



Crown
Commercial
Service

Attachment 1 - Specification

RM6370 – Space Technology Solutions Dynamic Market

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1. Introduction

- 1.1. This specification sets out what we and our buyers want.

2. CCS priorities

- 2.1. Crown Commercial Service (CCS) key priorities for this dynamic market support the [National Procurement Policy Statement \(NPPS\)](#) whilst increasing awareness of Space Technology Solutions products and services and to influence buying efficiencies through:

Optimise value for our customers and suppliers, with commercial products and services that make effective procurement easy.

Driving economic growth, strengthening supply chains by giving SMEs and VCSEs a fair chance at public contracts.

Building commercial capability to deliver value for money and stronger outcomes, collaborating with other contracting authorities to deliver best value.

The Space Technology Solutions Dynamic Market will have a positive effect on all of these priorities.

3. Scope

- 3.1. The RM6370 Space Technology Solutions Dynamic Market provides civil and defence related space and geospatial requirements, including related technology, operations, data and advisory solutions (Space Technology Solutions).
- 3.2. The Dynamic Market provides a broad scope of goods, works and/or services related to the following deliverables:
 - 3.2.1. Satellite communications
 - 3.2.2. Unmanned autonomous vehicles (UxVs)
 - 3.2.3. Geospatial and remote sensing
 - 3.2.4. Upstream launch services
 - 3.2.5. Design and manufacture
 - 3.2.6. Space domain awareness
 - 3.2.7. Space command and control
 - 3.2.8. Rapid deployment capability
 - 3.2.9. Research and development

- 3.2.10. Position, navigation and timing
- 3.2.11. Intelligence, surveillance and reconnaissance
- 3.2.12. Sustainability
- 3.2.13. Security, risk & insurance consulting
- 3.3. The Dynamic Market is divided into categories, called 'Parts'. Each Part provides specific goods, works and/or services, as detailed in the Part descriptions in paragraph 4 (Categories of goods, works and/or services (Parts)).
- 3.4. The range of goods, works and/or services is broad and intended to capture commercially viable products and services which may be 'off the shelf' or bespoke to the buyer requirement.
- 3.5. Buyers may award a contract with reference to this Dynamic Market provided the competitive flexible procedure is used.

4. Categories of goods, works and/or services (Parts)

- 4.1. In this paragraph 4, the tables 1 to 4 set out the Parts of the Dynamic Market, including the Part number, name and description of the goods, works and/or services applicable to each Part.
- 4.2. Each Part is in one of four main groups;
 - 4.2.1. Technology delivery
 - 4.2.2. Operations and services
 - 4.2.3. Data
 - 4.2.4. Advisory, consultancy, training and academia
- 4.3. In the Dynamic Market questionnaire (DMQ) suppliers must only select the Parts they are capable of delivering.
- 4.4. Suppliers may only provide buyers with the goods, works and/or services for the Parts of the Dynamic Market they have been appointed to.
- 4.5. For all Parts, the supplier must help buyers comply with any specific applicable standards of the buyer, including any:
 - 4.5.1. standards published by BSI British Standards, the National Standards Body of the United Kingdom, the International Organisation for Standardisation or other reputable or equivalent bodies (and their successor bodies) that a skilled and experienced operator in the

same type of industry or business sector as the Supplier would reasonably and ordinarily be expected to comply with:

- 4.5.2. standards detailed in this specification;
 - 4.5.3. standards detailed by the buyer in the tender; or
 - 4.5.4. relevant Government codes of practice and guidance applicable from time to time.
- 4.6. The deliverables set out in tables 1 to 4 may be refined by buyers during a competitive flexible procedure to reflect the buyer's specific requirements and conditions of participation.

Table 1. Dynamic Market Parts - Technology delivery

Part Number	Part Name	Part Description
101	Ground Stations	Equipment, technologies and infrastructure relating to ground stations for the purposes of developing and/or maintaining a gateway between the Ground Segment and the Space Segment. Enabling Ground Stations to transmit and receive instructions and data from/to satellites in space and elsewhere in the Ground Segment. This would include but not limited to, technologies to overcome atmospheric or adversarial interference, signal degradation or enable use of higher frequencies. Ground stations are also referred to as Earth stations or Earth terminals
102	Cryptographic Technology	Cryptographic equipment and technologies for the purposes of securing information and communications across an entire network of satellites, between satellites, including but not limited to space, ground and link segments. This could include all types of encryption hardware and software.
103	Satellite Components	All technologies relating to Space Assets. This can include but not limited to systems, subsystems, individual components such as sensors, communications systems, on-board processors, solar cells, transponders, propulsion systems, reactions wheels intended for use in relation to Space technology - whether in satellites or on the ground in test facilities.
104	Satellites and Spacecraft	Technologies, equipment and components for the complete design and build of Space assets. This could include but not limited to all types of satellites and spacecraft designed to be launched beyond the Earth's atmosphere, such as payloads, spacecraft buses, launch vehicles, and the transportation of satellites to launch providers, etc.
105	Ground Based Sensors	Systems, equipment and technologies relating to ground-based sensors for the purposes of gathering information about Space and objects in Space. This includes but not limited to telescopes, optical sensors, such as

		spectrometers and infrared detectors, and sensors which use radio frequency, such as RADAR and LIDAR
106	Software including Algorithms, Machine Learning, AI and Licences	All technologies and services related to Software such as Algorithms, Machine Learning, AI, AI Modelling including Software Research, Design or Access to Licences. This includes but is not limited to software which uses AI to forecast weather events; Sensor data analysis; Earth Observation analysis; Machine learning analytics used in robotics.
107	Generic Ground Infrastructure	Generic ground infrastructure, also known as the 'ground segment', enabling support of, and communication between, space elements and the ground. This could include but not limited to Mission Control Centres for monitoring and managing spacecraft, as well as analysing data
108	Digital Ground Infrastructure	All infrastructure, hardware and software which enable digital services with the ground segment of a space system. This includes but not limited to computers, servers, wiring and connection points; software such as operating systems and apps; physical and virtual networks, such as local area networks (LANs); and data centres to store, process and distribute data
109	Launch Technology and Infrastructure	All equipment, technology and infrastructure related to the launch of objects and spacecraft into orbit and Space. This includes for example but not limited to launch vehicles, rockets, spacecraft buses, launch design, integration and planning, mission support, specialist ground infrastructure, such as launch pads, runways, gantries, silos, bunds, storage facilities, construction, transportation and launch/landing control facilities, etc
110	Space-Based Sensors	All equipment and technologies relating to Space-based sensors that can track, survey objects and provide information on the earth's surface. Space-based sensors could include but not limited those which use radio frequency, including passive RF sensors, RADAR and INSAR; sensors which use the electromagnetic spectrum, such as hyperspectral, near visual and infrared sensors; and radiometric sensors which measure gamma radiation
111	Planetary and Lunar Exploration	Technologies relating to the scientific investigation of the planets and other celestial bodies within our solar system
112	Space Control	All equipment and technologies relating to the use of defensive and offensive capabilities to assure freedom of action in space, whilst denying adversaries to achieve the same. This includes but is not limited to on-orbit, terrestrial and cyber infrastructure resilience, such as systems and activities used to prevent the disruption and degradation of allied assets; destroying or preventing a satellite's operation in orbit. Space Control also encompasses defensive technologies, such as physical hardening of satellites; anti-jamming and cryptographic techniques; and Active Measures, such as sensor reorientation

113	Simulators, Stimulators, Test and Training Equipment	All equipment and technologies relating to Simulators, Stimulators, Test and Training Equipment. Including equipment to support end-to-end systems testing and training, including compatibility, integration, interface and mission-readiness testing
114	Onboard Hardening, System and Capability Resilience, Adaptability	All technologies, processes and equipment related to ensuring the resilience to hostile environments and effects, whether human or natural in origin, on componentry and materials
115	In-Orbit Servicing and Manufacturing	Technology and equipment relating to In-Orbit Servicing and Manufacturing. This can include but not limited to equipment for the testing and development of space technologies suitable for in-orbit servicing, assembly and manufacturing. In-Orbit Servicing can involve refuelling, repair and orbit adjustment. In-orbit manufacturing could involve creating materials, components or infrastructure in space.
116	Orbital Assets Disposal	Technology and equipment to assist in the prevention of space debris as well as enabling orbital clearing of debris, obsolete satellites and spacecraft, including Satellite decommissioning, etc.
117	Data Capture Hardware	General geospatial survey sensors and tools used to collect geospatial data accurately and efficiently for a wide range of applications, including localized ground-based sensors (for example, Imagery, LiDAR and radar sensors).
118	Unmanned Autonomous Vehicles (UxVs)	Technology and equipment relating to Unmanned Autonomous Vehicles (UxVs). Autonomous vehicles that operate without a human occupant or pilot on board, encompassing various types classified by their capabilities and features, for example, ground, aerial, maritime surface and underwater vehicles.
119	Unmanned Autonomous Vehicles (UxVs) - Control Systems	The electronic and electromechanical systems that control Unmanned Autonomous Vehicles (UxVs). They can include remote controllers, command and control systems, and flight control systems
120	Unmanned Autonomous Vehicles (UxVs) - Payloads	Technology and equipment that an Unmanned Autonomous Vehicles (UxVs) can carry relating to the provision of additional services such as sensors, thermal infrared sensors, cameras and communication tools
121	Unmanned Autonomous Vehicles (UxVs) - Other technology and equipment	Other technology and equipment relating to Unmanned Autonomous Vehicles (UxVs) not covered elsewhere. Including but not limited to, the use, security and detection of UxVs.
122	Image Based Navigation	All equipment and technologies relating to the use of Image-based navigation for the purposes of Position, Navigation and Timing. Image-based Navigation aims at navigating by processing a series of image data. This image data includes data that is both inside and outside of the visual

		spectrum and may be recorded with passive sensors like digital cameras or active instruments like laser scanners
123	Signals of Opportunity Receiver	All equipment and technologies relating to the use of Signals of Opportunity receivers for the purpose of Position Navigation and Timing. Signals of opportunity uses existing infrastructure and harnesses signals, which were not originally designed to determine position or aid navigation, such as radio transmissions from broadcasting towers, Wi-Fi points and signals from broadcast or communications satellites, to establish location. This includes, but not limited to, receivers for satellite signals of opportunity, terrestrial Signals of opportunity, Ultra-wide Band (UWB) and Low Power Wireless (LPW) technologies, VOR/DME (VHF Omnidirectional Range with a Distance Measuring Equipment)
124	Inertial Navigation Systems	All equipment and technologies relating to the use of Inertial Navigation Systems (INS) for the purpose of Position and Navigation. An Inertial Navigation System is a unit that uses sensors to continuously calculate by dead reckoning: velocity, orientation and position. This includes sensors such as accelerometers and gyroscopes
125	eLORAN	All equipment and technologies relating to the use of Enhanced Long-Range Navigation (eLORAN) for the purpose of Position, Navigation and Timing. eLORAN is a radio navigation system that can be used to provide 2-dimensional position information and timing. This includes complete systems, and components such as antenna and receivers
126	PNT Sensor Processing and Fusion	All equipment and technologies relating to the use of PNT Sensor Processing and Fusion for the purpose of Position, Navigation and Timing (PNT). PNT Sensor Processing Fusion combines data from multiple different PNT sensor sources to provide accurate information on PNT. This includes the Sensor Fusion engines using techniques including, but not limited to, Kalman Filters and Particle Filters
127	PNT Effectors	All equipment and technologies used to effect the adversaries Position, Navigation and Timing (PNT). PNT effectors seek to limit adversaries effective use of PNT systems whilst maintaining resilient PNT systems. This includes jamming and spoofing techniques
128	PNT Understand	All equipment, technologies and services related to understanding the Position, Navigation and Timing (PNT) environment. PNT Understand is the ability to monitor conditions such as where PNT technologies are being used and predict future hazards. This includes detection, tracking and cataloguing of PNT technologies as well as situational analysis and warnings
129	Atomic Clocks	All equipment and technologies relating to atomic clocks and their use in Position, Navigation and Timing (PNT). Atomic Clocks use the resonant frequency of certain atoms to measure time to a high accuracy. This includes all types of clocks, including but not limited to fountain clocks, reference

		clocks, Chip Scale Atomic Clocks (CSAC) and quantum clocks
130	Precision Time Transfer Methods	All equipment, technologies and services related to transferring precise time. Precise Time Transfer is the transmission of time from a reference time source to other clocks in a network so they compute their offset to the reference clocks and adjust accordingly to achieve and maintain network time synchronisation. This includes, but not limited to: TWSTFT (Two Way Satellite Time and Frequency Transfer), Fibre optic cable, PTP (Precise Time Protocol)
131	PNT Environmental Sensors	All equipment and technologies relating to the use of PNT Environmental Sensors for the purpose of PNT. PNT Environmental Sensors are sensors that measure environmental data and use it to provide Position, Navigation and Time. This includes but isn't limited to: Bathymetry, Gravimetry, Altimeters, Electromyography, magnetometers
132	Celestial Navigation	All equipment and technologies related to Celestial Navigation. Celestial Navigation is the determination of position based on measurements of celestial bodies (for example, Sun, Stars) relative to the Earth or a known horizon. This includes digital sextants and automated Celestial Navigation
133	LEO PNT Receivers	All equipment and technologies related to Low Earth Orbiting (LEO) PNT. LEO PNT provides timing and location data from an orbit about 25 times closer than GNSS, meaning a stronger signal, requiring a dedicated payload to be deployed on a satellite system. This could include products such as: space segments, antenna and receivers
134	Mitigation components for GNSS interference	All equipment and technologies relating to the mitigation of GNSS interference. This includes (but not limited to) Control Reception Pattern Array and (CRPA) and anti-spoofing
135	GNSS Open Signal Receiver	All equipment relating to the reception of uncoded signals emitted from any Global Navigation Satellite System (GNSS) for the purpose of PNT. This could include products such as: commercially available receivers
136	GNSS Encrypted Signal Receiver	All equipment relating to the reception and decoding of encrypted signals emitted from any Global Navigation Satellite System (GNSS) for the purpose of PNT. This could include products containing: Security devices such as Selective Availability Anti Spoofing Module (SAASM) or Military Code (M-Code) Technology which allow access to GPS Protected Positioning Service (PPS) signals
137	PNT Sensor system	All equipment and technologies relating to the use of Position, Navigation and Timing (PNT) Sensor system for the purpose of PNT. PNT Sensor Systems are any system that includes multiple technologies, so does not fit into any of the above sub categories and/or multiple technologies from the sub categories above. This includes an EGI, Sensor Fusion System or a GNSS Receiver integrated with a CRPA

138	PNT Magnetic Navigation	All equipment and data relevant to the measurement and analysis of magnetic variations which underpin our ability to use the earth magnetic field for navigation above and below ground which complements PNT base services and provides GNSS resilience. This includes all apparatus necessary for observatories which manage high sensitivity instrumentation, that must be maintained in a carefully managed, stable environment, free from anthropogenic interference over long timescales to capture the field to high accuracy and with a wide range in amplitude and period.
139	PNT Geodesy	All equipment relating to the measurement, storage and analysis relating to Geodesy and the maintenance or enhancement of the International Terrestrial Reference Frame (ITRF). This includes ranging lasers, telescopes and associated components with key techniques being Satellite Laser Ranging, Very Long Baseline Interferometry and Global Navigation Satellite Systems.
140	SATCOM - Space Segment	All elements of Technology Delivery related to Satellite Communication (SATCOM) Space Segments. This includes advancements to the spacecraft payload, bus, and link segment
141	SATCOM - Link Segment	All elements of Technology Delivery related to Satellite Communication (SATCOM) Link Segments. This includes advancements to modems, waveforms, power, gain, antenna, and technology applicable to the link segment
142	SATCOM - Ground Segment	All elements of Technology Delivery related to Satellite Communication (SATCOM) Ground Segments. This includes advancements to the ground segment network, grounding stations (teleports), antenna, and link segment
143	SATCOM - User Terminal	All elements of Technology Delivery related to Satellite Communication (SATCOM) User Terminals. This includes advancements for all types of terminals, fixed or portable, including Very Small Aperture Terminal (VSAT) and Broadband Global Area Network (BGAN). This also includes services related to the advancement of user terminals
144	SATCOM - Management	All elements of Technology Delivery related to Satellite Communication (SATCOM) Management. This includes advancements in the management of SATCOM services, networks, hardware, and software
145	SATCOM - Integration	All elements of Technology Delivery related to Satellite Communication (SATCOM) Integration. This includes integration and enhancements of SATCOM services, spacecraft, networks, ground architecture, and expertise
146	SATCOM - Launch Licensing	All services relating to the regulatory licences required under the UK Space Industry Act 2018 for satellite launch activities. This may include, but is not limited to: Launch and Return Licence and Orbital Operator Licence. It encompasses the licence itself and the associated regulatory commitments, from initial application through to renewal and ongoing compliance. This includes meeting statutory/regulatory obligations placed

		on the licence holder and ensuring legal authority for launch, return, and satellite operation activities.
147	SATCOM - Security	All elements of Technology Delivery related to Satellite Communication (SATCOM) Security Services. This includes advancements in the security of SATCOM services, networks, hardware, and software

Table 2. Dynamic Market Parts - Operations and services

201	Software Support Services	Software support services are to include but not limited to through-life support, penetration testing, information assurance, Cyber improvement plans, and Cyber Risk Assessments. This may include the need to incorporate effective cyber security practices when building digital services and technical infrastructure.
202	Payload Hosting Services	Relating to those services which allow payloads, such as instruments or sensors owned or operated by a third party, to maintain orbital capability on a host commercial satellite.
203	Crypto and Key Management Services	Services for the purposes of securing digital information and communications across the entire satellite system. This includes but not limited to creation of cryptographic keys and management across the lifecycle, i.e. distribution, operational use and destruction
204	Data Processing Services	All types of data processing services including but not limited to Validation and Verification - independent procedures that are used together for checking a product, service, or system meets requirements and specifications, and that it fulfils its intended purpose; Data Curation - process of creating, organising and maintaining data sets so they can be accessed and used by people looking for information. It could involve collecting, structuring, indexing and cataloguing data for users in an organisation, group or the public domain
205	Up-Link and Down-Link Services	Services for sending and receiving data between one or more satellites and the ground. This could include but not limited to ground-space linkage and space-space linkage
206	Satellite Operation and Support Services	All operations and services related to In-Orbit Operation and Support. This includes but not limited to satellite command and control, flight dynamics, mission control maintenance and engineering services
207	Ground Support Services	Operation and maintenance services related to ground infrastructure and equipment, including but not limited to 24/7 support, replenishment, safety testing, through-life support cover, planned and unplanned maintenance, and routine servicing of ground-based sensors and ancillary systems.
208	Threat Warning Services	Early Threat Warning Services within the space environment could include but not limited to Early warning of Missiles, Early warning of uncontrolled re-entry, In-space collision avoidance, Fragmentation alerting and monitoring, Space weather notifications and advice etc.

209	Analytical Services	Services related to analysis of space-related data, or earth-related data derived from space or other means, such as unmanned aerial vehicles.
210	Communication Services	Communication services for the purposes of transmitting signals between space-to-space, earth-to-space and vice versa, and earth-to-earth via space. This would include but not limited to services which provide broadcasting of video and radio, telecommunications, broadband, cloud connectivity and data transfer.
211	IT Data Storage and Retrieval Services	Operations and services related to IT data storage and retrieval, including but not limited to cloud services, automated systems and backup services.
212	Launch Services	Operations and services for the purposes of launching a spacecraft or satellite into space or orbit. This includes but not limited to the provision of launch vehicles, rockets, spacecraft buses, launch design, integration and planning, mission support, specialist ground infrastructure, such as launch pads, runways, gantries, silos, bunds, storage facilities, construction, transportation and launch/landing control facilities, etc
213	System Integration Services	Services related to integration and testing of space and ground architecture, using live assets and representative simulators, stimulators and other test equipment.
214	In-Orbit Servicing and Manufacturing Services	Operations and services including but not limited to the testing and development of space technologies suitable for in-orbit servicing, assembly and manufacturing. In-Orbit Servicing can involve refuelling, repair and orbit adjustment . In-orbit manufacturing involves creating materials, components or infrastructure in space.
215	Innovative Services	Services relating to the emergence of innovative research, products, services and technologies that have relevant and practical applications in the space sector, harnessing opportunities to expand understanding of Space and the Cosmo, and helping to address pressing challenges in the Space environment as well as gaining greater awareness of impacts to the Earth via Space-related galvanising the development of materials and technologies aimed at improving life both in Space and on Earth
216	Orbital Assets Disposal Services	Services to assist in the prevention of space debris as well as enabling orbital clearing of debris, obsolete satellites and spacecraft including Satellite decommissioning etc.
217	Ground Assets Decommissioning and Disposal	Services for the shutdown, removal and disposal of equipment and material in ground assets, including but not limited to logistics, recycling and the restoration of the site.
218	Space Domain Awareness Services	Operations and services to provide quality analytical information in understanding the space environment to help mitigate space effects. This includes but is not limited to conjunction analysis used to detect possible collisions, orbital awareness, cataloguing objects, space weather forecasting,

		jamming, behavioural traits, as well as those elements equated with Situational Awareness.
219	Geographic Information Systems (GIS) and Geospatial Data Services	Geographic Information Systems (GIS) integrating various types of geospatial data using platform and API technology for mapping and spatial analysis.
220	Web Services and Application Programming Interface (API)	Web Services and Application Programming Interface (API) technologies that facilitate the transfer and collation of data between separate applications. Enabling users to access, visualise, and analyse data, including geospatial data, through interactive software based services.
221	Data analytics including Artificial Intelligence (AI)	Data analytics and artificial intelligence (AI) tooling providing artificial AI powered software and platforms to analyse any dataset, extracting insights and patterns that can be used for informed decision-making. These services often include features like automated data cleaning, machine learning models, predictive analytics, natural language processing (NLP) and data visualisation tools to simplify complex data analysis processes. Data analytics including AI enabled analytics and AI tooling.
222	Aerial Photography Services	The acquisition, processing, and provision of orthorectified aerial photography and height data across Great Britain. This data is used by public sector organisations for mapping, environmental monitoring, infrastructure planning, and emergency response. Imagery may be real-time or historic.
223	Unmanned Autonomous Vehicles (UxVs) - Inspection Services	The use of Unmanned Autonomous Vehicles (UxVs) to inspect and survey infrastructure, buildings, and other assets
224	Unmanned Autonomous Vehicles (UxVs) - Surveying Services	The use of Unmanned Autonomous Vehicles (UxVs) to map and measure areas, for mapping, monitoring and analysis
225	Unmanned Autonomous Vehicles (UxVs) - Response Services	The use of Unmanned Autonomous Vehicles (UxVs) to help with emergency response
226	Unmanned Autonomous Vehicles (UxVs) - Technical Support Services	The maintenance, repair, and certification of Unmanned Autonomous Vehicles (UxVs). Additionally includes remote technical support and fault diagnostics; fleet management; and UxV platform configuration and testing.
227	Other Unmanned Autonomous	Other operations and services relating to Unmanned Autonomous Vehicles (UxVs) not covered elsewhere.

	Vehicles (UxVs) Services	Including but not limited to, the use, security and detection of UxVs.
228	PNT Situational Awareness Data Services	All data services for the purposes of Position, Navigation and Timing (PNT) Situational Awareness. Space Situational Awareness (SSA) is the ability to track and monitor objects in space and predict their future behaviour and location. This includes data processing, data analysis and situational awareness tools
229	Trials support and Acceptance Testing	All trials support and acceptance testing for the purposes of testing a product or system. Trials and acceptance testing are used to ensure the quality and functionality of a product or system and verify that the performance objectives have been met. This would include test development, modelling and simulation as well as live testing and evaluation
230	HAE Security approval and Certification	All aspects of the Host Application Equipment (HAE) security accreditation process using guidance documentation provided by the US authorities to enable statements to be made regarding classification of the equipment, resulting in HAE Level 2 certification. (As per GUE-PRD-772)
231	SRD Requirements authoring	Requirements relating to software development, creation and maintenance, including user requirements, system requirements and functional requirements, together with non-functional requirements such as security, and system design detail. Software requirements can be referred to as a Software Requirements Specification (SRS)
232	PNT Demilitarisation Services	All services for the purpose of the demilitarization and disposal of unneeded or unrepairable GNSS Encrypted Signal Receivers and the Security devices integrated into them, in accordance with guidance documentation provided by the US authorities. (As per PCU-PRD-771)
233	SATCOM - Space Segment Services	All elements of operations and services related to Satellite Communication (SATCOM) Space Segments. This includes use of spacecraft payloads, use of individual channels, transponders, or use of components and individual services on the spacecraft, such as antenna, software, data download, storage and analysis services
234	SATCOM - Link Segment Services	All elements of Operations and Services related to Satellite Communication (SATCOM) Link Segments. This includes use of modems, waveforms, power, gain, antenna, and technology applicable to the link segment
235	SATCOM - Ground Segment Services	All elements of operations and services related to Satellite Communication (SATCOM) Ground Segments. This includes use of ground segment networks, use of individual ground segment or use of components and individual services such as antenna and buildings, software, data download, storage and analysis services
236	SATCOM - User Terminal Services	All elements of operations and services related to Satellite Communication (SATCOM) User Terminals for all types of terminals, fixed or portable, including Very Small Aperture

		Terminal (VSAT) and Broadband Global Area Network (BGAN). This includes services related to operating permissions and testing of user terminals
237	SATCOM - Management Services	All elements of operations and services related to Satellite Communication (SATCOM) Management. This includes use of the management of SATCOM services, networks, hardware, and software
238	SATCOM - Integration Services	All elements of Operations and Services related to Satellite Communication (SATCOM) Integration. This includes use of SATCOM services, spacecraft, networks, ground architecture, and expertise
239	SATCOM - Launch Licensing Services	All services relating to licences under the Space Industry Act 2018 for the purposes of Satellite launch, such as Launch and return licence and Orbital operator licence. This includes the whole lifecycle of the licence from pre-licence planning and licence application to renewal and ongoing maintenance of an existing licence. These services include support with meeting the regulatory requirements for the licence, licence application, support with responses to the regulator and support with licencing issues
240	SATCOM - Security Services	All operations and services related to Satellite Communication (SATCOM) Security Services. This includes the security of SATCOM services, networks, hardware, and software

Table 3. Dynamic Market Parts - Data

301	Electro-Optical and Video	Earth Imagery, captured from space, in optical and UV parts of the spectrum
302	Synthetic Aperture Radar (SAR)	Earth Imagery, actively captured from remote platforms (planes, drones or space), in the microwave part of the spectrum, including 3D and all weather imaging.
303	Hyperspectral Imaging (HSI)	Earth Imagery, captured from space, across multiple regions of the spectrum, including data showing temporal changes and also land usage
304	Thermal Infrared (IR) Sensing	Earth Imagery, captured from space, in in the infra-red part of the spectrum
305	Radio Frequency (RF) Sensing	Data, passively captured from space, in the RF and microwave part of the spectrum, not necessarily of an imaging nature and including any processing of that data such as emitter classification, identification, geo-location, network analysis and communication interception
306	Elevation Data including Light Detection and Ranging (LiDAR)	Data related to physical elevation and relief
307	Earth atmosphere and weather data	Data related to the Earth's atmosphere and associated factors, including winds, cloud cover, humidity, temperatures, pollution, rainfall.

308	Other Earth-related Data	Other data related to the Earth or its atmosphere and not covered elsewhere
309	Ionospheric, solar and space-weather/environmental-related data	Data related to the space environment including solar weather, solar and background radiation levels, magnetic field or gravitational field data
310	Space Track Data	Data related to the tracks of objects in space within the solar system. This includes objects human in origin and also natural objects
311	Space Object Data	Data related to the nature and history of objects in space including orientation, stability/tumble, status and activities and official records
312	Other Space-related Data	Other data related to Space, Space Domain Awareness or connected with operations in space, not covered elsewhere
313	Population Movement Data (PMD)	Data products and services relating to Population Movement Data (PMD). This is sometimes called geographic mobility data. PMD refers to information locating the movements of people between areas. This may include aggregated and anonymised counts of people, origins and destinations between areas or specific locations, and other associated derived metrics such as travel mode. PMD is collected by various forms of devices, chips and their associated software and look-ups, rather than survey or administrative sources. This may include mobile phones, wearable devices, payment card transactions, or smart sensors.
314	Aerial Photography	Real time and historic aerial imagery/photograph datasets and analysis of the Earth's surface, including offshore, taken from an aircraft, satellite, or other remote platform. Sometimes referred to as air or airborne photography. For example, aerial imagery datasets allowing analysis of current and past land-use changes, infrastructure development, pollution and environmental mapping and transformations
315	Other Geospatial related data	Other geospatial data products, analysis and value-add services/applications, processing and analysis of Earth imagery to generate defined insights, specific to buyer requirements. For example, topographic, address, vector, raster, networks and associated analysis / insight

Table 4. Dynamic Market Parts - Advisory, consultancy, training and academia

401	Training	Training and development, including but not limited to the design and development of future courses or the delivery of training programmes furthering knowledge and capability in a space-related and geospatial environment
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402	Security	All security services, including but not limited to risk assessment, governance, compliance and certification as well as cyber security and the development and implementation of secure systems
403	Safety	All safety services, including but not limited to risk and safety management, safety assurance and certification, safety advice for all stages of system development, and construction in a space-related and geospatial environment
404	Architecture, Design and Specification including Requirements Elicitation	Capability and expertise in the field of Space-related and geospatial architecture and design, as well as requirements elicitation, which practices include interviews, questionnaires, user observation, workshops, brainstorming, use cases, role playing and prototyping
405	Environmental	Expert and professional services, such as but not limited to Environmental Risk and Impact Assessments, Strategy development, and Sustainability design, planning and compliance.
406	Academic Research, including Astronomy, Cosmology	The application and use of academic study, resource and access to specialist knowledge and capability for enhanced understanding in the realm of Space-related and geospatial endeavours
407	Independent Testing/Evaluation/Validation/Verification and Trials Support	Capability and expertise in the field of testing, evaluation, validation, verification and trials support, including access to specialist controlled environments for the purpose of independent evaluation, modelling and concept development throughout the product's lifecycle
408	Geodesy	Capability and expertise in the field of Geodesy, including but not limited to professional advice to review, evaluate proposals, undertake geodetic computations and/or develop reports or undertake studies on Earth's Orientation, Positioning, Gravity Field, Objects Orientation in space etc.
409	Concepts	A concept paper sets out and explains what a proposed study is about, why it is being undertaken and how the study will be carried out. It provides scrutiny of an idea and an overview of the project the researcher wants to embark on. It may also provide benefit assessment and business case support and development.
410	Doctrines	A Doctrine paper outlines the legal resource methodology in space legislation (also called black letter).
411	Regulatory, Law, Licensing	Expert and professional services, such as but not limited to compliance with legal and regulatory requirements, interpreting legislation, offering advice on best practices, assisting with the preparation and submission of necessary applications or documentation.
412	System Integration	Expert and professional services providing guidance and support to organisations seeking to connect various systems, applications, and technologies to work together seamlessly.

		This service encompasses assessing current system architectures, identifying integration needs, providing strategic recommendations, and helping to implement solutions that enhance interoperability and data exchange.
413	Project Management, Maintenance, Engineering and Operations Support	Expert and professional services for maintenance, engineering, and operations support.
414	Unmanned Autonomous Vehicles (UxVs) - Engineering Support	Expert and professional services providing engineering support for Unmanned Autonomous Vehicles (UxVs). Involves specialised consultation and technical expertise such as but not limited to enhancing the design, development, and operational efficiency of UxV systems.
415	Unmanned Autonomous Vehicles (UxVs) - Safety	Expert and professional services for safety for Unmanned Autonomous Vehicles (UxVs). Such as but not limited to the safe operation and management of UxV operations, development and implementation of safety protocols, risk assessment methodologies, and regulatory compliance strategies specific to UxVs and their usage
416	Unmanned Autonomous Vehicles (UxVs) - Regulatory, Law, Licensing	Expert and professional services on regulatory, licensing, and law for Unmanned Autonomous Vehicles (UxVs). Such as but not limited to informing clients about current laws, regulations, and industry standards governing the use of UxVs, for example, airspace management, operational limitations, and safety requirements.
417	Unmanned Autonomous Vehicles (UxVs) - Independent Testing/Evaluation/Validation/Verification and Trials Support	Expert and professional services for testing and trials of Unmanned Autonomous Vehicles (UxVs) provide comprehensive support to organisations seeking to validate the performance and safety of their UxV systems. These services encompass but are not limited to expert consultation on the development of testing methodologies, including the design and execution of trials, data collection protocols, and performance assessments
418	Unmanned Autonomous Vehicles (UxVs) - Environmental	Expert and professional services for the environmental and sustainability aspects of Unmanned Autonomous Vehicles (UxVs) provide organisations with expert guidance on minimising the ecological impact of UxV operations while promoting sustainable practices. These services encompass but are not limited to the assessment of environmental effects related to UxV deployment, such as noise pollution, emissions, and potential wildlife disturbances.
419	SATCOM - Training	All advisory, consultancy, and academia related to Satellite Communication (SATCOM) Training. This includes training of SATCOM services, networks, terminals, hardware, and software
420	SATCOM - Safety	All advisory, consultancy, and academia related to Satellite Communication (SATCOM) Safety. This includes safety of

		SATCOM services, networks, terminals, hardware, and software
421	SATCOM - Independent Testing/Evaluation/Verification and Trials Support	All advisory, consultancy, and academia related to Satellite Communication (SATCOM) independent testing, evaluation, validation, verification, and trial support. This includes support of SATCOM services, networks, terminals, hardware, and software
422	SATCOM - Environmental	All advisory, consultancy, and academia related to Satellite Communication (SATCOM) environmental support. This includes all aspects of environmental services, such as risk and impact assessments, strategy, and sustainability and compliance within SATCOM
423	SATCOM - Situational Awareness	All equipment, technology and services related to SATCOM Situational Awareness. Situational Awareness is the ability to monitor conditions, such as where objects are in space and predict future hazards. This includes detection, tracking and cataloguing of space objects, Space Weather, as well as situational analysis and warnings
424	SATCOM - Engineering Support	All engineering support related to SATCOM. This includes satellite command and control, flight dynamics, mission control maintenance, ground segment, networks, software, and general engineering services
425	SATCOM - Academic Research, including Market Assessment Studies	The application and use of academic study, resource and access to specialist knowledge and capability for the enhanced understanding in the realm of SATCOM related endeavours

5. Supplier capability

- 5.1. In this paragraph 5, the tables 5 to 7 set out the information relating to the capability of suppliers that may form part of a buyer's competitive flexible procedure in the form of conditions of participation:
 - 5.1.1. Annual turnover
 - 5.1.2. Defence and security
 - 5.1.3. Quality assurance and management system standards
- 5.2. Suppliers are advised to answer the questions relating to capability in the Dynamic Market questionnaire (DMQ).
- 5.3. This is not an exhaustive list and a buyer may include conditions of participation in their competitive flexible procedure

that are not included in this paragraph 5. Buyers will publish details of all conditions of participation in the tender notice.

- 5.4. CCS and buyers expect suppliers appointed to the Dynamic Market to behave as good corporate citizens. Further detail on what this means is included in Annex 1 (Sustainability and social value).

Table 5. Annual turnover

<£499,999.99	Required overall annual turnover in the last financial year is less than £499,999.99
£500,000.00 - £1,999,999.99	Required overall annual turnover in the last financial year is between £500,000.00 - £1,999,999.99
£2,000,000.00 - £9,999,999.99	Required overall annual turnover in the last financial year is between £2,000,000.00 - £9,999,999.99
£10,000,000.00 - £14,999,999.99	Required overall annual turnover in the last financial year is between £10,000,000.00 - £14,999,999.99
£15,000,000.00 - £49,999,999.99	Required overall annual turnover in the last financial year is between £15,000,000.00 - £49,999,999.99
£50,000,000.00 - £99,999,999.00	Required overall annual turnover in the last financial year is between £50,000,000.00 - £99,999,999.99
£100,000,000.00 - £199,999,999.99	Required overall annual turnover in the last financial year is between £100,000,000.00 - £199,999,999.99
>£200,000,000.00	Required overall annual turnover in the last financial year exceeds £200,000,000.00

Table 6. Supplier capability - Defence and security

Security clearances can be essential for working in the defence and security sectors, ensuring that personnel handling and accessing sensitive information do not pose a risk to national security.

Secure Facilities	Required to be Facility Security Cleared or who are willing to be Facility Security Cleared to safeguard classified assets for Defence Contracts Please visit 'FSC Policy and Guidance' for more details
US Import Controls Compliant	Required to be, or are willing to be compliant, with the International Traffic in Arms Regulations (ITAR) or a member of the Authorised User Community (AUC) in order to have access to assets controlled under ITAR for Defence Contracts

	The International Traffic in Arms Regulations (ITAR) - DDTC Public Portal
Baseline Personnel Security Standard (BPSS)	Required to have relevant personnel cleared up to BPSS, or willing to have relevant personnel cleared to BPSS, where access to Government assets is required. National Security Vetting: clearance levels - GOV.UK
Accreditation Check (AC)	Required to have relevant personnel cleared up to AC, or willing to have relevant personnel cleared to AC, in accordance with Aviation Security Regulations National Security Vetting: clearance levels - GOV.UK
Counter Terrorism Check (CTC) / Level 1B	Required to have relevant personnel cleared up to CTC / Level 1B, or willing to have relevant personnel cleared to CTC / Level 1B, where access to public figures, sensitive information and sites at risk from terrorist attack National Security Vetting: clearance levels - GOV.UK
Security Clearance (SC)	Required to have relevant personnel cleared up to SC, or who are willing to have relevant personnel cleared up to SC, to enable regular access to classified assets for Defence Contracts National Security Vetting: clearance levels - GOV.UK
Enhanced Security Clearance (ESC)	Required to have relevant personnel cleared up to ESC, or who are willing to have relevant personnel cleared up to ESC, to enable regular access to classified assets for Defence Contracts National Security Vetting: clearance levels - GOV.UK
Developed Vetting (DV)	Required to have relevant personnel cleared up to DV, or who are willing to have relevant personnel cleared up to DV, to enable access to Top Secret assets for Defence Contracts National Security Vetting: clearance levels - GOV.UK
Enhanced Developed Vetting (EDV)	Required to have relevant personnel cleared up to EDV, or who are willing to have relevant personnel cleared up to EDV, to enable access to Top Secret assets for Defence Contracts National Security Vetting: clearance levels - GOV.UK
UK Registered Company	Required to be a UK entity for National Security Reasons to deliver Defence Contracts

Table 7. Supplier capability - Quality assurance and management system standards

Quality Management System certification to ISO 9001, or equivalent standard	ISO9001 (or suitable equivalent standard) certification with the appropriate scope for the products or services the supplier intends to supply within this dynamic market, issued by a certification body accredited by a National Accreditation Body (NAB). Please note this will be tested further as part of the procurement, in relation to the specific requirement.
Environmental Management System to ISO 14001, or equivalent standard	Certification to ISO14001 or suitable equivalent issued by a certification body accredited by a National Accreditation Body (NAB).
Quality Management System certification for Aerospace AS9100, or equivalent standard	AS9100 (or suitable equivalent standard) certification with the appropriate scope for the products or services the supplier intends to supply within this dynamic market, issued by a certification body accredited by a National Accreditation Body (NAB). Please note this will be tested further as part of the procurement, in relation to the specific requirement.
Information Security Management System to ISO 27001, or equivalent standard	Certification to ISO 27001 or suitable equivalent issued by a certification body accredited by a National Accreditation Body (NAB).
Occupational Health and Safety Management System to ISO 45001, or equivalent standard	Certification to ISO 45001 or suitable equivalent issued by a certification body accredited by a National Accreditation Body (NAB).
Cyber Essentials Plus, or willing to obtain Cyber Essentials Plus, subject to contract award	Required to be Cyber Essentials Plus certified, or willing to obtain Cyber Essentials Plus, representing the UK Government's heightened standard for cyber security, based on more rigorous and independent technical testing. National Cyber Security Centre

6. Changing the specification

- 6.1. Through the life of the Dynamic Market CCS may change the specification to the extent permitted by the Procurement Act 2023.
- 6.2. The dynamic market Modification Notice will be updated to reflect a change and ensure that accurate and up to date information about the dynamic market is available via the register of commercial tools.

Annex 1 - Sustainability and social value

Annex 1 sets out the expectations on all suppliers appointed to the Dynamic Market to behave as good corporate citizens.

This is not an exhaustive list and a buyer may refine or include additional requirements in their competitive flexible procedure that are not included here.

1. Public Sector Equality Duty

- 1.1. In addition to legal obligations, where the supplier is providing a deliverable to which the Public Sector Equality Duty applies, the supplier shall support CCS and the buyer in fulfilling its Public Sector Equality duty under S149 of the Equality Act 2010 by ensuring that it fulfils its obligations under each Contract in a way that seeks to:
 - 1.1.1. eliminate discrimination, harassment or victimisation and any other conduct prohibited by the Equality Act 2010; and
 - 1.1.2. advance:
 - a) equality of opportunity and
 - b) good relations,between those with a protected characteristic (age, disability, gender reassignment, pregnancy and maternity, race, religion or belief, sex, sexual orientation, and marriage and civil partnership) and those who do not share it.

2. Employment Law

- 2.1. The supplier must perform its obligations meeting the requirements of all applicable Law regarding employment.

3. Modern Slavery

- 3.1. The supplier:
 - 3.1.1. shall not use, nor allow its subcontractor to use forced, bonded or involuntary prison labour;

- 3.1.2. shall not require any supplier staff to lodge deposits or identity papers with the employer and shall be free to leave their employer after reasonable notice;
- 3.1.3. warrants and represents that it has not been convicted of any slavery or human trafficking offences anywhere around the world;
- 3.1.4. warrants that to the best of its knowledge it is not currently under investigation, inquiry or enforcement proceedings in relation to any allegation of slavery or human trafficking offences anywhere around the world;
- 3.1.5. shall make reasonable enquires to ensure that its officers, employees and supplier staff have not been convicted of slavery or human trafficking offenses anywhere around the world;
- 3.1.6. shall have and maintain throughout the contract period its own policies and procedures to ensure its compliance with the Modern Slavery Act 2015 and include in its contracts with its subcontractor anti-slavery and human trafficking provisions;
- 3.1.7. shall implement due diligence procedures to ensure that there is no slavery or human trafficking in any part of its supply chain performing obligations under the contract;
- 3.1.8. shall prepare and deliver to CCS and the Buyer, an annual slavery and human trafficking report (in respect of which a statement under Section 54 of the Modern Slavery Act 2015 would be sufficient) setting out the steps it has taken to ensure that slavery and human trafficking is not taking place in any of its supply chains or in any part of its business with its annual certification of compliance with this Paragraph 3;
- 3.1.9. shall not use, nor allow its employees or subcontractor to use physical abuse or discipline, the threat of physical abuse, sexual or other harassment and verbal abuse or other forms of intimidation of its employees or subcontractor;
- 3.1.10. shall not use or allow child or slave labour to be used by its subcontractor; and
- 3.1.11. shall report the discovery or suspicion of any slavery, trafficking, forced labour, child labour, involuntary prison labour or labour rights abuses by it or its subcontractor to

CCS, the buyer and Modern Slavery Helpline and relevant national or local law enforcement agencies.

- 3.2. Without prejudice to CCS' and the buyer's rights under Paragraph 3.7, if the supplier, CCS and/or the buyer identifies any occurrence of modern slavery connected to the contract, the supplier shall comply with any request of CCS or the buyer to follow the Rectification Plan Process to submit a remedial action plan which follows the form set out in Annex D of the Tackling Modern Slavery in Government Supply Chains guidance to [PPN 009 \(Tackling Modern Slavery in Government Supply Chains\)](#).
- 3.3. If the supplier notifies CCS or the buyer pursuant to paragraph 3.1.11 it shall respond promptly to CCS' or buyer's enquiries, co-operate with any investigation, and allow the CCS or the buyer to audit any books, records and/or any other relevant documentation in accordance with the buyer's contract.
- 3.4. The supplier shall comply with any request by CCS or the buyer to complete the Modern Slavery Assessment Tool or an alternative assessment required by CCS or the buyer within sixty (60) days of such request.
- 3.5. The supplier shall comply with any request by CCS or the buyer to provide a Supply Chain Map within fourteen (14) days of such request.
- 3.6. The supplier shall comply with any request by CCS or the buyer to provide a copy of any reports of any subcontractor regarding any or all of workplace conditions, working or employment practices and recruitment practices within fourteen (14) days of such request.

4. Environmental Requirements

- 4.1. The supplier must perform its obligations meeting in all material respects the requirements of all applicable Laws regarding the environment.
- 4.2. The supplier shall, through best endeavours, ensure that their environmental impact is minimised throughout the delivery of any buyer contract.
- 4.3. The supplier acknowledges and understands the Government Net Zero Target. Accordingly, and in line with PPN 006 (Taking account of Carbon Reduction Plans in the procurement of major government contracts), the supplier shall:

- 4.3.1. set a Supplier Net Zero Target with a target achievement date the same as or earlier than the Government Net Zero Target;
 - 4.3.2. maintain its Carbon Reduction Plan in accordance with PPN 006; and
 - 4.3.3. provide details of steps it is taking as an organisation to reduce its Carbon Footprint in the form of Emissions Reduction initiatives.
- 4.4. The supplier commits to delivering the contract in line with its published Carbon Reduction Plan, as per PPN 006, and to support the achievement of the Supplier Net Zero Target and the Government Net Zero Target.

5. Social Value Priorities

- 5.1. Social value legislation (the Social Value Act, the Wellbeing of Future Generations Act and the Procurement Reform Scotland Act) requires people who buy public services to think about:
- 5.1.1. how, what is proposed to be procured might improve the economic, social and environmental well-being of the “relevant area”
 - 5.1.2. how, in conducting a procurement process, it might act with a view to securing that improvement
- 5.2. The National Procurement Policy Statement (NPPS) sets the Government's strategic priorities for public procurement in support of the Government's missions. This includes delivering social and economic value that supports the Government's missions.
- 5.3. In their procurement, the buyer will set out their social value priorities and objectives and set out how they will evaluate bids for social value.
- 5.4. The Supplier shall, in the delivery of their contracts, support the themes and policy outcomes set out in Procurement Policy Note PPN 002: Taking account of social value in the award of contracts and in the buyer's procurement.

6. Government Buying Standards

- 6.1. The supplier shall meet the applicable Government Buying Standards applicable to the goods, works and/or services delivered, which can be found online at:

<https://www.gov.uk/government/collections/sustainable-procurement-the-government-buying-standards-gbs>

7. Supplier Code of Conduct

- 7.1. In February 2019, HM Government published a Supplier Code of Conduct setting out the standards and behaviours expected of suppliers who work with government which can be found online at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1163536/Supplier_Code_of_Conduct_v3.pdf

- 7.2. The buyer expects to meet, and expects the supplier and its subcontractor to meet, the standards set out in that Code.
- 7.3. The buyer may include in their competitive flexible procedure additional requirements in relation to corporate social responsibility. The buyer expects that the supplier and its subcontractor will comply with such corporate social responsibility requirements as the buyer may notify to the supplier from time to time.