysis to Inform Development of a Future Material Distribution Land (F-MDL) Strategy for Army
1.2	**Summary**
	1.2.1 [Redacted under FOIA Section 26 – Defence]; the purpose of this task is to identify which combinations of which Logistics technologies (and potentially, other non-technology changes to CSS) should be the priorities for investment to deliver a Future E2E (i.e. from 3rd Line / Joint Support Area (JSA) to 1st Line / F Echelon) LSC capability able to support The Future Force (TFF) to be deployed on operations in the c2035 epoch. Specifically, this work is to: a. **Baseline** the performance of the system of currently funded c2035 E2E LSC capabilities across 4 scenario-phases from 2 scenarios in this epoch; b. **Evaluate** the costs and benefits of integrating new technologies and non-technological changes into existing Land CSS capabilities, individually & in combination; c. **Formulate** alternative Courses of Action on how, where & when these changes could be integrated into existing, planned & expected Land CSS capabilities; d. **Support** the development by AHQ of an F-MDL Strategy for TFF 2035. e. **Provide** (in outline) future distribution, storage & Information Exploitation (IX) requirements for Land CSS;

f. (If Tranche 3 in FY22/23 is funded) **produce** a strawman F-MDL Force Operating Concept (FOC) and implementation strategy for the MDL component of this E2E Concept;

g. (If Tranche 4 in FY22/23 is funded) extend the previous analyses to test the robustness of these conclusions in the circumstance where concurrent scenarios (which may not be those analysed in Tranches #1 & #2) are to be supported simultaneously.

1.2.2 Recognising that previous work has been undertaken recently on modelling supply chains (including the Analysis Support Construct (ASC) development of a Systems Capability for Assessing the [overall, Defence level] Logistics Enterprise (SCALE) model), it is expected that the successful Supplier will already have access to Models, Methods & Tools (MMT) suitable for undertaking this task, although data collection will be required to populate the model for the scenarios assessed.

FY	Contract Tranche	WP	Task	Leading to	When
FY 21/22	Core/Tr1	WP0	Cohere with otr Studies [Redacted under FOIA Section 26 – Defence]	DP1	MAR22
		WP1	Baseline current E2E LSC		
		WP2	Identify Potential Land Supply Chain (LSC) interventions		
		WP3	Data Collection		
FY 22/23	TR2	WP0	Cohere with otr Studies [Redacted under FOIA Section 26 – Defence]	End of Study	MAR 23
		WP4	Optimise current E2E LSC		
		WP5	Detailed Characterisation of Interventions		
		WP6a	Assess Intervention Impacts individually		
		WP6b	Assess Intervention Impacts Collectively (look for synergy effects)		
		WP7	Future F-MDL Concept		
	Tr3 (Optional)	*WP8*	*F-MDL FOC/Strategy*	*End of Study*	*MAR 23*
	Tr4 (Optional)	*WP9*	*Sensitivity Analysis for Concurrency*	*End of Study*	*MAR 23*

	1.2.3 The FY21/22 core task ("Tranche #1") will: a. Provide support to Dstl in maintaining appropriate coherence with other relevant Army Research & Experimentation underway in parallel within Dstl &/or Dstl/ASTRID (WP0); b. Baseline the performance of the currently funded LSC in c2035 in each of the 4 scenario-phases in order to identify what stresses or failures will occur in the 2035 LSC, where & why without capability intervention (WP1); this will inform both the priority interventions for further investigation and future CSS Capability Audits; c. Identify, define, bound and prioritise – with the AHQ Customer - the potential capability "interventions" into the 2035 LSC to be assessed in FY22/23 (WP2); d. Collect any additional data required for the FY22/23 analyses (WP3). e. Provide a Decision Point (DP1) at the end of FY21/22 for the AHQ Customer to confirm that the study should continue in FY22/23 (which is funded). 1.2.4 Assuming AHQ are content to proceed at DP1, Tranche #2 in FY22/23 will then characterise in appropriate detail the various potential LSC capability "interventions" identified (WP5) and assess which might contribute to addressing the identified LSC performance shortfalls, either individually (WP6a) or in combination (WP6b). It will also look to see whether said LSC performance shortfalls could be addressed simply by using the funded 2035 CSS capability in different ways (WP4). From this recommendations are to be made regarding how HoC CSS should design a realistic F-MDL concept to guide their Logistics Capability development (WP7). 1.2.5 Additionally, the AHQ Customer will decide at DP1 to authorise either or both of optional Tranches #3 & #4 in FY22/23 (WPs 8,9) as described above (paragraph 1.2.1.f – g).
1.3	**Background**
	1.3.1 Since 2018, the (still unpublished draft) Land CSS Sub-Concept for the Digital Era has directed that *"…Land CSS must transform… and continuously modernise to be 'match fit' for the next decade and beyond…[Redacted under FOIA Section 26 – Defence]"*. 1.3.2 This aspiration recognises the reality that the Land Supply Chain between 3rd Line (Theatre/Joint Support Area (ThSA/JSA) at Points of Disembarkation (PODs) for the Coupling Bridge) and 1st Line (F Echelon troops on the Front Line of Own Troops (FLOT)) has remained largely unchanged since the end of the Cold War [Redacted under FOIA Section 26 – Defence]

	1.3.3 Moreover, the incipient 4th industrial revolution (Industry 4.0) is likely to force a paradigm shift in logistic support into an era of cyber-physical systems (the Internet of Things), with greater logistic information quality & quantity coupled with Robotic and Autonomous Systems (RAS) and greater standardisation and modularisation (the Physical Internet (PI or "π")) to enable more effective distribution logistics (sometimes called the "logistics internet"). Coupled with advanced manufacturing (AdM or AM) techniques that allow production to be carried out near or at the point of consumption, potentially significantly reducing ES Mat requirements and improved localised energy & resource harvesting, these technologies could – in the best case - allow for leaner, information-led, more Just-In-Time (JIT) sustainment networks rather than the current commodity-pushed, Just-In-Case linear supply chains. 1.3.4 Furthermore, the evolving character of conflict suggests that operations will occur at greater tempo and dispersal across more domains with greater concurrency than at any recent time. To meet these challenges, and to ensure that existing and planned projects and programmes remain fit for purpose and able to support the logistically most-challenging defence scenarios, OA is required to understand the capability performance requirements of the current and potential future LSC as a *system* and to identify the costs and benefits of incorporating into the current system "interventions" providing greater information & automation, localised production and resource-acquisition etc. 1.3.5 Several initiatives to derisk and demonstrate aspects of such a potential future Land Supply Chain (LSC) are already underway within Army [Redacted under FOIA Section 26 – Defence] but only in an opportunistic, piecemeal manner. [Redacted under FOIA Section 26 – Defence] 1.3.6 Additionally, Army Capdev philosophy & the associated requirements for Research & Experimentation (R&E) to support same are currently evolving towards a much greater emphasis on managing systems of capabilities rather than capabilities in isolation; CSS is a natural candidate for such systems-level assessment [Redacted under FOIA Section 26 – Defence] 1.3.7 Finally, even before the recently published (MAR 21) Integrated Review (IR) of UK Defence & Security [Redacted under FOIA Section 26 – Defence] it was clear that [Redacted under FOIA Section 26 – Defence] there would be particular pressure on the military sustainer headcount (IOT allow 'reinvestment' of same elsewhere in Army). [Redacted under FOIA Section 26 – Defence]

1.4	**Requirement**

1.4.1 **Security Classification.** Although the required analyses are to be set within the context of [Redacted under FOIA Section 26 – Defence] Defence Scenarios and their associated Planned Force Testing (PFT) exercises, data collection and scenario characterisation at [Redacted under FOIA Section 26 – Defence] level will be undertaken by Dstl and simplified & sanitised down to [Redacted under FOIA Section 26 – Defence] for supply to ASTRID.

1.4.2 **Scope of Analysis:** For the purposes of this analysis:

a. the E2E LSC:

i. Is the collection of physical and information systems used to enable the storage, handling and movement (transhipment) of inventory (in both directions) between the 3rd Line (Theatre/Joint Support Area (ThSA/JSA) at the Points of Disembarkation (PODs) for the Coupling Bridge and the 1st Line (including F Echelon troops on the Front Line of Own Troops (FLOT)) via appropriate intermediate nodes (such as Divisional Support Area (DSA), if present, and 2nd Line (Brigade Support Area (BSA), Logs Rendezvous (Logs RV), Exchange Points (XPs) etc);

ii. Covers NATO Supply Classes I – V;

b. Includes the associated Logistics Information Systems (LogIS) & Sensors for monitoring and controlling the Supply Chain and for monitoring, tracking, accounting and issuing/receipting the inventory within this Supply Chain; The Logistic Requirement ("Demand Signal") to be satisfied (if possible) by the E2E LSC in any given scenario is to encompass the sustainment requirements of both the Supported and Supporting Forces (i.e. the E2E LSC itself, as well as other non-logistic CSS enablers along the Grounds Line of Communication (GLOCs);

c. Is to be assessed against the following 4 Defence Scenario phases of operation in the c.2035 epoch:

i. The Deployment Phase of the [Redacted under FOIA Section 26 – Defence] Campaign;
ii. The Sustainment Phase of said [Redacted under FOIA Section 26 – Defence] Campaign;
iii. (Subject to Confirmation) the MARCH phase of the [Redacted under FOIA Section 26 – Defence] Campaign;
iv. (Subject to Confirmation) the Disperse phase of said [Redacted under FOIA Section 26 – Defence] Campaign.

d. The “Interventions” (changes to/across the LSC) to be considered are restricted to either those capabilities used to operate the LSC (i.e. logistics capabilities) and/or those that might significantly reduce the Logistic Demand placed upon the LSC:

e. Equally, whilst said interventions are expected to be principally technologically-based, they could potentially include organisational or other changes across the Defence Lines of Development (DLODs) – for example moving to a policy of contracting local (indigenous) contractors to deliver the bulk of the Supported Force’s sustainment.

1.4.3 **Mandatory Technology Interventions to be assessed:** The interventions to be assessed **are – at a minimum – to include those related to the introduction of autonomy & automation technology into and across the LSC** in order to provide *evidence* of productivity improvements in sustainment per military sustainer. In particular, **assessment of “Leader-Follower” (L-F) truck “platooning” autonomy is a Customer-mandated priority**, in order to inform [Redacted under FOIA Section 26 – Defence].

1.4.4 **Project Management:** Throughout the lifetime of the study, the Supplier is to monitor and report on the project’s progress, ensuring any issues or risks are identified early and shared with Dstl / AHQ using a shared risk register. To achieve this, the Dstl PM is to receive:

a. A fortnightly progress call;
b. A monthly progress report at the end of each month (D00),this presentation pack to include but not limited to:
• Update on technical progress;
• Progress report against project schedule;
• Review of risk management plan;
• Commercial aspects;
• Review of deliverables;
• Risks/issues/challenges;
• GFA and supplier performance;
DEFCON 705 shall apply.

1.4.5 **Customer Engagement and Dstl Study Coherence (WP0):** the Supplier should also expect (and budget) to receive up to 1 request per month from either Dstl or the Customer for information, status reports, presentation material or for Supplier attendance at meetings, briefings etc. Any such meetings will be either held virtually or at one of [Redacted under FOIA Section 26 – Defence] with physical meetings being no more frequent than once per quarter.

1.4.6 Regular engagement with the Dstl Technical Partner should also be anticipated; this will mostly be undertaken virtually and on at least a fortnightly basis. Depending upon the model & Supplier selected, a Dstl junior analyst with relevant training/experience may also engage fortnightly.

Tranche #1: Core Work Required In FY21/22:

1.4.7 The purpose of Tranche #1 of this task is to:

a. Collect data required to enable characterisation of the total sustainment Demand Signal for each campaign-phase of each scenario to be assessed;

b. Agree with the Customer & Dstl the Measures of Performance/Merit (MoP/M) to be used in assessing LSC performance in the subsequent analysis;

c. Estimate the baseline capability of the c2035 LSC to sustain both the supporting & supported forces for each scenario campaign-phase assuming no “interventions” are applied in order to:

i. Provide evidence for future CSS Capability Audits;
ii. Identify where and how the c2035 LSC is expected to fail, or struggle to provide the required sustainment capability.

d. Agree with the Customer, in the light of this baseline assessment, which technology and non-technology interventions are the priorities for subsequent assessment (noting paragraph 1.4.3);

1.4.8 **Decision Point DP01:** Tranche #1 will end in a Customer Decision Point (DP01) at the end of FY21/22 (DP01) on:

a. Whether the study is sufficiently well-found (i.e. making progress in the desired direction and on course to deliver results of acceptable breadth & depth) as to be worth pursuing into its second year (at least Tranche #2);

b. What the priority order will be for testing individual interventions and interventions within Tranche #2 (WPs5,6a,6b);

c. Whether or not to approve optional Tranches #3 &/or #4.

1.4.9 To achieve this, Tranche #1 is required to deliver 4 broadly sequential tasks (Work Packages (WPs)), each of which is required to produce deliverable output, being:

a. WP0: Supporting Customer Engagement & Study Coherence (see para 1.4.6 above);
b. WP1: Assessment of the Performance of the Baseline funded c2035 E2E LSC;
c. WP2:Definition & prioritisation of Interventions to be assessed in Tranche #2;
d. WP3: Data Collection;

WP1: Assessment of the Performance of the Baseline funded c2035 E2E LSC;

1.4.10 Using a extant model, method or tool (MMT), which the Supplier will be expected to provide, and whose suitability for use in this study is to be agreed with Dstl, this WP is to assess the “baseline” performance of the currently funded c2035 E2E LSC to sustain both itself and the supported Future Force across each of 2 phases of operation of each of 2 logistically challenging Defence Scenarios (making for 4 separate assessments in total, paragraph 1.4.2.c). This will:

d. Provide evidence of capability gaps / capacity shortfalls to inform Capability Audits;

e. Provide a (set of) reference points for the subsequent Tranche #2 analyses;

f. Identify where the c2035 LSC is likely to fail or come under significant pressure in each of the 4 campaign-phases assessed.

WP2: Identification, prioritisation & definition of Interventions to be assessed in Tranche #2

1.4.11 This WP is to identify, define & scope the potential "interventions" (changes) that AHQ could consider implementing in and across the various capabilities that comprise the LSC.

1.4.12 A candidate list of both technology and non-technology interventions has been proposed by the Customer, but this will need inspection, fleshing-out and potentially deconflicting to ensure that different interventions represent discrete and sensible stand-alone Courses of Action for the Customer.

1.4.13 This candidate list of interventions should then be presented, together with the assessment of capability gaps and capacity shortfalls in the baseline c2035 LSC, to the Customer for endorsement and prioritisation at a Customer workshop to be held by the end of FY21/22 (D01). This prioritisation will be the principal method used for managing delivery risk in Tranche #2 and the Customer should be informed how many interventions are *expected* to be assessable in said second year of work.

WP3: Data Collection

1.4.14 The Supplier is to collect, interpolate or otherwise generate the data to be subsequently analysed in WP4a of Tranche #1 & in Tranche #2 (FY22/23); this data is to be collated and organised and a copy of same made available to Dstl for archiving.

1.4.15 Where data is held by Defence organisations & entities (including by Dstl), the Supplier should assume that the Dstl Technical Partner &/or Military Adviser (&/or Customer) will *assist* with the making of initial introductions for the Supplier but ***not*** with the data collecting itself. It is not expected that there will be any need or opportunity to engage Original Equipment Manufacturers (OEMs) directly in undertaking this data collection.

1.4.16 **Tranche #1 Deliverable (D01):** The Supplier is to deliver a Customer briefing & Workshop (D01) by No Later than 31 MAR 2022 that:

c. Presents to the Army Customer a set of possible (assessable) future interventions into the E2E LSC by 2035 for endorsement & prioritisation;

d. Presents to the Army Customer a summary of the findings from the assessments of the LSC baseline undertaken;

e. Enables the Army Customer to make informed prioritisation decisions regarding which interventions to assess in Tranche #2;

f. Reports on the adequacy of the data available (after WP3) to undertake Tranche #2;

g. Acts as Decision Point DP01 (paragraph 1.4.8 above).

Acceptance Criteria (D01): The Customer:

a. Understands the baseline performance of the c2035 LSC; understands the intervention options available for inclusion in the subsequent Tranche #2 analysis and makes informed prioritisation decisions about same.

b. Understands the benefits and risks attached to proceeding with Tranches #2 & either or both of Tranches #3-#4 in FY22/23 and gives direction regarding same (DP01).

1.5	**Options or follow on work**
	1.5.1 Assuming the Army Customer approves continuation of the F-MDL study in FY22/23, Tranche #2 is a core task, whilst **Tranches #3 & #4 are optional tasks** that could be undertaken for the purposes further exploiting (Tranche #3) and exploring (Tranche #4) beyond the basic results and outputs produced by Tranches #1-#2. Although resources have been budgeted to fund Tranches #3 &/or #4, it is unclear at this remove whether the Customer will still (in FY22/23) wish to have these outputs generated. **<u>Tranche #2: Core Work Required In FY22/23:</u>** 1.5.2 Tranche #2 will first consider whether options exist to address shortfalls in the expected performance of the "baseline" E2E LSC (across the 4 campaign-phases considered) through simple optimisation of the c2035 LSC capabilities (i.e. without any significant interventions being applied). It will then assess what performance improvements would be provided by each of the selected LSC "interventions", both individually and in combination. Finally, from these assessments & analyses, a draft Future-MDL Concept is to be identified **in consultation with** [Redacted under FOIA Section 26 – Defence] that can inform Log Capdev planning within HoC CSS AHQ for the potential [Redacted under FOIA Section 26 – Defence] programmes that are expected to follow MDL25. 1.5.3 To achieve this, Tranche #2 is required to deliver 6 broadly sequential tasks, being: a. WP0: Supporting Customer Engagement & Study Coherence (see para 1.4.6 above); b. WP4: Investigation of whether any opportunities exist to significantly improve baseline LSC performance through better use of LSC capabilities absent any "intervention"; c. WP5: Undertake detailed characterisation of each "intervention" to be assessed to enable it to be represented in the analysis (including estimation of Very Rough Order of Magnitude (VROM) adoption costs for same); agree major assumptions with Dstl & the Customer. d. WP6a: Assessment of the impact on the performance of said LSC in each campaign-phase of each "intervention" if implemented in isolation (individually); e. WP6b: Assessment of the impact on the performance of said LSC of a To Be Determined (by no later than DP01) number of combinations of "interventions" (to identify where synergy or interference might accrue);

f. WP7: Development, of a F-MDL Concept (informed by the findings of WP6a & WP6b) that should (as much as possible):

i. Maximise the Operational Effectiveness of the Supported Force;
ii. Maximise the Logistic Efficiency of the E2E LSC;
iii. Cover Land distribution and storage capabilities;
iv. Be coherent with relevant Defence, Army Concepts and Sub-Concepts;
v. Be consistent with the known intent for the Conceptual Force to follow the TFF;
vi. Be realistically implementable by Army by the 2035 epoch;
vii. Be of the lowest cost without increasing the CSS personnel requirement

1.5.4 **Tranche #2 Deliverables (D02):** The findings from Tranches #1 & #2 combined are to be briefed to Dstl & the Customer through a Technical Report & Master Data & Assumptions List (D02a), a Customer Capping Paper/Report (D02b) & an accompanying Powerpoint briefing (D02c) to be delivered No Later Than FRI 31 MAR 2023. These should between them encompass:

a. The extent to which the baseline c2035 E2E LSC capabilities will be able to deploy and sustain both itself and the supported force across the 4 campaign-phases assessed, and what shortfalls are expected to occur where & when;

b. The extent to which any shortfall in this baseline performance can be addressed through better use of the currently planned LSC capabilities.

c. The expected overall performance impact, benefits/disbenefits, feasibility and indicative (Very Rough Order of Magnitude (VROM)) costs of the individual and combined interventions assessed;

d. An agreed draft concept for a future E2E LSC, together with the evidence justifying same.

1.5.5 As well as recording details of analytical methods & models used, said Technical Report (D02a) should record, for future reference, details of the data & assumptions used to characterise:

a. The Demand Signal requirement for each of the 4 campaign-phases assessed;
b. The Baseline c2035 LSC, and how they would be used in each campaign-phase;
c. Each intervention assessed, including Very Rough Order of Magnitude (VROM) cost.

1.5.6 Similarly, said Customer report (D02b) should:

a. Tabulate and summarise the overall performance impact, benefits/disbenefits, feasibility and indicative cost of the individual and combined interventions assessed;

b. Articulate & justify the proposed F-MDL Concept developed;

c. Include an Executive Summary suitable for 1* circulation.

1.5.7 The Powerpoint briefing (D02c) is to cover the same material as D02b and is to be written at a level suitable for 1* circulation.

1.5.8 Acceptance Criteria for D02a-D02c are that:

a. D02a: Dstl has sufficient technical record of both the study data and methodology as to be able to audit and exploit same afterwards;

b. D02b: The Customer understands what interventions can provide what improvement in LSC performance at be obtained at what broad (VROM) investment cost and can argue for same within Army Balance of Investment (BoI) processes;

c. D02c: The Customer has an objective basis for his future Log Capdev planning (through future MDL Equipment Programmes) and can explain & justify same at up to 1* level within AHQ.

Optional Work Possible In FY21/23 (Tranches #3 & #4):

1.5.9 **Tranche #3:** If authorised, Tranche #3 will exploit the analysis undertaken in Tranche #2 to develop on behalf of HoC CSS AHQ a draft **Force Operating Concept (FOC)** – effectively a Concept of Employment (CONEMP) – for Future Material Distribution Land (F-MDL) capability, as well as a strategy (or roadmap) for what capability changes would be required, when, with what enablers in order to realise this FOC. The output would be a short Customer Letter & annexes due No Later Than 31 MAR 2023 that would provide (Subject To Confirmation):

a. An Executive Summary suitable for 1* Circulation;
b. A draft Force Output Concept (FOC) for a F-MDL capability;
c. A draft Strategy for realising this FOC;
d. Supporting evidence.

1.5.10 **Tranche #4:** If authorised, Tranche #4 will estimate a Most Likely and a Most Stressing Concurrent Demand Signal for specialist CSS capabilities (through exploitation of existing concurrency analysis studies or otherwise); it will then use these to undertake sensitivity analyses on the findings of Tranche #2 to confirm whether or not the proposed E2E LSC Concept and F-MDL FOC remain able to satisfy concurrent Demand (such as would occur when e.g. recovering a number of secondary operations into order to simultaneously generate a “Best Effort” operation).The output would be **an annex to the D02b Technical Report** (therefore due No Later Than 31 MAR 2023) detailing the further analysis undertaken and the conclusions reached therefrom.

1.6	Deliverables & Intellectual Property Rights (IPR)						
Ref.	**Title**	**Due by**	**Format**	**TRL***	**Expected classification (subject to change)**	**What information is required in the deliverable**	**IPR DEFCON/ Condition** *(Commercial to enter later)*
D00	Monthly Progress Report	Monthly , 1 week after AP end	.docx or .pptx	n/a	[Redacted under FOIA Section 26 – Defence]	Presentation pack to include but not limited to: • Update on technical progress • Progress report against project schedule. • Review of risk management plan. • Commercial aspects. • Review of deliverables. • Risks/issues/challenges • GFA and supplier performance	DEFCON 705 shall apply
D01	Customer briefing & Workshop (D01) by No Later than 31 MAR 2022 that: * presents the Assessment of the performance of the Baseline LSC, * presents the Supplier's list of candidate Interventions for Customer & Dstl	31 MAR 22	.pptx	n/a	[Redacted under FOIA Section 26 – Defence]	• Presentation on estimated performance of the baseline 2035 LSC in sustaining both itself & the a supported force in 4 x campaign-phases acrss 2 defence scenarios • Presentation (for endorsement by Customer & Dstl) on Candidate Interventions to be assessed in Tranche #2 • Cost, risk, feasibility data to inform DP01	DEFCON 705 shall apply

	endorsement and which elicits a Customer ranking of these Interventions by priority. * Acts as Decision Point DP01 for decisions on undertaking Tranches #2-#4 in FY22/23						
The Following Deliverables Relate to the in-FY22/23 Core Task (If DP1 approves continuation into FY22/23):							
D02a	Technical Final Report documenting analysis undertaken, models & data used & assumptions made in Tranches #1 & #2	31 MAR 23	.docx	n/a	[Redacted under FOIA Section 26 – Defence]	• Record of the analysis undertaken, including method/tools & data used, assumptions made, sensitivities explored etc	DEFCON 705 shall apply
D02b	A Customer Capping Paper/Report on Tranche #1 & #2 Analyses & Findings	31 MAR 23	.docx	n/a	[Redacted under FOIA Section 26 – Defence]	Summary (suitable for OF5 audience) of findings from Tranches #1 - #2 about: • The expected performance (shortfalls) in the ability of the baseline 2035 E2E LSC to deploy and sustain both itself and the supported force across the campaign phases assessed;	DEFCON 705 shall apply

						• Whether these performance shortfalls can be addressed through better use of the baseline LSC capabilities. • What Interventions would offer what benefits/disbenefits at what cost if applied to the baseline LSC individually or in combination • What combination of interventions would provide a feasible, efficient Future-MDL Concept under what assumptions, dependencies	
D02c	1* Briefing on Tranche #1 & #2 Analyses & Findings	31 MAR 23	.pptx	n/a	[Redacted under FOIA Section 26 – Defence]	• As for D02b	DEFCON 705 shall apply
D03	Draft Force Operating Concept	31 MAR 23	.docx	n/a	[Redacted under FOIA Section 26 – Defence]	• Develop on behalf of HoC CSS AHQ a draft Force Operating Concept (FOC) for Future Material Distribution Land (F-MDL) capability, as well as a strategy (or roadmap) for what capability changes would be required, when, with what enablers in order to realise this FOC. • The output would be a short Customer Letter & annexes due No Later Than 31 MAR 2023 that would provide (Subject To Confirmation): a. An Executive Summary suitable for 1* Circulation;	DEFCON 705 shall apply

						b. A draft Force Output Concept (FOC) for a F-MDL capability; c. A draft Strategy for realising this FOC; d. Supporting evidence.	
D04	Draft Force Operating Concept	31 MAR 23	.docx	n/a	[Redacted under FOIA Section 26 – Defence]	• Sensitivity analyses on the findings of Tranche #2 to confirm whether or not the proposed E2E LSC Concept and F-MDL FOC remain able to satisfy concurrent demand. • The output would be an annex to the D02b Technical Report (therefore due No Later Than 31 MAR 2023) detailing the further analysis undertaken and the conclusions reached therefrom.	DEFCON 705 shall apply

*Technology Readiness Level required, if applicable

1.7	**Standard Deliverable Acceptance Criteria**
	Deliverable Acceptance Criteria (As per ASTRID Framework T&Cs) 1. Acceptance of Contract Deliverables produced under the Framework Agreement shall be by the owning Dstl or wider Government Project Manager, who shall have up to 30 calendar days to review and provide comments to the supplier. 2. Task report Deliverables shall be accepted according to the following criteria except where alternative acceptance criteria are agreed and articulated in specific Task Statements of Work: • All Reports included as Deliverables under the Contract e.g. Progress and/or Final Reports etc. must comply with the Defence Research Reports Specification (DRRS) which defines the requirements for the presentation, format and production of scientific and technical reports prepared for MoD. Reports shall be free from spelling and grammatical errors and shall be set out in accordance with the accepted Statement of Work for the Task. • Interim or Progress Reports: The report should detail, document, and summarise the results of work done during the period covered and shall be in sufficient detail to comprehensively explain the results achieved; substantive performance; a description of current substantive performance and any problems encountered and/or which may exist along with proposed corrective action. An explanation of any difference between planned progress and actual progress, why the differences have occurred, and if behind planned progress what corrective steps are planned. • Final Reports: shall describe the entire work performed under the Contract in sufficient detail to explain comprehensively the work undertaken and results achieved including all relevant technical details of any hardware, software, process or system developed there under. The technical detail shall be sufficient to permit independent reproduction of any such process or system. 3. Failure to comply with the above may result in the Authority rejecting the Deliverables and requesting re-work before final acceptance. 4. Acceptance criteria for non-report Deliverables shall be agreed for each Task and articulated in the Statement of Work provided by the Contractor
1.8	**Specific Deliverable Acceptance Criteria**

2.	Quality Control and Assurance
2.1	**Quality Control and Quality Assurance processes and standards that must be met by the contractor**
	☒ **ISO9001** (Quality Management Systems) ☐ **ISO14001** (Environment Management Systems) ☐ **ISO12207** (Systems and software engineering — software life cycle) ☐ **TickITPlus** (Integrated approach to software and IT development) ☐ **Other:** (Please specify)
2.2	**Safety, Environmental, Social, Ethical, Regulatory or Legislative aspects of the requirement**
	None

3.	Security	
3.1	**Highest security classification**	
	Of the work	[Redacted under FOIA Section 26 – Defence]
	Of the Deliverables/ Output	[Redacted under FOIA Section 26 – Defence]
	Where the work requires more than occasional access to Dstl premises (e.g. for meetings), SC Clearance will be required.	
3.2	**Security Aspects Letter (SAL) – Note the ASTRID framework has an overarching SAL for quotation stage (up to OS)**	
	Not applicable If yes, please see SAL reference- *Enter iCAS requisition number once obtained*	
3.3	**Cyber Risk Level**	
	Choose an item.	[Redacted under FOIA Section 26 – Defence]
3.4	**Cyber Risk Assessment (RA) Reference**	
	Click or tap here to enter text.[Redacted under FOIA Section 26 – Defence] If stated, this must be completed by the contractor before a contract can be awarded. In accordance with the please complete the Cyber Risk Assessment available at	

4.	Government Furnished Assets (GFA)

GFA to be Issued - Choose an item.

If 'yes' – add details below. If 'supplier to specify' or 'no,' delete all cells below.

GFA No.	Unique Identifier/ Serial No	Description: *Classification, type of GFA (GFE for equipment for example), previous MOD Contracts and link to deliverables*	Available Date	Issued by	Return or Disposal *Please specify which*

If GFA is to be returned: It must be removed from supplier systems and returned to the Dstl Project Manager within 2 weeks of the final Task deliverable being accepted. (Any required encryption or measures can be found in the Security Aspects Letter associated with the Task).

If GFA is to be destroyed: It must be removed from supplier systems and destroyed. An email confirming destruction should be sent to the Dstl Project manager within 2 weeks of the final Task deliverable being accepted

5.	Proposal Evaluation
5.1	**Technical Evaluation Criteria**
5.2	**Commercial Evaluation Criteria**
	As per ASTRID Framework T&Cs.