

4 January 2021

STATEMENT OF REQUIREMENT FOR PROVISION OF COMMERCIAL IMAGERY (CI) AND ELEVATION DATA (ED)**Table of Mandatory Requirements**

Serial	Mandatory minimum performance criteria
1.	<p>Information: To provide THE AUTHORITY the ability to purchase Commercial Imagery (CI) and Elevation Data (ED) from vendor archive(s) or task vendor for new collection, and to do so at a competitive price that provides value for money.</p> <p>Requirements: Ability to purchase shall include the following: Contractor links to the major established and new CI and ED vendors and plans for links to emerging CI and ED vendors.</p> <p>2. Contractor method(s) for investigation and assessment of CI and ED across vendors sufficient to allow THE AUTHORITY decisions on which CI or ED to purchase and/or when to initiate tasking for new collection.</p> <p>3. Contractor mechanisms to allow purchase at a competitive price providing value for money and including negotiated discounts and to be compliant with MoD Terms and Conditions.</p> <p>4. Contractor mechanism to avoid duplication of requests for CI and ED by THE AUTHORITY</p>
5.	<p>Information: To provide expert investigation and assessment of medium and/or high spatial resolution archive CI and ED over THE AUTHORITY-defined geographic areas and provide recommendations for possible purchase.</p> <p>Requirements: CI and ED cover searches shall be conducted for either a specific sensor/source or a selection of sensors/sources, within or across spatial resolutions, as defined by THE AUTHORITY.</p> <p>6.</p> <p>CI Sensors considered shall include a minimum of:</p> <ul style="list-style-type: none"> • Optical – SPOT, Landsat, KOMPSAT-3, KOMPSAT-3a, WorldView 1, WorldView 2, Worldview 3, GeoEye and the Pleiades constellation. • Radar – ENVISAT, ERS, JRS, TerraSAR and Radarsat. <p>7.</p> <p>ED Products/Sources considered shall include a minimum of:</p> <ul style="list-style-type: none"> • Stereo optical – ALOS PRISM, SPOT, KOMPSAT-3, Worldview, GeoEye, DEIMOS-2, ASTER and the Pleiades constellation. • Radar –SRTM, WorldDEM, NEXTmap, TerraSAR-X and Radarsat. • Lidar <p>8.</p> <p>Consideration of sensors/sources shall allow for future systems of suitable spatial resolution and searches for archive CI and ED from satellites no longer in operation as defined by THE AUTHORITY.</p>

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<p>9.</p> <p>10.</p> <p>11.</p> <p>12.</p> <p>13.</p> <p>14.</p> <p>15.</p>	<p>CI Spatial resolutions considered shall include medium resolution at 1 to 5m, and high resolution at less than 1m, as defined by THE AUTHORITY. ED Spatial resolutions (post spacing) considered shall include medium resolution at 6 to 30m, and high resolution at less than 6m, as defined by THE AUTHORITY.</p> <p>Imagery types considered shall be panchromatic, multi-spectral, pansharpened, hyper-spectral and radar but shall allow for future imagery types as defined by THE AUTHORITY.</p> <p>Elevation Data considered shall be Bare earth Digital Terrain Models (DTM), Reflective surface Digital Surface Models (DSM) and Point Clouds but shall allow for future elevation data types as defined by THE AUTHORITY.</p> <p>Geographic areas considered shall range from specific targeted area of interest footprints to full country areas, as defined by THE AUTHORITY and customer RFIs. CI quality factors shall be considered in the recommendations, including accuracy, currency (usually latest available), cloud cover (usually 10% or less), atmospheric quality and verticality (angle of nadir) as defined by THE AUTHORITY. ED quality factors shall be considered in the recommendations, including accuracy, currency (usually latest available), void cover (usually 10% or less), elevation model type (DSM or DTM), level/type of editing, as defined by THE AUTHORITY.</p> <p>Deliverables from the investigation and assessment shall be provided by e-mail and shall include a summary of CI and/or ED availability with recommendations, estimated costs and delivery times where required, attached CI and ED coverage diagrams, CI and ED identifier listings and quick-look sample images. Investigation and subsequent results of a sensitive nature, should they be required, will be provided by a method as defined by THE AUTHORITY on a case by case basis.</p> <p>All ED will be supplied to THE AUTHORITY with metadata in a MoD Geospatial Metadata Profile 2 (MGMP2) compatible format, details of which will be provided. This metadata will include the following as a minimum: platform/source operator, platform/source name, date, time and geographic location of capture and type of capture DSM or DTM.</p> <p>Any imagery sensor must be from an appropriately reputable company and not have links to any countries the MOD would consider a risk unless otherwise requested by THE AUTHORITY.</p>
<p>16.</p> <p>17.</p> <p>18.</p>	<p>Information: To task, monitor and deliver CI and/or ED new collection on request by THE AUTHORITY.</p> <p>Requirements: To task vendors to enable sensors to capture CI and/or ED over areas of interest identified by THE AUTHORITY. To advise availability of sensors, collection windows, delivery timeframes and costs.</p> <p>Deliverables from the tasking and task monitoring shall be provided by e-mail. Deliverables shall include initial tasking details, progress reports during collection windows, and completion details or reasons for failed collection. Investigation and subsequent results of a sensitive nature, should they be required, will be provided by a method as defined by THE AUTHORITY on a case by case basis.</p> <p>Deliverables (including ephemeris support data to allow local processing) from the CI and/or ED collection shall be in softcopy to standard geographic reference systems,</p>

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<p>19.</p> <p>20.</p> <p>21.</p> <p>22.</p>	<p>formats and media as selected by THE AUTHORITY accompanied by metadata in a MGMP2 compatible format where required.</p> <p>The Contractor shall provide the option to deliver the CI in standard format (no topographic correction and mapped to the average base elevation of the terrain covered by each scene), standard ortho-ready format (a geographically referenced product radiometrically calibrated, corrected for sensor distortion and mapped to a valid combination of geographic or cartographic projection, datum and spheroid) as defined by THE AUTHORITY.</p> <p>The Contractor shall provide the option to deliver the ED in standard gridded format (such as GeoTIFF, DTED format [e.g. .dt2], LAS, AsciiXYZ), mapped to a valid combination of geographic or cartographic projection, datum and spheroid and to a standard such as DGED, as defined by THE AUTHORITY.</p> <p>Pictometry and Lidar should be included in the range of sensors and imagery/elevation types that can be tasked if requested by THE AUTHORITY.</p> <p>Primary delivery method will be direct digital transfer (via FTP) through appropriate servers, as specified by THE AUTHORITY for a given delivery. Media shall include CD-ROM, DVD and portable external hard drive. No individual image file can exceed 4GB, any image file larger will need to be split up into 2 separate files as agreed with THE AUTHORITY.</p>
<p>23.</p> <p>24.</p> <p>25.</p> <p>26.</p>	<p>Information: To deliver CI and/or ED from archive, only if required by THE AUTHORITY.</p> <p>Requirements: Deliverables (including ephemeris support data) shall be in softcopy to standard vendor geographic reference systems, formats and media as selected by THE AUTHORITY, accompanied by metadata in a MGMP2 compatible format where required.</p> <p>The Contractor shall provide the option to deliver the CI in standard format (no topographic correction and mapped to the average base elevation of the terrain covered by each scene), standard ortho-ready format (a geographically referenced product radiometrically calibrated, corrected for sensor distortion and mapped to a valid combination of cartographic projection, datum and spheroid).</p> <p>The Contractor shall provide the option to deliver the ED in standard gridded format (such as GeoTIFF, DTED format [e.g. .dt2], LAS, AsciiXYZ), mapped to a valid combination of geographic or cartographic projection, datum and spheroid and to a standard such as DGED, as defined by THE AUTHORITY.</p> <p>Primary delivery method will be direct digital transfer (via FTP) through appropriate servers, as specified by THE AUTHORITY for a given delivery. Media shall include CD-ROM, DVD and portable external hard drive. No individual image file can exceed 4GB, any image file larger will need to be split up into 2 separate files as agreed with THE AUTHORITY.</p>
	<p>Information: To deliver if required; Enhanced CI and ED products, namely orthorectified imagery (where all terrain distortions have been removed), mosaicked imagery and with respect to ED; DTMs. And datasets that are associated with CI and ED, for example GCPs, land classifications and slope analysis</p> <p>Requirements:</p>

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27.	If required, GCPs will be supplied to assist in the triangulation and geographic referencing of any supplied imagery.
28.	If required, fully orthorectified imagery shall be supplied by the Contractor produced against a model provided by the vendor or THE AUTHORITY. The Contractor will be required to generate a model in the event of the vendor or THE AUTHORITY being unable to do so. Such products must be within an acceptable standard of quality as defined by THE AUTHORITY
29.	The Contractor will also, on request, supply enhanced imagery products such as those that have been mosaicked or any combination of enhancements.
30.	If required, the contractor on request will supply datasets that are associated with CI and ED, for example; Land classifications and slope analysis
31.	The contractor will ensure that all CI and ED provided to THE AUTHORITY is in an electronic data format that is compliant with and useable in all Defence/Government systems, as advised by THE AUTHORITY.
32.	<p>Information: To advise and support THE AUTHORITY in understanding and solving technical issues concerning the collection and use of CI and ED from both new collection and archive.</p> <p>Requirements: Advice shall include best solutions to cover searches, and cover topics including sensor operational time frames and characteristics, vendor archives, delivery formats, costing processes, licensing options, and tasking and delivery channels and timings.</p>
33.	Support shall include resolution of technical issues for delivered CI and ED and its use, through interaction with the vendor, analysis at the contractor's site, or by the contractor acting as a "help desk".
34.	Deliverables shall include formal written documentation sufficient to progress or resolve requests and issues, and the re-supply of delivered CI and/or ED if required.
35.	<p>Information: To have a thorough understanding of licence issues and to be able to negotiate suitable usage permissions on behalf of THE AUTHORITY.</p> <p>Requirements: The Contractor must understand the forms in which Defence may wish to use the CI and/or ED: i.e. as raw CI or ED, enhanced products and in derived products, and ensure that there is clear guidance on how each form may be used in hard and soft copy products.</p>
36.	The Contractor will need to appreciate the way in which THE AUTHORITY conducts its business in creating, and exchanging information in hard and soft copy, with other parts of UK Defence, other Government departments and international Defence organisations and when working in multi-national coalitions.
37.	Support shall include negotiating a suitable licence that enables THE AUTHORITY to meet the usage requirements, but THE AUTHORITY must have the final say on the acceptability. The Contractor will be expected to negotiate terms, conditions of use in an innovative manner, be reactive to evolving THE AUTHORITY licence requirements and be able to demonstrate best value against market rates.

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38.	Deliverables shall include formal documentation of the licence setting out any uplift cost, and subsequent conditions of use. It must be possible to amend the licence should requirements change.
39.	The Contractor must be prepared to and able to negotiate with an imagery supplier to continue any imagery-use licences that are renewable on a yearly basis.
40.	<p>Information: The contractor shall have procedures and environment that will ensure security of all THE AUTHORITY requests and orders within the contractor's organisation, within any CI and ED vendor's organisation, and in the transmission of information and materials between contractor and vendor and THE AUTHORITY.</p> <p>Requirements: To tender for the contract Contractors will be bound not to release or reveal to any third parties any details of a request or order submitted by THE AUTHORITY without our express permission.</p>
41.	The contractor shall identify personnel within the contractor organisation who would be involved in THE AUTHORITY requests and orders, and the handling of these.
42.	The contractor shall identify the environments and procedures in which investigations and assessments, negotiations, tasking, collection, purchasing, image processing, delivery and other support will be conducted within the contractor organisation for THE AUTHORITY requests
43.	<p>Information: To provide timely delivery of the results from investigation and assessment and subsequent delivery of CI and ED.</p> <p>Requirements: Delivery timeframes for deliverables from the investigation and assessment for archive CI and ED shall be 1 working day for urgent operational requests and 3 working days for routine requests.</p>
44.	Delivery timeframes for deliverables from the investigation and assessment of CI and ED new collection shall be 1 working day from the time of order for operational requests, and 3 working days for routine requests.
45.	Delivery timeframes for delivery of CI and/or ED from new collection shall be advised to THE AUTHORITY after negotiation by the Contractor with the vendor. THE AUTHORITY will determine the validity of such request on receipt of this information and instruct the Contractor accordingly.
46.	Delivery timeframes for delivery of CI and/or ED from archive shall be within 1 working days for urgent operational tasks, and within 3 working days for routine tasks.
47.	Delivery timeframes for deliverables from advice and support provided prior to CI and/or ED delivery shall be consistent with the above timeframes.
48.	Contractor shall provide contact details to afford THE AUTHORITY out-of-hours and weekend cover should this be required for operational or emergency reasons.

Table of Key Requirements

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	Information: To advise THE AUTHORITY on future sensors/sources, associated satellite launches and other technical developments.
1.	Requirement: Advice shall include status on future CI sensor/satellite launches, details of sensors and ED sources and their evolution ahead of them becoming operational.
2.	Deliverables shall include an assessment of expected sensor/satellite launches over at least the next three years, and formal written documentation sufficient to support THE AUTHORITY planning for exploitation of new CI and ED if requested.
3.	Delivery timeframes shall be monthly for launch information, and as sensor/source operational details become available for other information.

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