Net-Centric Implementation Framework

Part 1: Overview

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V 2.0

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Net-Centric Enterprise Solutions for Interoperability (NESI) is a collaborative activity of the USN Program Executive Office, Command, Control, Communications, Computers and Intelligence (PEO C4I); the USAF Electronic Systems Center (ESC); and the Defense Information Systems Agency (DISA).

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1 NESI Implementation

NESI Part 6: Contracting Guidance for Acquisition is the final of six parts of the NESI implementation document set. Part 6 is intended for Program Managers and Department of Defense (DoD) contractors. This extensive revision of Part 6 briefly outlines the acquisition process and focuses on contracting guidance to support software reusability.

Section 1 of Part 6 contains NESI background information. For more introductory information, see the first part of this document set, *NESI Part 1: Overview*.

1.1 References

The following references apply to all six parts of the NESI implementation document set. Additional references that apply to individual parts appear in the text, often as footnotes rather than specific references such as "reference (a)."

(a) DoD Directive 5000.1, *The Defense Acquisition System*, 24 November 2003.

(b) DoD Instruction 5000.2, *Operation of the Defense Acquisition System*, 12 May 2003.

(c) DoD Directive 8100.1, *Global Information Grid (GIG) Overarching Policy*, 21 November 2003.

(d) DoD Directive 4630.5, *Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)*, 05 May 2004.

(e) DoD Instruction 4630.8, *Procedures for Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)*, 30 June 2004.

(f) DoD Directive 5101.7, *DoD Executive Agent for Information Technology Standards*, 21 May 2004.

(g) *DoD Global Information Grid (GIG) Architecture, Version 2.0*, August 2003.

(h) *DoD Architecture Framework (DoDAF), Version 1.0*, 9 February 2004.

(i) *DoD Net-Centric Data Strategy*, DoD Chief Information Officer, 9 May 2003.

(j) CJCSI 3170.01E, *Joint Capabilities Integration and Development System*, 11 May 2005.

(k) CJCSM 3170.01B, *Operation of the Joint Capabilities Integration and Development System*, 11 May 2005.

(l) CJCSI 6212.01D, *Interoperability and Supportability of Information Technology and National Security Systems*, 8 March 2006.

(m) *Net-Centric Operations and Warfare Reference Model (NCOW RM)*, Version 1.1 (Draft), 8 November 2004.

(n) *Net-Centric Checklist, V2.1.3*, Office of the Assistant Secretary of Defense for Networks and Information Integration/Department of Defense Chief Information Officer, 12 May 2004.

(o) *A Modular Open Systems Approach (MOSA) to Acquisition, Version 2.0*, September 2004.

(p) *DoD IT Standards Registry (DISR)*, http://disronline.disa.mil.

(q) *Net-Centric Attributes List*, Office of the Assistant Secretary of Defense for Networks and Information Integration/Department of Defense Chief Information Officer, June 2004.

(r) *Global Information Grid (GIG) Key Interface Profiles (KIPs) Framework (DRAFT)*, Version 0.95, 7 October 2005.

1.2 NESI Overview

Net-Centric Enterprise Solutions for Interoperability (NESI) provides, for all phases of the acquisition of net-centric solutions, actionable guidance that meets DoD Network-Centric Warfare goals. The guidance in NESI is derived from the higher level, more abstract concepts provided in various directives, policies and mandates such as the *Net-Centric Operations and Warfare Reference Model* (*NCOW RM*) and the ASD(NII) *Net-Centric Checklist*, references (m) and (n), respectively. As currently structured, NESI guidance is captured in documents covering architecture, design and implementation; a compliance checklist; and a collaboration environment that includes a repository of supporting materials and project-specific artifacts.

More specifically, NESI is a body of architectural and engineering knowledge that guides the design, implementation, maintenance, evolution, and use of the Information Technology (IT) portion of net-centric solutions for military applications. NESI provides specific technical recommendations that a DoD organization can use as references. Stated another way, NESI serves as a reference set of compliant instantiations of these directives.

NESI is derived from a studied examination of enterprise-level needs and, more importantly, from the collective practical experience of recent and on-going program-level implementations. It is based on today's technologies and probable near-term technology developments. It describes the practical experience of system developers within the context of a minimal top-down technical framework. Most, if not all, of the guidance in NESI is in line with commercial best practices in the area of enterprise computing.

NESI applies to all phases of the acquisition process as defined in references (a) and (b) and applies to both new and legacy programs. NESI provides explicit counsel for building in net-centricity from the ground up and for migrating legacy systems to greater degrees of net-centricity.

NESI subsumes a number of references and directives; in particular, the Air Force *C2 Enterprise Technical Reference Architecture (C2ERA)*[1] and the Navy *Reusable Applications Integration and Development Standards (RAPIDS)*.[2] Initial authority for NESI is per the Memorandum of Agreement between Commander, Space and Naval Warfare Systems Command (SPAWAR), Navy PEO C4I & Space and the United States Air Force Electronic Systems Center, dated 22 December 2003, Subject: Cooperation Agreement for Net-Centric Solutions for Interoperability (NESI). The Defense Information Systems Agency (DISA) formally joined the NESI effort in 2006.

[1] Air Force C2 Enterprise Technical Reference Architecture, v3.0-14, 1 December 2003.

[2] RAPIDS Reusable Application Integration and Development Standards, Navy PEO C4I & Space, December 2003 (DRAFT V1.5).

1.3 Releasability Statement

This document has been cleared for public release by competent authority in accordance with DoD Directive 5230.9 and is granted *Distribution Statement A: Approved for public release; distribution is unlimited*. Obtain electronic copies of this document at the following site: http://nesipublic.spawar.navy.mil.

1.4 Vendor Neutrality

NESI documentation sometimes refers to specific vendors and their products in the context of examples and lists; however, NESI is vendor-neutral. Mentioning a vendor or product is not intended as an endorsement, nor is a lack of mention intended as a lack of endorsement.

Code examples typically use open-source products since NESI is built on the open-source philosophy. NESI accepts inputs from multiple sources so the examples tend to reflect whatever tools the contributor was using or knew best. However, the products described are not necessarily the best choice for every circumstance. Users are encouraged to analyze specific project requirements and choose tools accordingly. There is no need to obtain, or ask contractors to obtain, the open-source tools that appear as examples in this guide. Similarly, any lists of products or vendors are intended only as references or starting points, and not as a list of recommended or mandated options.

1.5 Disclaimer

Every effort has been made to make this documentation as complete and accurate as possible. Even with frequent updates, this documentation may not always immediately reflect the latest technology or guidance.

1.6 Contributions and Comments

NESI is an open-source project that will involve the entire development community. Anyone is welcome to contribute comments, corrections, or relevant knowledge to the guides via the Change Request tab on the NESI Public Site, http://nesipublic.spawar.navy.mil, or via the following email address: nesi@spawar.navy.mil.

1.7 Collaboration Site

The Navy has established a collaboration site to support NESI community interaction. It is located at https://nesi.spawar.navy.mil (user registration required). This site facilitates collaborative software development across distributed teams.

2 Overview

Programs in the DoD acquisition community must comply with numerous statutory and regulatory requirements that support the overarching goal of a connected, interoperable and open information system architecture including the Global Information Grid (GIG) Architecture, Net-Centric Enterprise Solutions (NCES), Modular Open Systems Approach (MOSA), ASD(NII) Net-Centric Checklist, and the Net-Centric Operations and Warfare Reference Model (NCOW RM).

Whether a Program is a new start or developing a new increment of capability as part of an evolutionary acquisition strategy, most Programs will at some point need to craft effective language in the various contracting artifacts which are part of the DoD acquisition process. As a result, the Program Manager (PM) will have to balance the requirement to provide enough detail to potential Offerors to describe what the objective of the acquisition is without over-prescribing the technical solution, thus limiting commercial innovation. Under the umbrella of the Request for Proposal (RFP) process, there are many different approaches for soliciting contractor performance. The PM, in coordination with the Contracting Office, must develop a source selection strategy which emphasizes the importance of the requirements and evaluates those factors which the Government has determined most important and will result in the best value to the Government while attaining net-centric goals.

The guidance (in the form of Perspectives, Guidance and Best Practices) in NESI Part 6 is not intended to duplicate the DoD guidance contained in the Federal Acquisition Regulation (FAR) or the Defense Federal Acquisition Regulation Supplement (DFARS); rather, it is intended to assist PMs with language appropriate for various contracting documents that will facilitate using NESI guidance to develop net-centric, interoperable solutions.

This version of NESI Part 6 supersedes Version 1.3.0 of 16 June 2006 and focuses on contracting guidance in support of reusability.

References

- Office of the Under Secretary of Defense (USD) for Acquisition, Technology and Logistics (AT&L) memorandum, *Instructions for Modular Open Systems Approach (MOSA) Implementatio*n, 7 July 2004, available at www.acq.osd.mil/osjtf
- Assistant Secretary of the Navy (Research, Development and Acquisition) memorandum, *Software Process Improvement Initiative Contract Language*, 17 November 2006
- *Naval Open Architecture Contract Guidebook*, Guidebook Version 1.0, 7 July 2006
- GAO Report to Congressional Committees, *Weapons Acquisition, DOD Should Strengthen Polices for Assessing Technical Data Needs to Support Weapon Systems*, GAO-06-839, July 2006
- *Providing Incentives for Spiral Developments: An Award Fee Plan*, Defense Journal, Supplemental Issue 2006 Vol. 12 No. 1
- DFARS 252.227-7013, -7014 and -7015 Technical data – Commercial Items.

- *Department of Defense Handbook for Preparation of Statement of Work (SOW)*, MIL-HDBK-245D, 10 September 1991, available at https://www.acqsolinc.com/mockups/7steps/library/DODhandbook.pdf
- For Open Architecture Assessment Tool (OAAT) information access the Defense Acquisition University (DAU) Web site located at https://acc.dau.mil/CommunityBrowser.aspx?id=18016

2.1 Relationship with the JCIDS Process

The appropriate timeframe to start implementing net-centricity and interoperability is during the early definition of the system with the preparation of the Capabilities Documents. These documents, prepared under the Joint Capabilities Integration and Development System (JCIDS), set the stage for the subsequent acquisition process. Before initiating a program, the JCIDS process identifies warfighting capability and supportability gaps and the Doctrine, Organization, Training, Materiel, Leadership and education, Personnel, and Facilities (DOTMLPF) capabilities required to fill those gaps. The documentation developed during the JCIDS process provides the formal communication of capability needs between the warfighter, acquisition, and resource management communities.

Program sponsors, in coordination with program managers, should consider applicable NESI guidance when preparing JCIDS documents. Program sponsors and managers can use Part 1 and 2 to develop a high-level foundational understanding of the relevant issues and have a starting point for planning relevant activities and strategies. Incorporating this guidance facilitates meeting the requirements of the ASD(NII) Net-Centric Checklist (see NESI Part 2). This is a means of increasing interoperability and aiding the development of architectural products. Program personnel should look for the attributes in the program capabilities documents (with reference to the relevant portions of NESI) that are contained in Table 1 below.

Table 1 – Relationship between JCIDS Documents, Process Milestones, and NESI Guidance

JCIDS Document	Milestones	Description	Relevant Guidance
Initial Capabilities Document (ICD)	A, B, C	Defines capability gap in terms of functional area(s), relevant range of military operations, time, obstacles to overcome, and key attributes, with appropriate measures of effectiveness. Recommends materiel approach(s) based on cost analysis, efficacy, sustainability, environmental quality impacts, and associated risks.	NESI Parts 1, 2
Capability Development Document (CDD)	B	Provides operational performance attributes, including supportability, for the acquisition community to design the proposed system. Includes key performance parameters (KPP) and other parameters that guide the development, demonstration, and testing of the current increment. Outlines the overall strategy for developing full capability.	NESI Parts 2, 3, 4 Net-Ready Key Performance Parameter (NR-KPP) developed for this CDD.
Capability Production Document (CPD)	C	Addresses the production attributes and quantities specific to a single increment of an acquisition program. Supersedes threshold and objective performance values of the CDD.	NESI Parts 3, 4 5 Updated NR-KPP required in this CPD.

The Net-Ready Key Performance Parameter (NR-KPP) noted in Table 1 measures the net-centricity of a new program or major upgrade. The NR-KPP contains four elements:

- Compliance with the Net-Centric Operations and Warfare Reference Model (NCOW RM)
- Compliance with applicable Global Information Grid Key Interface Profiles (KIPs)
- Compliance with DoD information assurance (IA) requirements
- Support for integrated architecture products that assess information exchange and use for a given capability

Refer to the Defense Acquisition University (DAU) *Defense Acquisition Guidebook* Section 7.3.4[3] for further information on the NR-KPP elements.

The program sponsor and manager can also use NESI to aid in the development of the NR-KPP as show in Table 2.

[3] http://akss.dau.mil/dag/DoD5000.asp?view=document&rf=GuideBook\IG_c7.3.4.asp

Table 2 – Relationship between NESI and the NR-KPP

	NCOW RM			Information Assurance	Key Interface Profiles (KIPs)	Integrated Architectures
NESI	Services Strategy	Data Strategy	IA Strategy			
Part 1	3.2, 3.3.2, 4.4	3.2, 3.4, 4.2	3.2		3.3.1	1.5, 4.3-4.6
Part 2	4.1, 4.7, 7.0, 8.0	3.1-3.6, 8.0	5.1–5.7, 8.0	5.1-5.7,8.0	4.1	4.1, 4.2, 6.3
Part 3	4.1, 4.3-4.6	4.1, 4.3-4.6	4.1, 4.3			3.2, 4.3
Part 4	2.2-2.4	2.2-2.4	2.2-2.4	2.2-2.4	2.4	All of Part 4, but especially 2.4.1
Part 5	*Web Services*, *Browser-Based Clients*	*Data Tier*, *Data*, *Metadata*	*Application Security*	*Application Security*		*Technical Guidance and Tactics*
Part 6	N/A	N/A	N/A	N/A	N/A	N/A

3 Contracting Guidance for Reuse

This NESI perspective focuses on using recommended contracting language to guide the technical implementation for building reusability into DoD net centric solutions. Component and service reuse is a fundamental design tenet required for building service orientation into Network Centric Warfare (NCW) capabilities.

The GAO Report to Congressional Committees titled *Weapons Acquisition DoD Should Strengthen Polices for Assessing Technical Data Needs to Support Weapon Systems* (GAO-06-839 dated July 2006)[4] recommends that DoD should strengthen policies for assessing and leveraging technical data needs to support reuse in future systems requirements. The intent of this policy includes the following points:

- provide incentives for demonstrating the use of existing components and/or services
- reduce the risk associated with cost and schedule by leveraging well defined components and services throughout the enterprise
- reduce the risk of cost and schedule associated with vendor-specific proprietary solutions
- reduce interoperability issues through reuse of commonly used functionality
- provide a library of composeable software components and services

The engineering practice of *separation of concerns* builds on the principle of modularity by decomposing large modules into smaller ones that each address specific, individual concerns. When combined with the concept of loose-coupling – where these modules interact with each other via small, well-defined, and preferably standard interfaces – the system developer can attain a significant degree of overall flexibility, maintainability, and reuse and their associated cost-savings.

A DoD acquisition solicitation package provides information to prospective developers regarding what the Government seeks to buy (capabilities, objectives, work statements, and requirements), how the Government will buy it (acquisition strategy, contract type), how and what the Government will solicit from Offerors (solicitation in the form of a Request for Proposal or RFP), how the Government will determine the choice for developer (evaluation criteria), and how the Government will manage the program after contract award (Award Fee Plan, Contract Data Requirements List or CDRL, metrics).

This perspective introduces additional perspectives concerning pre- and post-award Contract Sections:

- Section C, Description/Specifications/Work Statement (specifically, the Statement of Work, Statement of Objectives and Technical Requirements Document)
- Section J, List of Attachments (specifically, Contract Data Requirements List)
- Section K, Representations, Certifications, and Other Statements of Offerors (specifically, Data Rights)

[4] http://www.gao.gov/new.items/d06839.pdf

- Section L, Instructions, Conditions, and Notices to Offerors (i.e., Proposal Instructions)
- Section M, Evaluation Factors for Award (i.e., Proposal Evaluation Criteria)
- Post-Award Contract Actions

3.1 Section C: Description/Specifications/Work Statement

Section C of the Request for Proposal (RFP) and the resulting contract contains the detailed description of the products for delivery or the work the Offeror is to perform under the contract. Section C typically includes a Statement of Work (SOW) or Statement of Objectives (SOO).

Statement of Work (SOW)

The SOW specifies in clear, understandable terms, the work the contractor is to do in developing or producing the required goods or services. It defines all tasks, deliverables, and data requirements for the acquisition. It communicates work requirements (hardware, software, technical data and logistics support, goods or services) to the performing contractor. As part of the contract, it also forms the basis for determining successful performance by the contractor. An SOW can be prepared by the Government as part of the RFP package to provide specific, detailed instructions to the Offerors or can be provided by the Offerors in response to a SOO and technical requirements documents as part of their proposal.

Statement of Objectives (SOO)

The SOO provides the basic, top-level, outcome-oriented objectives of the acquisition, their relative importance, and key risk areas that the Offeror needs to address in its proposal. It is provided in the RFP in lieu of a Government-written Statement of Work. This approach provides potential Offerors the flexibility to develop cost-effective solutions and the opportunity to propose innovative alternatives meeting the objectives. It also presents the Government with an opportunity to assess the Offeror's understanding of all aspects of the solicited effort. The SOO, along with the Technical Requirement Specification (covering the technical performance requirements), provides the Offeror guidance for proposing a solution to meet the user’s needs.

Technical Requirements Document (TRD)

The Technical Requirements Document (also known as Technical Requirements Specification or System Specification) states the technical and mission functional and performance requirements for the system.

Best Practices

- Include a reference to *NESI Part 3: Migration Guidance* in the SOW Section 2, Applicable Documents. [BP1792]
- Include a reference to *NESI Part 4: Node Guidance* in the SOW Section 2, Applicable Documents [BP1793]
- Include a reference to *NESI Part 5: Developer Guidance* in the SOW Section 2, Applicable Documents. [BP1794]
- Include a reference in the SOW Section 2, Applicable Documents to the *Technical Evaluation Checklist* for measuring net-centric compliance. [BP1795]

- Include in the TRD specific requirements extracted from the NESI guidance based on the net-centric capabilities and functions the Government needs as part of the acquisition. [BP1789]

3.2 Section J: List of Attachments

Lists of attachments expand on other sections of the solicitation and contract. Areas which may require particular attention include the consistency of definitions, the compatibility of cost eliminating relationships, the interface of equations, the establishment of contract milestones, and the Order of Precedence clause. Another attachment may include the Contract Data Requirements List (CDRL), which contains detailed descriptions of the contract deliverables. The CDRL specifies the format of the deliverables (electronic, media format, etc.) and the number of copies to produce when a printed document is required.

Sample contract language supporting reusability follows:

- Contractors shall identify the data rights for products as a part this proposal in Section K – Representations and Certifications.
- Contractors shall post Section K – Representations and Certifications of the solicitation to a Government-prescribed repository (e.g., NESI Collaboration Site, https://nesi.spawar,navy.mil; user access required).
- Contractors shall notify the Government in writing if there are any changes to the data rights specified in Section K of the RFP.
- Contractors shall use Government approved data rights labels for any deliverables that are classified as Unlimited and/or Government Purpose Rights.
- Contractors shall post all artifacts (i.e., components, source code, documentation, script files, IDE, Makefiles, instructions, processes, tools, test procedures and results, etc.) associated with final deliverables to a Government-prescribed repository (e.g., NESI Collaboration Site; user access required).

Guidance

- Stipulate that the Offeror is to use NESI to assess net-centricity and interoperability. [G1787]
- Stipulate that the Offeror is to use Government approved data rights labels and markings for any deliverables that are identified as Unlimited or Government Purpose Rights. [G1788]

3.3 Section K: Representations, Certifications, and Other Statements of Offerors (Data Rights)

All contracts that require data to be produced, furnished, acquired or specifically used in meeting contractor performance requirements must contain terms that delineate the respective rights and obligations of the Government and the contractor regarding the use, duplication and disclosure of such data. Therefore, Program Managers must work with the Government Contracting Office to ensure these are spelled out in the RFP and resulting contract. Offers submitted in response to a

solicitation need to identify, to the extent known at the time of submission to the Government, the technical data, computer software or other artifacts that the Offeror and its subcontractors or suppliers, or potential subcontractors or suppliers, assert should be furnished to the Government with restrictions on use, release, or disclosure. The Government honors the rights in data resulting from private developments and limits its demands for such rights to those essential for Government purposes. Therefore, include in Section K DFARS Clause 252.227-7017 *Identification and Assertion of Use, Release, or Disclosure Restrictions* which makes the contractors identify their assertions up front.

An example of contracting language follows:

- "Contractors must identify and list the data rights for all products as a part this proposal in Section K – Representations and Certifications."

Guidance:

- Include a statement in the solicitation for Offerors to identify and list data rights for all proposed products. [G1784]

3.4 Section L: Instructions, Conditions, and Notices to Offerors

Section L of the RFP instructs the Offerors to provide information necessary to support Government review and evaluation of the proposal based on the criteria established in Section M of the RFP. In Section L, contractors should address the ability to reuse commonly used functionality in the technical proposal.

Examples of approaches to reusability with respect to software follow; similar examples are appropriate for the reusability of other artifacts:

- **Component-based software**: mission applications are architected as components integrated within a component framework.
- **Layered software architecture**: application software is separated into tiers that separate concerns; minimally, client, presentation, middle, and data tiers.
- **Service-oriented architecture (SOA)**: services enable access to data and application functionality through public interfaces exposed to the enterprise.
- **Separation of implementation and interface**: services expose mission capabilities through well-defined interfaces and provide reliable and scalable components.

An example of language to include in Section L follows:

- All Contractors shall use NESI to assess the proposed technical solution.

Best Practices

- Stipulate that the Offeror is to describe how the proposed technical solution reuses services from other systems or demonstrates composeability and extensibility by building from existing reusable components and/or services. [BP1790]
- Stipulate that the Offeror is to describe how the proposed technical solution demonstrates software practices that support reuse. [BP1791]

3.5 Section M: Evaluation Factors for Award

In the proposal evaluation process, structure the contracting strategy in ways that will focus Government and contractor efforts on meeting cost, schedule, and performance requirements. To achieve a successful award fee contracting approach, Offerors should consider if the solution is designed toward a net-centric architecture that is robust and insensitive to source variations such as vendor-specific implementations, updates, product obsolescence or requirement volatility. Offerors should also demonstrate practices for building solutions that are modular, loosely coupled, standard based, support the separation of interface from implementation, sustainable, upgradeable, vendor independent, agile, and reuse pre-existing or commonly used functions where appropriate.

Program Managers (PMs) can stress the importance of one factor over another by weighing what they believe to be the more important factor accordingly. Factor reuse into any criteria where there is an evaluation and score associated with the cost and schedules of deliverables deemed as proprietary to the Government. This could reside in factors such as: cost and schedule preservation, technical performance or risk management. Evaluate reuse and score high as a risk migration technique designed to reduce the risk associated with proprietary solutions.

Guidance

- Stipulate that evaluation criteria will include the extent to which an Offeror's proposed technical solution builds on reuse of common functionality. [G1785]
- Stipulate that evaluation criteria will include the extent to which an Offeror's proposed technical solution builds on well defined services. [G1786]

3.6 Post Award Contract Actions

There are occasions, as the DoD transitions to a net-centric environment, that the Government has already awarded a contract based on a solicitation that did not include the language detailing the guidance in NESI Part 6 in the original SOW. If the Government will procure additional increments, add an appendix which will detail NESI Part 6 guidance for the Statement of Work (SOW) and Contract Data Requirements List (CDRL). The CDRL contains detailed descriptions of the contract deliverables. The CDRL also specifies the format of the deliverables (electronic, media format, etc.) and the number of copies to produce when a printed document is required. Sample contract language supporting reusability follows:

- Contractors shall identify the data rights for products as a part of this proposal in Section K – Representations and Certifications.
- Contractors shall post Section K – Representations and Certifications of the solicitation to a Government-prescribed repository (e.g., NESI Collaboration Site; user access required).
- Contractors shall notify the Government in writing if there are any changes to the data rights specified in Section K of the RFP.
- Contractors shall use Government approved data rights labels for any deliverables that are classified as Unlimited and/or Government Purpose Rights.

- Contractors shall post all artifacts (i.e., components, source code, documentation, script files, IDE, makefiles, instructions, processes, tools, test procedures and results, etc.) associated with final deliverables to a Government-prescribed repository (e.g., NESI Collaboration Site; user access required).

Guidance

- Stipulate that the Offeror is to use NESI to assess net-centricity and interoperability. [G1787]
- Stipulate that the Offeror is to use Government approved data rights labels and markings for any deliverables that are identified as Unlimited or Government Purpose Rights. [G1788]

Guidance Details

G1784

Statement:	Include a statement in the solicitation for Offerors to identify and list data rights for all proposed products.
Rationale:	Reusing GOTS requires understanding all the data rights associated with each artifact involved with the solution. Section K of the proposal should specifically state the data rights for the deliverable artifacts such as Unlimited Rights, Government Purpose Rights, or specific vendor licensing requirements for COTS items.
Derived from:	
Justifies:	
Referenced by:	Section K: Representations, Certifications. and Other Statements of Offerors (Data Rights)
Acquisition Phase:	
Authorized By	
Evaluation Criteria:	**1.** ***Test:*** *Does the Offeror demonstrate that all deliverables will include data rights labels?* **Procedure:** Check Section K for a statement identifying and listing the data rights for all artifacts. **Examples:** Example data rights markings include markings for Unlimited Rights and Government Purpose Rights.

G1785

Statement:	Stipulate that evaluation criteria will include the extent to which an Offeror's proposed technical solution builds on reuse of common functionality.
Rationale:	The Government must stipulate what evaluation criteria will be used to evaluate proposed solutions. Having the Offeror specify the extent to which proposed solutions build on reuse of common functionality aids in the evaluation of proposals and aids in identification of common functionality.

Derived from:	
Justifies:	
Referenced by:	Section M: Evaluation Factors for Award
Acquisition Phase:	
Authorized By	
Evaluation Criteria:	**1. Test:** *Has the government stipulated that evaluation criteria will include the extent to which an Offeror's proposed technical solution builds on reuse of common functionality?* **Procedure:** Check Section M for a statement that states reuse of common functionality will be used as an evaluation criterion for proposals. **Examples:**

G1786

Statement:	Stipulate that evaluation criteria will include the extent to which an Offeror's proposed technical solution builds on well defined services.
Rationale:	The Government must stipulate what evaluation criteria will be used to evaluate proposed solutions. Having the Offeror specify the extent to which proposed solutions build on reuse of well defined services aids in the evaluation of proposals and further improves service reuse.
Derived from:	
Justifies:	
Referenced by:	Section M: Evaluation Factors for Award
Acquisition Phase:	
Authorized By	
Evaluation Criteria:	**1. Test:** *Has the government stipulated that evaluation criteria will include the extent to which an Offeror's proposed*

		technical solution builds on well defined services?
	Procedure:	Check Section M for a statement that states the extent to which the proposed solution builds on well defined services will be used as an evaluation criterion for proposals.
	Examples:	

G1787

Statement:	Stipulate that the Offeror is to use NESI to assess net-centricity and interoperability.		
Rationale:	NESI guidance and its associated checklists are useful tools (used by themselves or in conjunction with other tools) for assessing how a program is meeting its net-centric and interoperability objectives.		
Derived from:			
Justifies:			
Referenced by:	Section J: List of Attachments, Post Award Contract Actions		
Acquisition Phase:			
Authorized By			
Evaluation Criteria:	**1.**	**Test:**	*Has the Government stipulated that the Offeror is to use NESI to assess net-centricity and interoperability?*
		Procedure:	Identify statements in policy, RFPs, SOWs, or CDRLs that stipulate that the Offeror is to use NESI to assess net-centricity and interoperability?
		Examples:	PEO C4I uses the Technical Evaluation Checklist (http://nesipublic.spawar.navy.mil/checklist) as a means for Program Managers to assess how well their programs meet net-centric objectives.

G1788

Statement:	Stipulate that the Offeror is to use Government approved data rights labels and markings for all deliverables that are identified as Unlimited or Government Purpose Rights.
Rationale:	Reusing deliverables or components of deliverables requires a full understanding of the data rights associated with each artifact in the deliverable. Identified data rights for each artifact through the use of data right labels are important in order to protect the legal rights of both the contractor and government during component reuse.
Derived from:	
Justifies:	
Referenced by:	Section J: List of Attachments, Post Award Contract Actions
Acquisition Phase:	
Authorized By	
Evaluation Criteria:	**1. Test:** *Has the government stipulated that the Offeror is to use government approved data rights labels and markings for all deliverables that are identified as Unlimited or Government Purpose Rights.* **Procedure:** Identify statements in the RFP, SOW, or CDRLs which mandate the use of government approved data rights labels for any deliverables that are identified as Unlimited or Government Purpose Rights. **Examples:**

Best Practice Details

BP1789

Statement:	Include in the TRD specific requirements extracted from the NESI Implementation Document Set based on the net-centric capabilities and functions the Government needs as part of the acquisition.
Rationale:	The Technical Requirements Document provides Offerors with detailed information regarding what the proposal is requesting. Ask Offerors to comply with these technical and performance requirements as part of the competition. This information will be used as part of the award evaluation. The NESI Implementation Document Set is available at http://nesipublic.spawar.navy.mil.
Derived from:	
Justifies:	
Referenced by:	Section C: Description/Specifications/Work Statement
Acquisition Phase:	
Authorized By	
Evaluation Criteria:	**1. Test:** *Does the TRD contain requirements extracted from the NESI Implementation Document Set?* **Procedure:** Inspect the TRD looking for specific requirements based on NESI guidance. **Examples:**

BP1790

Statement:	Stipulate that the Offeror is to describe how the proposed technical solution reuses services from other systems or demonstrates composeability and extensibility by building from existing reusable components and/or services.
Rationale:	Reuse of existing components and services leads to reduced costs and promotes modularity and composeability. Reusable artifacts are common in

	large distributed networks. Future systems will be required to demonstrate composing new solutions from reusable components and services.
Derived from:	
Justifies:	
Referenced by:	Section L: Instructions, Conditions, and Notices to Offerors
Acquisition Phase:	
Authorized By	
Evaluation Criteria:	**1.** ***Test:*** *Does the Offeror demonstrate reuse of existing components or services?* **Procedure:** Identify in the proposal the components or services identified as being reused. **Examples:**

BP1791

Statement:	Stipulate that the Offeror is to describe how the proposed technical solution demonstrates software practices that support reuse.
Rationale:	Service-oriented architecture approaches will shift the development environment from large stovepipe waterfall approaches to incremental approaches supporting highly reusable components and services.
Derived from:	
Justifies:	
Referenced by:	Section L: Instructions, Conditions, and Notices to Offerors
Acquisition Phase:	
Authorized By	
Evaluation Criteria:	**1.** ***Test:*** *Does the Offeror describe how the proposed technical solution demonstrates software practices that support reuse?*

	Procedure:	Using NESI guidance, evaluate the Offeror's proposal and identify software development practices based on loose coupling, component based frameworks, N-tiered approach, separation of implementation from interface, and well defined services.
	Examples:	

BP1792

Statement:	Include a reference to *NESI Part 3: Migration Guidance* in the SOW Section 2–Applicable Documents.	
Rationale:	*NESI Part 3: Migration Guidance* defines incremental migration strategies tailored according to the ASD(NII)/DoD CIO Net-Centric Category and NESI Migration Level of a program, project or application. *NESI Part 3: Migration Guidance* is available at http://nesipublic.spawar.navy.mil/docs/part3. Add this reference in an Appendix to the Statement of Work (SOW) for an additional acquisition increment, if not already in the original SOW, with the stipulation to follow NESI Part 3 guidance for all refresh and new start development activities for transitioning and developing software solutions.	
Derived from:		
Justifies:		
Referenced by:	Section C: Description/Specifications/Work Statement	
Acquisition Phase:		
Authorized By		
Evaluation Criteria:	**1. Test:**	*Does the SOW Section 2–Applicable Documents contain a reference to NESI Part 3?*
	Procedure:	Check the SOW in Section 2–Applicable Documents and look for a reference to NESI Part 3.
	Examples:	

BP1793

Statement:	Include a reference to *NESI Part 4: Node Guidance* in the SOW Section 2–Applicable Documents.
Rationale:	*NESI Part 4: Node Guidance* provides system-engineering-level guidance for developing and implementing nodes. It also provides high-level guidance for how applications, services, data, and enterprise services interact in the context of a node. *NESI Part 4: Node Guidance* is available at http://nesipublic.spawar.navy.mil/docs/part4. Add this reference in an Appendix to the Statement of Work (SOW) for an additional acquisition increment, if not already in the original SOW, with the stipulation to follow NESI Part 4 guidance for all refresh and new start development activities for transitioning and developing software solutions.
Derived from:	
Justifies:	
Referenced by:	Section C: Description/Specifications/Work Statement
Acquisition Phase:	
Authorized By	
Evaluation Criteria:	**1. Test:** *Does the SOW Section 2–Applicable Documents contain a reference to NESI Part 4?* **Procedure:** Check the SOW in Section 2–Applicable Documents and look for a reference to NESI Part 4. **Examples:**

BP1794

Statement:	Include a reference to *NESI Part 5: Developer Guidance* in the SOW Section 2–Applicable Documents.
Rationale:	*NESI Part 5: Developer Guidance* provides chief engineers and software developers with detailed implementation guidance for applications, services, and data. This effort leverages current best practices from the software development community to enable the DoD to create net-centric, extensible,

	scalable enterprise applications. *NESI Part 5: Developer Guidance* is available at http://nesipublic.spawar.navy.mil/docs/part5. Add this reference in an Appendix to the Statement of Work (SOW) for an additional acquisition increment, if not already in the original SOW, the stipulation to follow NESI Part 3 and Part 5 guidance for all refresh and new start development activities for transitioning and developing software solutions.
Derived from:	
Justifies:	
Referenced by:	Section C: Description/Specifications/Work Statement
Acquisition Phase:	
Authorized By	
Evaluation Criteria:	**1. Test:** *Does the SOW Section 2–Applicable Documents contain a reference to NESI Part 5?* **Procedure:** Check the SOW in Section 2–Applicable Documents and look for a reference to NESI Part 5. **Examples:**

BP1795

Statement:	Include a reference in the SOW Section 2–Applicable Documents to the Technical for Evaluation Checklist measuring net-centric compliance.
Rationale:	Navy PEO C4I currently uses the Technical Evaluation Checklist as part of an assessment program for Program Managers to evaluate the degree to which their programs meet net-centric objectives. The checklist is available at http://nesipublic.spawar.navy.mil/checklist/tool. Add this reference in an Appendix to the Statement of Work (SOW) for an additional acquisition increment, if not already in the original SOW, the stipulation to Use the Technical Evaluation Checklist for all refresh and new start development activities for transitioning and developing software solutions.

Derived from:			
Justifies:			
Referenced by:	Section C: Description/Specifications/Work Statement		
Acquisition Phase:			
Authorized By			
Evaluation Criteria:	**1.**	**Test:**	*Does the SOW Section 2–Applicable Documents contain a reference to a technical evaluation checklist?*
		Procedure:	For Navy PEO programs, check the SOW Section 2–Applicable Documents for a reference to a technical evaluation checklist.
		Examples:	Navy PEO checklist example located at: http://nesipublic.spawar.navy.mil/checklist/tool.