

| | | | | | | | | | | | | |
|---|-----|---|--------------|--------------|---|--|--|--|--|--|--|-----------|
| Data transfer | DGC | Test; Inspection; Demonstration; Operational Evaluation | | K | Y | | | | Threshold | GECO MPS has a powerful information exchange (including intelligent synchronisation) capability with external hard drives. This ensures that only new / replacement data is synchronised. | Pass/Fail | |
| Data transfer | DGC | Analysis; Inspection | | | Y | | | | Threshold | Inzpire is a List-X organisation and has hardware suppliers that also hold List-X status. Based on experience of supporting deployed DIGIMAP equipment over the last 4 years Inzpire will supply 16 2TB Encrypted external hard drives for moving data. These will be encrypted using a Enhanced BeCrypt transport key installed on all PUMA MSS MPSs - To allow interoperability and subject to MOD approval it is also possible to install all or some of the MPSs with Transport keys from other platforms. In service systems currently use BeCrypt Enhanced. This will ensure that transfer of data can occur regardless of network status, providing flexibility and redundancy. NOTE Inzpire will also be supplying additional Encrypted External Hard Drives to be used for Backups. | Pass/Fail | |
| Data transfer | DGC | Test; Inspection; Demonstration; Operational Evaluation | | | Y | | | | | | Pass/Fail | |
| | | | | | | | | | | | | |
| | | | UMB Priority | SMB Priority | | | | | Remarks | Bidder's Statement of Compliance | Scoring | |
| | | | | | | | | | | | | |
| The Defence Systems Approach to Training Quality Standard (DSAT QS), a BSI-endorsed 'private standard' based on the provisions of BS EN ISO 9001:2000, is to be applied across all Defence training | JHC | | | K | | | | | The Authority will assess the DSAT equivalence. The Authority will be able to provide assistance with development of the TNA. | | | |
| The Defence Systems Approach to Training Quality Standard (DSAT QS), a BSI-endorsed 'private standard' based on the provisions of BS EN ISO 9001:2000, is to be applied across all Defence training | JHC | Test; Inspection; Demonstration; Operational Evaluation | | K | Y | | | | The Authority will assess the DSAT equivalence. The Authority will be able to provide assistance with development of the TNA. | Threshold | Inzpire is a company with a strong pedigree and proven excellence in training of military personnel in Mission Systems, military flying and operational training borne from a high percentage of operationally experienced and qualified RAF helicopter aviators, trainers and engineers. GECO DIGIMAP and GECO AMMWAS require training of this type across the whole of JHC and our courses are already approved by the MoD for aircrew, operations staff, administrators and managers. Inzpire will provide the training solution to DSAT standards. | Pass/Fail |

| Accessing their intent. | | | | | | | | | | comprehensive support approach would elevate the issue into direct support from Inzpire to resolve the issue in a timely manner. The quality of the Inzpire User Guides are strongly exemplified by the in-service GECCO AMMWAS User Guide and DIGIMAP. | |
|---|-----|---|--------------|--------------|--|--|--|---------|----------------------------------|---|---------|
| In-line access to manuals will be the normal means of accessing their intent. | JHC | Test; Inspection; Demonstration; Operational Evaluation | | Y | | | | | Threshold | The GECCO Puma MSS will be provided with an up to date User manual in electronic form for hosting on the MPS and MMS. This will be updated and disseminated by Inzpire to ensure it remains in line with latest MSS capabilities. There will be the ability to print the User Manual on the System | |
| | | | URD Priority | STD Priority | | | | Remarks | Bidder's Statement of Compliance | Bidder's Statement of Compliance: A narrative supporting statement is required against each detailed system requirement. This statement will provide justification and assurance for the level of compliance detailed. | Scoring |
| Puma HC2 CONUSE | JHC | Analysis; Inspection; Demonstration; Operational Evaluation | | Y | | | | | | | |
| Puma HC2 CONUSE | JHC | Analysis; Inspection; Demonstration; Operational Evaluation | | Y | | | | | Threshold | The Tablet has passed testing in accordance with MIL-STD-810G Method 501.5 Procedure II (constant) 140°F (60°C) operating and MIL-STD-810G Method 502.5 Procedure II operating -20°F (-29°C). The temperature range of the testing exceeds the Objective high temperature requirement and is comparable with the low temperature requirement being 1°C above the lowest requirement. The screen is backlit with LED lighting allowing use in 0 lux. The screen is also visible in direct sunlight through the use of filters and a high backlighting capability to 500 nits. The tablet has passed testing to MIL-STD-810G Method 506.5 Procedure I, (Blowing Rain) 5.8" rain, 70 mph wind, 30 minutes per surface Unit operating, MIL-STD-810G Method 510.5 Procedure I, blowing dust (non-operating temperature of 160°F (71°C)) and MIL-STD-810G Method 507.5 Procedure II (Aggravated Humidity) temp cycles 86°F (40°C) to 140°F (60°C) 95%RH. These latter tests demonstrate the Objective requirements are met by the tablet. | |

| | | | | | | | | | | |
|---|-----|---|--|---|--|--|--|---|--|---|
| | | | | | | | | | | compatibility whilst degrading the sunlight visibility of the display. The dimming option has proved successful in previous system and does not degrade the sunlight visibility which is always a trade-off when using filters. The illumination of the cockpit is very low with the NVD compatible brightness levels, but there are potential reflections of the screen in the transparencies depending upon the position of the tablet and the inclination of the display with respect to the transparencies. These reflections will need to be assessed as part of the cockpit assessment or release to service assessment. |
| Operational Effectiveness DSTL requirements for OMPS | JHC | Analysis; Inspection; Demonstration; Operational Evaluation | | Y | | | | | | Threshold The proposed MMS tablet has passed testing to MIL-STD-810G Method 514.6 Procedure I (Transportation) Helicopter minimum integrity (operating and non-operating). Method 514.6 Procedure I uses a profile Figure 514.6E-1. Category 24 - General minimum integrity exposure with levels 0.040 g2/Hz in the frequency range of 20 Hz to 1000Hz and then an attenuation of -6dB to 2000Hz to a level of 0.001 g2/Hz. The test duration of one hour per axis; rms = 7.7 gs. This test is considered to be adequate to demonstrate that the tablet is able to be used on a helicopter either operating or non-operating and survive for the projected duration of the life of the tablet according to the refresh policy. |
| Operational Effectiveness DSTL requirements for OMPS | JHC | Analysis; Inspection; Demonstration; Operational Evaluation | | Y | | | | | | Threshold The proposed tablet has passed testing to MIL-STD-810G Method 516.6 Procedure I, 40g, 11ms whilst operating. |
| Operational Effectiveness DSTL requirements for OMPS | JHC | Analysis; Inspection; Demonstration; Operational Evaluation | | Y | | | | | | Threshold The proposed tablet has passed testing to MIL-STD-461 test RS103 for radiated susceptibility. The equivalent Def Stan 59-411 test is DRS02.B Radiated Susceptibility Electric Field 10 kHz - 18 GHz. Direct comparison is difficult as the Mil-Std461 test is in v/m and the Def-Stan 59-411 DRS02.B is in dBµv/m. |
| Safety, Operational Effectiveness DSTL requirements for OMPS | JHC | Analysis; Inspection; Demonstration; Operational Evaluation | | Y | | | | | | Threshold The EMC testing carried out on the Panasonic -Toughpad-FZ-M1 to MIL-STD-461 test Re103 is almost identical to that required in accordance with Def-Stan 59-411 DRE01.B there are a few differences in the standards but for practical reasons the standards can be considered to be the same. |
| Operational Effectiveness | JHC | Analysis; Inspection; Demonstration; Operational Evaluation | | | | | | Y | | Threshold The Base Station and Tablets have internal monitoring circuits that measure the internal temperature of the computers and will shut the computer down if it overheats to minimise the chance of damage occurring to the computer. |
| MSS must have Power in all expected areas of operation. | JHC | Analysis; Inspection; Test | | Y | | | | | | Threshold The MSS equipment is all capable of being operated from a domestic single phase 230V 50 Hz electrical supply. |
| MSS must have Power in all expected areas of operation. | JHC | Analysis; Inspection; Test | | Y | | | | | | Threshold The MSS equipment is all capable of being operated from a single phase 110-230V 50-60 Hz electrical supply. |

| | | | | | | | | | | | |
|--|-----|--|-----------------|---|--|--|---|---------|--|---|---------------------|
| always be guaranteed and MSS must be protected against damage and data loss. | | Test | | | | | | | ground based equipment and the Tablet will revert to internal battery supplies. This gives the operator the chance to shut down the system in a controlled manner. If data was being transferred between the base station and the tablets the transfer failure will be detected and the tablets will reject any failed transfers. The failed transfers will not prevent the tablets synchronising with the base station at the next attempt and the reported data load from the tablet will be used by the base station to recommence the data transfer at the point where the data was lost if this is desired. | | |
| For the longest duration sortie MMS needs to be available. | JHC | Analysis; Inspection; Test; Operational Evaluation | | Y | | | | | Threshold | The MMS tablet has the capability to swap batteries without loss of functionality. This means that the 4 hour life of the external battery can be replaced by a further 4 hour working time by swapping batteries. The operating time of the tablet is only limited by the availability of charged batteries. | |
| MMS replanning may be required when ac power is not available. Ac power may be lost during flying operations. | JHC | Analysis; Inspection; Test | | Y | | | | | Threshold | The MMS tablet has a hot swappable battery which is its main power source. The battery is capable of operating the tablet for 4 hours at full brightness. | |
| MMS must be rechargeable in expected areas of operations. | JHC | Analysis; Inspection; Test | | Y | | | | | Threshold | The MSS Tablet battery can be recharged either on the Tablet or on external charging equipment operated from a single phase 110-230V 50-60 Hz electrical supply. | |
| Planning must be able to continue in the event of power failure. | JHC | Analysis; Inspection; Test | | Y | | | | | Threshold | The MSS Base Station that is the planning terminal is capable of operating for at least 1 hour from its internal battery. | Threshold Objective |
| The System must protect itself from imminent power loss and damage. | JHC | Analysis; Inspection; Test | | | | | Y | | Threshold | When external power is lost from the Puma MSS the software will be able to issue commands to the Fixed Server to shut down in accordance with the network protocol provided by MoD for the server. This will only be possible if the servers and the interconnecting network infrastructure has sufficient battery backed reserve power supplies that can maintain power to the Fixes Server and infrastructure for sufficient time to allow an orderly shutdown. | Pass/Fail |
| Operational Effectiveness | JHC | Analysis; Inspection; Test; Operational Evaluation | | | | | | | Non Compliant | The GECCO Puma MSS is capable of providing this functionality as part of a future funded software upgrade. However, provision of this functionality is not currently costed within this proposal | Threshold Objective |
| | | | SRD Priority | | | | | Remarks | Bidder's Statement of Compliance | Bidder's Statement of Compliance: A narrative supporting statement is required against each detailed system requirement. This statement will provide justification and assurance for the level of compliance detailed. | Scoring |

| | | | | | | | | | |
|---|--------|---|--|---|--|--|---|-----------|---|
| User requires support to maintain capability worldwide. | P2G PT | Analysis; Inspection; Demonstration; Operational Evaluation | | Y | | | | Threshold | The GECCO Puma MSS administrator Support is available from Inzpire by phone during normal working hours. |
| User requires support to maintain capability worldwide. | P2G PT | Analysis; Inspection; Demonstration; Operational Evaluation | | Y | | | | Threshold | The GECCO Puma MSS administrator Support is available from Inzpire by phone 24 hours a day 7 days a week for short periods to support training and operations that require it (not to exceed 5 days of the year and with a minimum of 5 days notice). |
| User requires support to maintain capability worldwide. | P2G PT | Analysis; Inspection; Demonstration; Operational Evaluation | | Y | | | | Threshold | Inzpire will be providing Field Service Representative support on request at the MOB. This will be provided within 5 working hours (requests before 1200: actioned same day - requests after 1200: action would commence same day and be completed the next morning). |
| User requires support to maintain capability worldwide. | P2G PT | Analysis; Inspection; Demonstration; Operational Evaluation | | Y | | | | Threshold | Inzpire will provide worldwide Software support remotely via phone and email. Inzpire will respond within 2 days but the scope of the problem and technical solution and testing will not always allow delivery of a solution within 48 hours, but Inzpire will use best endeavours to achieve it. Inzpire is one of the finest providers of Mission Systems Support and has won awards for its exceptional response times and dedication - Contact Apache PT for DIGIMAP and AMMWAS feedback. Providing timely fixes is a compromise primarily driven by safety and software process. The minimum time for a full software verification is 6 weeks. Delivery of a robustly verified system within 20 days is achievable and 5 days for urgent operational requirements. In the small number of occasions where there has been an operational need in the past, e.g. Op ELLAMY Images, Inzpire has analysed the problem and provided a workable solution within hours of the problem being flagged to support staff. The Inzpire process is to identify the root cause, identify a quick reliable interim fix, then deliver a solution. As result of experience of supporting the often urgent need for changes at the front line or by remote users Inzpire has designed it's system so that users can make software and/or configuration changes in the field with minimal support. |
| User requires support to maintain capability worldwide. | P2G PT | Analysis; Inspection; Demonstration; Operational Evaluation | | Y | | | | Threshold | Based on in service support of DIGIMAP Systems and an understanding of the typical turnaround time for COTS Manufacturers Inzpire will hold a number of fully configured systems and other spares to meet this requirement. If on site or telephone support cannot identify or rectify the problem in timely manner it will dispatch replacement units. This service is completely dependent upon the timely and immediate return of fault equipment. |
| User requires support to maintain capability worldwide. | P2G PT | Analysis; Inspection; Demonstration; Operational Evaluation | | | | | Y | Threshold | Inzpire's GECCO MPS will have an inbuilt help to assist Users. |

User expects to be able to operate anywhere in the UK for any information apart from imagery. Imagery can be managed for expected area of operations.

Operational Analysis

Storage capacity will be driven by geospatial data.

To allow User friendly and rapid data selection when preparing for FOB/standalone operations.

To allow User friendly, rapid, data selection when preparing for FOB/standalone operations.

To allow User friendly, rapid, data selection when transferring data to the MMS.

To allow User friendly, rapid, data selection when transferring data to the MMS.

To allow updates to be prioritised for areas of interest.

| | | | | | | | | | |
|-----|--|---|---|--|--|--|---|--|--|
| | | | | | | | | | |
| JHC | | Analysis; Inspection; Test | Y | | | | | | |
| JHC | | Analysis; Inspection; Demonstration; Operational Evaluation | Y | | | | | | |
| JHC | | Analysis; Inspection; Demonstration; Operational Evaluation | Y | | | | | | |
| JHC | | Analysis; Inspection; Test | | | | | Y | | |

Threshold
 The GECO MPS will host global data and from that extensive library, pertinent data for particular areas of military operation can be selected and the data is then filtered for synchronisation to the MMS as part of a mission data pack. (individual data types are selectable individually). This is powerfully demonstrated as part of numerous fielded Inzpire Mission Systems such as AMMWAS.

Threshold
 GECO Puma MSS has the functionality to prioritise the data for update by type and through geographical selection.

| | | | | | | | | | | | |
|--|------------|-----------------------------------|--|----------|--|--|----------|--|------------------|--|------------------|
| <p>Selective use of standard routes in the flying training environment has been proven to save considerable time and effort as well as offering a good means of standardising training packages.</p> | <p>JHC</p> | <p>Analysis; Inspection; Test</p> | | <p>Y</p> | | | | | | | |
| <p>Post flight investigations will require mission data.</p> | <p>JHC</p> | <p>Analysis; Inspection; Test</p> | | <p>Y</p> | | | | | | | |
| <p>Rapid recovery from System crashes or unexpected System behaviour is essential, especially with inexperienced operators.</p> | <p>JHC</p> | <p>Analysis; Inspection; Test</p> | | | | | <p>Y</p> | | <p>Threshold</p> | <p>The system includes a comprehensive backup system that will ensure coherence across all systems and rapid recovery and redundancy, whilst also ensuring standalone systems also have an adequate backup facility.</p> | <p>Threshold</p> |

| | | | | | | | | | | |
|---|-----|----------------------------|----------|--|--|----------------------|--|-----------|---|--|
| <p>control is essential for maintaining flight safety. However, the user must be aware that the data must be accurate in the absence of anything else.</p> | | | | | | | | | | |
| <p>User requires latest information to ensure accuracy.</p> <p>Most of the data used by the MSS will be regularly updated and version control is essential for maintaining flight safety.</p> <p>Most of the data used by the MSS will be</p> | JHC | Analysis; Inspection; Test | Y (Data) | | | Y (Map config data) | | Threshold | <p>GECO Puma MSS alerts the User if its data is no longer current according to its validity. All products can be interrogated for version and date validity either from within a defined dataset or user configurable. Printouts can display this information if required</p> | |
| <p>User requires latest information to ensure accuracy.</p> | JHC | Analysis; Inspection; Test | Y | | | | | Threshold | <p>The GECO Puma MSS will provide this. The In service GECO AMMWAS system currently has this capability. It is possible to hold Past, Present and Future versions of time critical data such as data on a 28 day cycle. The validity of the data is flagged to users on all MPS and MSS equipment. The ability to delete data is set by the Admin User Account on the MPS machines.</p> | |
| <p>Sometimes the only data available may be out of date (or the next edition has not been published) and this must be useable in the absence of any other information.</p> | JHC | Analysis; Inspection; Test | Y | | | | | Threshold | <p>GECO Puma MSS will always warn the User of the presence of out of date information. The User has to physically accept and acknowledge the use of this out of date data before it is physically presented to them i.e. they actively choose to use this out of date data.</p> | |
| <p>User requires latest information to ensure accuracy.</p> <p>Raw data should be used to minimise the risk of errors and to maintain certification.</p> | JHC | Analysis; Inspection; Test | Y | | | Y (MIDDLEWARE / SLI) | | Threshold | <p>GECO Puma MSS is designed to take all MSS data as System inputs in its raw format (as issued) via WAN, LAN or physical media in order to update the System.</p> | |

| | | | | | | | | | | | |
|---|-----|----------------------------|---|-----------------------------------|--|--|-------------------|---|-----------|---|-----------|
| <p>safety.</p> <p>Most of the data used by the MSS will be regularly updated and version control is essential for maintaining flight safety. However, sometimes the only data available may be out of date and this must be useable in the</p> | JHC | Analysis; Inspection; Test | | Y | | | | | Threshold | Inzpire's GECO Puma MSS warns the user if data they are about to use is out of date. This occurs at log in and the system is intelligent enough to also warn whilst the system is in use i.e. after log in. The User can elect to still use this out of date information if required i.e. it is not denied but they have decided and are aware of using out of date information. The validity of the data can also be checked at any time during use. | |
| <p>MSS must be able to manage updates and amendments to ensure products are up-to-date.</p> | JHC | Analysis; Inspection; Test | | Y | | | | | Threshold | GECO Puma MSS allows personnel with the required access rights (administrators) to annotate / label data with updates / amendments. | |
| <p>The User needs reference to a number of documents during the planning process. This will include, but not be limited to, relevant MAA publications, JHC documents (FOB, SOPs etc), local flying orders and the ADS. Briefing packs shall be able to be generated (.ppt). On deployed operations local flying orders may need to be created on the MSS.</p> | JHC | | 2 | | | | | | | | |
| <p>The User needs reference to a number of documents during the planning process. This will include, but not be limited to, relevant MAA publications, JHC documents (FOB, SOPs etc), local flying orders and the ADS. Briefing packs shall be able to be generated (.ppt). On deployed operations local flying orders may need to be created on the MSS.</p> | JHC | Analysis; Inspection; Test | 2 | Y (Docs, XLS, HTML via 3rd party) | | | Y (Read XML docs) | MSS shall be able to manage documentation aligned with the applications and versions that will be available on DINE at NSS-IGC. This shall be managed through life by a request for change process. | Threshold | The GECO Puma MSS will provide this. The In service GECO AMMWAS system MSS currently has this capability. It is possible to hold Past, Present and Future versions of time critical data such as data on a 28 day cycle. The validity of the data is flagged to users on all MPS and MSS equipment. The ability to delete data is set by the Admin User Account on the MPS machines. | Threshold |

| | | | | | | | | | |
|--|------|---|----------------------|--|--|---------------------|--|---|--|
| <p>air needs access to JFIC and data sets.</p> <p>and developing operational procedures for the use of the data sets in the context of the JFIC, such as:</p> | | | | | | | | | |
| <p>The MOD mandated DAFIF database provides aeronautical navigation information reference material concerning airports, heliports, navigation aids, Waypoints, ATS routes, airspace boundaries, special use airspace, military training routes, parachute jump areas, preferred routes, terminal procedures.</p> | AIDU | Analysis; Inspection; Demonstration; Operational Evaluation | Y (DAFIF) | | | Y (DAFIF on MPS) | | | |
| <p>The crew must be able to appreciate the landscape over which they will fly.</p> | DGC | Documentation; Demonstration; Operational Evaluation | Y (DTED, SRTM) | | | Y (SRTM import) | | <p>Threshold</p> <p>GECCO Puma MSS will provide this. The In service GECCO AMMWAS system currently has this capability to import DTED and as part of Inzpire's support package already updates the software as new standards emerge. The ability to import SRTM will be available for the PUMA MSS in service date. Inzpire will endeavour to implement this for the Demo date.</p> | |

| | | | | | | | | | | |
|---|-----------|---|---|-----|--|----------|--|--|-----------|--|
| developing low level routes for air vehicles. Mapping does not always include all obstructions. | | | | | | | | Jointly participate in the development of the data file. | | |
| Obstacle information is a useful capability for highlighting known obstructions. Symbology highlights position but not height or elevation - this can be interrogated but the option to permanently display would also be useful to the user. This can overly clutter the map however so should be an option. | DGC | Analysis; Inspection; Demonstration; Operational Evaluation | | SWG | | | | | Threshold | GECO Puma MSS achieves Threshold status for this requirement. The display of obstacles data is a fundamental part of the GECO solution fielded as part of AMMWAS |
| Allow user to plan on the correct data where possible for the date of flight. | DGC; AIDU | Documentation; Demonstration; Operational Evaluation | Y | Y | | | | Example: AIRACs always occur on a Thursday. If planning were to take place for a same-day sortie on Wednesday, the day before AIRAC 6/14 (the 28 day period in 2014), the MSS would only allow the User to plan with AIRAC 6/14 data. However, if the User was wanting to plan a sortie on the same Wednesday, but the sortie would take off late the Monday after AIRAC 6/14, the MSS would only allow the User to plan with AIRAC 6/14 data. If the User wanted to plan a sortie on the same Wednesday but with a take off date that would be in AIRAC 7/14, where the data is not yet loaded into the System, the MSS should allow the User to plan with the AIRAC 6/14, but with a warning. When the day of flight arrives, the MSS must then revert to using the correct data. If the sortie takes place over | Threshold | Inzpire's range of GECO Products provide the Threshold capability requested. Therefore, GECO Puma MSS will deliver this. Provision of data in a timely fashion is critical (tied to AIRAC in this case) and Inzpire demonstrate the ability to fulfill this already on DIGIMAP and AMMWAS fielded contracts. Data loading, currency, management and configuration control are strong elements of our System. |
| Raster mapping is the base requirement for aeronautical navigation planning. | DGC | Analysis; Inspection; Demonstration; Operational Evaluation | K | Y | | Y (ECRG) | | | Threshold | GECO Puma MSS will deliver the threshold capability. Raster mapping import and display are strong capabilities already demonstrated across the GECO DIGIMAP and AMMWAS Product range |