

Volume 1, Annex D, Appendix 4

Bid Evaluation Plan

Engineering Change Impact Assessment

Underwater Warfare Suite Upgrade

31 January 2017

ID		Requirement Type	Compliance Demonstration Method	Bidder's Response	Evaluation of Bidder's Response	Compliant (Y/N)
EC-3	Volume 1, Annex D, Appendix 4 to W8472-135462 Bid Evaluation Plan - Engineering Change Impact Assessment Dated: 31 January 2017	Heading	N/A			
EC-4	Volume 1, Annex D, Appendix 4 Bid Evaluation Plan Engineering Change Impact Assessment Underwater Warfare Suite Upgrade 31 January 2017	Heading	N/A			
EC-5	1 Objectives	Heading	N/A			
EC-6	1.1 The first objective of this portion of the Bid Evaluation is for an assessment of the Bidder's Engineering Change Impact for their proposed solution.	Information	N/A			
EC-7	1.2 The second objective of this portion of the Bid Evaluation is for the Bidder to provide a Level of Effort Estimate to install their proposed full upgrade solution for one Halifax-class frigate. This estimate will be used by the Bid Evaluation process to assess the Relative Level of Effort Estimate for the full upgrade solution against the other Bidders' solutions.	Information	N/A			
EC-98	1.3 The third objective of this portion of the Bid Evaluation is for the Bidder to provide the Dry-Dock Level of Effort Estimate and the relative proportion of the Dry-Dock Level of Effort Estimate versus the Level of Effort Estimate of the installation of the full upgrade solution at paragraph 1.2.	Information	N/A			

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EC-161	1.4 The fourth objective of this portion of the Bid Evaluation is for the Bidder to provide a Level of Effort Estimate to execute a Capability Transfer of the Bidder's proposed full upgrade solution for one Halifax-class frigate to another frigate which is initially fitted with only a completed FFBNW-WR configuration as proposed by the Bidder in response to section 6.3 of the Volume 2 Annex C System Requirements Document. This estimate will be used by the Bid Evaluation process to assess the Relative Level of Effort Estimate for Capability Transfer against the other Bidders' solutions.	Information	N/A			
EC-8	2 Method	Heading	N/A			
EC-99	2.1 Method for Description of Engineering Change Impact Assessment	Heading	N/A			
EC-187	2.1.1 The Bidder's Description of Engineering Change Impact Assessment must address:	Mandatory	D			
EC-188	(a) installation of the Bidder's full upgrade solution; and	Mandatory	D			
EC-189	(b) removal of capability from a frigate configured with a full-upgrade and installation in a frigate configured in the Bidders' proposed FFBNW-WR solution.	Mandatory	D			
EC-87	2.1.2 The Bidder must assess and provide the Engineering Change Impact based on the detailed description the Logical, Functional, and Physical Views of the UWSS System Architecture of the Bidder's proposed solution to meet the mandatory requirements of the UWSU Statement of Work (SOW) for Acquisition and UWSU System Requirements Document (SRD), Volume 2 Annexes B and C, respectively.	Mandatory	W			
EC-90	2.1.3 The scoring will favour completeness and comprehensiveness of the Engineering Change Impact Assessment based on the UWSS System Architecture Views.	Information	N/A			
EC-100	2.2 Method for Overall Level of Effort Estimate for the Full Upgrade Solution	Heading	N/A			

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EC-101	2.2.1 The Bidder must derive and provide a Level of Effort Estimate and its break down into major equipment or infrastructure groupings for their full upgrade solution for one Halifax-class frigate based on the Description of Engineering Change Impact Assessment from Section 2.1.	Mandatory	W			
EC-102	2.2.2 The Bidder must include the following in the Level of Effort Estimate for the Full Upgrade Solution, as applicable:	Mandatory	D			
EC-103	(a) Estimates for removal of existing fitted equipment and material;	Mandatory	A			
EC-104	(b) Estimates for relocation and re-installation of existing fitted equipment and material;	Mandatory	A			
EC-105	(c) Estimates for installation of new equipment and material;	Mandatory	A			
EC-106	(d) Estimates for modification of existing fitted equipment and material;	Mandatory	A			
EC-107	(e) Estimates for re-used equipment and material;	Mandatory	A			
EC-108	(f) Estimates for interconnections (such as pipes and cables) of new, re-used, removed, re-located and re-installed, and modified equipment and material; and	Mandatory	A			
EC-109	(g) Estimates for installation inspections and inspection tests.	Mandatory	A			
EC-110	2.2.3 The Bidder must not include estimates for Set-To-Work, and Acceptance Test and Trials.	Mandatory	A			
EC-111	2.2.4 For each estimate from Section 2.2.2, the Bidder must justify and substantiate with Objective Evidence the derivation of the Level of Effort Estimate.	Mandatory	A			
EC-112	2.2.5 The scoring will favour complete and comprehensive derivations of the Level of Effort Estimate for the Full Upgrade Solution.	Information	N/A			
EC-113	2.2.6 The scoring will favour the Level of Effort Estimate for the Full Upgrade Solution with less number of person-hours.	Information	N/A			

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EC-114	2.3 Method for Dry-Dock Level of Effort Estimate for the Full Upgrade Solution	Heading	N/A			
EC-115	2.3.1 The Bidder must specifically identify within the Level of Effort Estimates work that requires the ship to be dry-docked.	Mandatory	D			
EC-116	2.3.2 Work requiring dry-dock is defined as all exterior work below "6-feet above the waterline".	Information	N/A			
EC-117	2.3.3 The scoring will favour estimates that have a lower proportion of Dry-Dock work relative to Overall Level of Effort Estimate.	Information	N/A			
EC-162	2.4 Method for Level of Effort Estimate for Capability Transfer	Heading	N/A			
EC-163	2.4.1 The Bidder must derive and provide a Level of Effort Estimate for Capability Transfer and its break down into major equipment or infrastructure groupings for transfer of capability from their full upgrade solution for one Halifax-class frigate to a ship in the Bidder's proposed FFBNW-WR configuration, based on the Description of Engineering Change Impact Assessment from Section 2.1.	Mandatory	W			
EC-164	2.4.2 The Bidder must include the following in the Level of Effort Estimate for Capability Transfer, as applicable:	Mandatory	D			
EC-165	(a) Estimates for removal of existing fitted equipment and material;	Mandatory	A			
EC-166	(b) Estimates for relocation and re-installation of existing fitted equipment and material;	Mandatory	A			
EC-167	(c) Estimates for installation of new equipment and material, including all components, equipment and material from a full-up configuration that is missing or not present in a FFBNW-WR configuration;	Mandatory	A			
EC-168	(d) Estimates for modification of existing fitted equipment and material;	Mandatory	A			
EC-169	(e) Estimates for re-used equipment and material;	Mandatory	A			

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EC-170	(f) Estimates for interconnections (such as pipes and cables) of new, re-used, removed, re-located and re-installed, and modified equipment and material; and	Mandatory	A			
EC-171	(g) Estimates for installation inspections and inspection tests.	Mandatory	A			
EC-172	2.4.3 The Bidder must not include estimates for Set-To-Work, and Acceptance Test and Trials.	Mandatory	A			
EC-173	2.4.4 For each estimate from Section 2.4.2, the Bidder must justify and substantiate with Objective Evidence the derivation of the Level of Effort Estimate.	Mandatory	A			
EC-174	2.4.5 The scoring will favour complete and comprehensive derivations of the Level of Effort Estimate for Capability Transfer.	Information	N/A			
EC-175	2.4.6 The scoring will favour the Level of Effort Estimate for Capability Transfer with less number of person-hours.	Information	N/A			
EC-177	2.4.7 The Level of Effort Estimate for Capability Transfer must include an indication of the Dry-Dock work relevant to the Capability Transfer, but this will not be scored separately as part of the Bid Evaluation.	Mandatory	D			
EC-88	3 Bidders' Responses	Heading	N/A			
EC-94	3.1 Bidder's Response to Description of Engineering Change Impact Assessment	Heading	N/A			
EC-178	3.1.1 The Bidder's response for Description of Engineering Change Impact Assessment must include descriptions of:	Mandatory	D			
EC-179	(a) installation of the Bidder's full upgrade solution; and	Mandatory	D			
EC-180	(b) removal of capability from a frigate configured with a full-upgrade and installation in a frigate configured in the Bidders' proposed FFBNW-WR solution.	Mandatory	D			

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EC-118	3.1.2 The Bidder's response for Description of Engineering Change Impact Assessment must be prepared and delivered as based on a detailed description of the Logical, Functional, and Physical View of the UWSS System Architecture for their full upgrade solution.	Mandatory	A			
EC-119	3.1.3 The Bidder's response for Description of Engineering Change Impact Assessment must include in their assessment the types of Engineering Change Guidance Package considerations listed in UWSU-DID-TD-003 Section 10.3.2.	Mandatory	D			
EC-120	3.1.4 The Bidder's response must include the following information for each physical element, system element, and physical interface:	Mandatory	D			
EC-121	(a) List of removed equipment and material;	Mandatory	A			
EC-122	(b) List of relocated and re-installed equipment and material;	Mandatory	A			
EC-123	(c) List of new equipment and material to be installed;	Mandatory	A			
EC-124	(d) List of modified existing fitted equipment and material;	Mandatory	A			
EC-125	(e) List of re-used existing fitted equipment and material;	Mandatory	A			
EC-126	(f) List of interconnections (such as pipes and cables) of new, re-used, removed, re-located and re-installed, and modified equipment and material; and	Mandatory	A			
EC-127	(g) Location of all UWSS equipment and material;	Mandatory	A			
EC-128	3.1.5 Minimum Score for Description of Engineering Change Impact Assessment	Heading	N/A			
EC-129	3.1.5.1 For the Bid to be compliant, the Bidder's response for Description of Engineering Change Impact Assessment must achieve a score of Acceptable, Good, or Exceptional.	Mandatory	A			
EC-49	3.2 Bidder's Response to Level of Effort Estimates	Heading	N/A			
EC-181	3.2.1 The Bidder's response for the Level of Effort Estimates must include estimates for:	Mandatory	D			
EC-182	(a) installation of the Bidder's full upgrade solution; and	Mandatory	D			

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EC-183	(b) removal of capability from a frigate configured with a full-upgrade and installation in a frigate configured in the Bidders' proposed FFBNW-WR solution.	Mandatory	D			
EC-60	3.2.2 The Bidder's response must include the types of Engineering Change Guidance Package considerations listed in UWSU-DID-TD-003 Section 10.3.2 to derive and estimate the Level of Effort and must be based on the Bidder's Response to Description of Engineering Change Impact Assessment in Section 3.1.	Mandatory	D			
EC-9	3.2.3 The Bidder's response must provide the breakdown of the Level of Effort Estimates at a minimum to cover the following major equipment or infrastructure groupings, as applicable:	Mandatory	D			
EC-96	(a) Sonobuoy Processing System;	Mandatory	A			
EC-130	(b) Hull Mounted Sonar;	Mandatory	A			
EC-131	(c) Towed Active Passive Sonar;	Mandatory	A			
EC-132	(d) Hull Mounted Torpedo Sonar Intercept;	Mandatory	A			
EC-133	(e) Underwater Data Management System;	Mandatory	A			
EC-134	(f) Operator Workstations;	Mandatory	A			
EC-135	(g) On-board Training System;	Mandatory	A			
EC-136	(h) Electrical and Power; and	Mandatory	A			
EC-137	(i) Other equipment and material not listed in the above major equipment groupings as required for their full upgrade solution in order to meet UWSU SOW and SRD.	Mandatory	A			
EC-138	3.2.4 For each equipment and material, the Bidder's response for Level of Effort Estimates must include the following information:	Mandatory	D			
EC-139	(a) Item Description: This describes the equipment and material to be installed/removed;	Mandatory	A			

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EC-140	(b) Item Location: For equipment, this describes the location within the compartment. For piping and cabling, this describes the origination, destination, and routing information.	Mandatory	A			
EC-141	(c) Total person-hours: This contains the person-hours to perform the work;	Mandatory	A			
EC-142	(d) Dry-Dock Required: This indicates if the work needs to be performed during dry-dock; and	Mandatory	A			
EC-143	(e) Detailed justification for the Level of Effort Estimate.	Mandatory	A			
EC-144	3.2.5 The detailed justification for the Level of Effort Estimates must include:	Mandatory	D			
EC-145	(a) Derivation details that describes how the estimate was established and justifies an assessment of its level of correctness; and	Mandatory	A			
EC-146	(b) Objective Evidence that supports the assessment of the level correctness of estimates.	Mandatory	A			
EC-147	3.2.6 Types of Objective Evidence may include based on previous shipboard installations/removals of identical equipment, previous shipboard installations/removals of similar equipment, shipyard labour estimate catalogues, shipyard installation historical data, shipyard installation handbooks, shipyard installation guidelines, and shipyard UWSU-specific costing reports.	Information	N/A			
EC-148	3.2.7 The Bidder's response must include the Objective Evidence that was used to justify the Level of Effort Estimates.	Mandatory	A			
EC-149	3.2.8 Minimum Score for Derivation of Level of Effort Estimates	Heading	N/A			
EC-150	3.2.8.1 For the Bid to be compliant, the Bidder's response for Derivation of Overall Level of Effort Estimates must achieve a score of Acceptable, Good, or Exceptional.	Mandatory	A			
EC-50	3.3 Bidder's Response to Dry-Dock Level of Effort Estimate	Heading	N/A			

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EC-11	3.3.1 The Bidder's response must specifically identify within their Level of Effort Estimates for the Bidder's proposed full-up installation, as provided in accordance with paragraph 3.2.1(a), work that requires the ship to be dry-docked in accordance with the dry-dock definition in Paragraph 2.3.2.	Mandatory	D			
EC-37	3.3.2 The Dry-Dock Level of Effort Estimate must be provided in person-hours.	Mandatory	A			
EC-15	4 Evaluation of Results	Heading	N/A			
EC-89	4.1 The Bidder must self-assess their responses to the rated items that form this part of the Bid Evaluation, specifically Indices R8.1, R8.2, and R8.4 in tab 'R8 Engineering Change Impact' in the Point Rated Requirements Evaluation Worksheet, Volume 1 Annex D Appendix 2.	Mandatory	A			
EC-151	4.2 Evaluation of Description of Engineering Change Impact Assessment	Heading	N/A			
EC-95	4.2.1 The Bidder must enter the results of the Description of Engineering Change Impact Assessment rating into tab 'R8 Engineering Change Impact Assessment' in the Point Rated Requirements Evaluation Worksheet, Volume 1 Annex D Appendix 2, Index R8.1.	Mandatory	A			
EC-152	4.3 Evaluation of Level of Effort Estimates	Heading	N/A			
EC-153	4.3.1 Evaluation of Derivation of Level of Effort Estimates	Heading	N/A			
EC-154	4.3.1.1 The Bidder must enter the rating results into 'R8 Engineering Change Impact Assessment' in the Point Rated Requirements Evaluation Worksheet, Volume 1 Annex D Appendix 2, Index R8.2.	Mandatory	A			
EC-155	4.3.2 Evaluation of Relative Overall Level of Effort Estimate for Full-up Install	Heading	N/A			
EC-58	4.3.2.1 The Bid Evaluators will determine the Relative Level of Effort for the Full-up Install of the Bidder's proposed solution against the other Bidder solutions to contribute to the determination of a technical score that will assess best value.	Information	N/A			

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EC-156	4.3.2.2 The Bidder must enter the results of the Level of Effort Estimate for Full-up Install into tab 'R8 Engineering Change Impact Assessment' in the Point Rated Requirements Evaluation Worksheet, Volume 1 Annex D Appendix 2, Index R8.3.	Mandatory	A			
EC-184	4.3.3 Evaluation of Relative Level of Effort Estimate for Capability Transfer	Heading	N/A			
EC-185	4.3.3.1 The Bid Evaluators will determine the Relative Level of Effort for Capability Transfer of Bidder's proposed solution against the other Bidder solutions to contribute to the determination of a technical score that will assess best value.	Information	N/A			
EC-186	4.3.3.2 The Bidder must enter the results of the Level of Effort Estimate for Capability Transfer into tab 'R8 Engineering Change Impact Assessment' in the Point Rated Requirements Evaluation Worksheet, Volume 1 Annex D Appendix 2, Index R8.5.	Mandatory	A			
EC-157	4.4 Evaluation of Dry-Dock Level of Effort Estimate	Heading	N/A			
EC-97	4.4.1 The Bid Evaluation process will calculate the proportion of the Dry-Dock Level of Effort Estimate relative to the Level of Effort Estimate for the full-up install to contribute to the determination of a technical score that will assess best value.	Information	N/A			
EC-158	4.4.2 The Bidder must enter the results of the Dry-Dock Level of Effort Estimate in tab 'R8 Engineering Change Impact Assessment' in the Point Rated Requirements Evaluation Worksheet, Volume 1 Annex D Appendix 2, Index R8.4.	Mandatory	A			
EC-159	4.5 Results of Engineering Change Impact Assessment	Heading	N/A			
EC-72	4.5.1 The results of the 'R8 Engineering Change Impact Assessment' tab will be entered by the Bid Evaluators into Table 5 of the Bid Evaluation Plan, Volume 1 Annex D.	Information	N/A			