

Attachment 13 to Section J

Cost Element Structure Data Dictionary (CEDD)

Revised: 10-29-04



1.0 Purpose

The purpose of the Cost Element Data Dictionary (CEDD) is to define the cost elements to be used by prime systems integrators in developing the life cycle cost estimates for ERA.

2.0 Cost Element Structure Data Dictionary

The following paragraphs document the basic organization and definitions of the cost element structure.

2.1 Investment

This major Cost Element (CE) includes all costs to the Government to implement Full Operational Capability (FOC). Costs are attributed to the ERA alternative from the time of program initiation through complete testing, implementation, and fielding necessary to meet FOC requirements.

2.1.1 Program Management Office – Investment (Government)

Not Applicable

2.1.2 System Development (Program Management and System Engineering)

Includes all activities associated with the Program Management and System Engineering effort toward the system development of the ERA program performed by the ERA development contractor.

2.1.2.1 Program Management

All Program Management activities to encompass Program Management, Program Control, Cost and Schedule Management, Quality Assurance, Risk Management, and Subcontractor Management.

2.1.2.2 System Engineering

Includes personnel developing documentation related to the analysis, development, definition, and design pertaining to ERA system requirements as well as an assessment of the high-level architecture. Also includes effort to develop documentation for system specifications, input/output processes, system security considerations, logistics analysis, and configuration management. This element also includes the cost for system engineering tools.

2.1.3 Production Commercial-Off-The-Shelf (COTS) Software

Software that can be purchased “off-the-shelf” that enables the ERA system to meet required functionality. Costs include license fees per user, enterprise license fees, and any upfront fees required by the vendor.

2.1.4 Software Development

Software Development activities such as developing lines of code associated with the design and development of software for such things as interfaces, interoperability, etc. in addition to or to address gaps with COTS Software.



2.1.5 Production Hardware

All costs and activities associated with detailed design, fabrication, procurement, assembly, and checkout of all Hardware Configuration Items (HWCIs).

2.1.6 Hardware/Software Integration, Assembly, Test & Checkout

All integration activities to perform site integration, assembly, and checkout of hardware and software for the ERA system.

2.1.7 Training

All activities associated with designing, developing, and delivering training services, aids, and materials used to train ERA system end-users, NARA engineering personnel, and all others who will need to be trained on the use of some component of the ERA system.

2.1.8 Facilities & Physical Infrastructure

Includes all activities associated with the design and development of facilities and physical infrastructure, lease, operating, construction, telecommunications and networking costs.

2.1.8.1 Facilities & Physical Infrastructure Design & Development

Includes the cost of all activities associated with the design and development of facilities and physical infrastructure.

2.1.8.2 Production, System, and Operations Support Facilities

All costs for the lease, additional construction if needed, and utilities such as lighting, power, ventilation, water, air conditioning, cabling, etc., at each site where an instance of ERA will be operational.

2.1.8.3 Communications

Communications equipment purchased to support access, data transfer, and any other required communications related activities of the ERA system at each of the ERA sites.

2.1.9 Test & Evaluation

All testing and evaluation activities necessary to verify and validate that products meet specifications, satisfy requirements, and are operationally suitable and effective in the production environment.

2.1.9.1 System Integration Testing

Ensures that all engineering design and development activities required for System Integration Testing are complete, that the system will meet specifications, and verifies that the new system is installed and operating properly. Development test and evaluation includes contractor and in-house activities associated with this effort, e.g., software validation and verification. All support activities (e.g., technical assistance, maintenance, labor, material, support elements, testing spares, etc.) required during this phase of testing are also included.



2.1.9.2 System Acceptance Testing

Ensures that all engineering design and development activities required for System Acceptance Testing are complete, that the system will meet specifications, and verifies that the new system is installed and operating properly. Development test and evaluation includes contractor and in-house activities associated with this effort, e.g., software validation and verification. All support activities (e.g., technical assistance, maintenance, labor, material, support elements and testing spares, etc.) required during this phase of testing are also included.

2.1.9.3 Test Bed Environment

All activities associated with development and construction of those special test facilities, test simulators, Test Beds and models required for performance of the operational tests necessary for offline software development.

2.1.10 Logistics, Equipment, and Spares Support

All activities associated with the acquisition of logistics support, support equipment, and initial spares and repair parts to support and maintain parts of the ERA system through the complete delivery of the solution.

2.1.10.1 Logistics Support

All activities and analysis associated with Logistics Support and Maintenance (LSM) to provide corrective and preventative maintenance of the ERA System.

2.1.10.2 Support Equipment

All activities associated with acquiring equipment used for initial support of the ERA system.

2.1.10.3 Spares and Repair Parts

All activities associated with the acquisition, provisioning, packaging, handling, storage, and transportation of deliverable spare components, assemblies, and subassemblies used for initial replacement purposes in the system hardware. Includes the repairable spares and repair parts required as initial stock to support and maintain newly fielded systems or subsystems during the initial phase of service at all levels of maintenance and support.

2.2 System Operations and Support (O&S)

Includes the operations and support costs for ERA system increments after they are operational. Operations and Support (O&S) is the maintenance of all costs identified in the sub-sections within Section 2.1.

2.2.1 Program Management Office – O&S (Government)

Not Applicable

2.2.2 System Operations and Support PM and SE

Includes all Operations and Support Program Management and System Engineering efforts after ERA has achieved Full Operational Capability.



2.2.2.1 O&S Program Management (PM)

All Program Management activities conducted during the ERA Operations and Support period to encompass Program Control, Cost and Schedule management, Quality Assurance, Risk Management, Logistics Management and Subcontractor Management.

2.2.2.2 O&S System Engineering (SE)

All System Engineering activities conducted during the Operations and Support period. Includes personnel developing documentation related to the analysis, development, definition, and design pertaining to ERA system requirements as well as an assessment of the high-level architecture. Also includes effort to develop documentation for system specifications, input/output processes, system security considerations, logistics and configuration management.

2.2.3 Production Hardware O&S

This CE includes costs incurred in providing maintenance and repair for ERA hardware regardless of who has ownership of the equipment or responsibility for repair. These costs include but are not limited to:

- Overhaul expenses,
- Programmed maintenance expense,
- Component repair,
- Minor facilities modifications and upkeep,
- Support equipment repair, and
- Administrative support required for maintenance operations.

All equipment covered in CE 2.1.5 is included.

2.2.3.1 Hardware

This element includes all new purchases for ERA hardware after FOC and is the continuation of all recurring hardware costs identified in CE 2.1.5 (including Technology Refresh).

2.2.3.2 Hardware Maintenance

This element includes maintenance costs for hardware purchases covered in CE 2.1.5, pre-FOC, and in CE 2.2.3.1, post-FOC. Also includes purchases for spares and repair parts, and all elements identified in CE 2.1.10.3, made after the ERA system is FOC.

2.2.4 Production Software Maintenance

All costs for the software maintenance of the ERA system. Includes the costs of software license upgrade fees negotiated with COTS software vendors that were first identified in CE 2.1.3. Also includes the costs of continuing software development required after FOC to support the ERA system.

2.2.4.1 Software COTS Upgrade / Maintenance

All fees required by COTS software vendors for upgrades and maintenance of the purchases identified in CE 2.1.3.



2.2.4.2 Software Development Maintenance

Costs of all new software development required, or maintenance to the software development identified in CE 2.1.4.

2.2.5 Unit/Site Operations

This CE includes operational personnel costs, as well as, fuel and power requirements, training, communications, facilities maintenance, etc.

2.2.5.1 Systems Operations Personnel

Contains all costs associated with personnel required to provide routine maintenance and operations support to the ERA system at various sites where ERA is distributed.

2.2.5.2 Facilities Lease and Maintenance

Contains all costs associated with facilities operations that can be directly attributed to ERA, whether incurred by NARA or by contractors. Facility renovation costs are included in this CE. This is a continuation of costs identified in CE 2.1.8.

2.2.5.3 Communications

Contains all costs for communications lines to and from several facilities that house an instance of the ERA system during operations.

2.2.5.3.1 Non-Recurring Communications

Contains all Post-FOC non-recurring costs for communications lines to and from several facilities that house an instance of the ERA system during operations.

2.2.5.3.2 Recurring Communications

Contains all recurring costs for communications lines to and from several facilities that house an instance of the ERA system during operations.

2.2.5.4 Recurring Training

Contains costs incurred in maintaining the appropriate training services, devices, accessories, aids, and equipment for initial instruction of all functional area mission and systems operation personnel.

2.3 Status Quo Phase-out Costs

Not Applicable

2.4 Functional Area Mission (FAM)

Functional Area Mission (FAM) costs are intended to identify additions to NARA staff that will be needed to accomplish NARA objectives as users of ERA.



2.4.1 Personnel

This CE consists of additional NARA personnel who use the ERA system to perform their daily jobs. NARA is responsible for ingesting, preserving, and making accessible an increasing number of electronic records. To meet this responsibility, NARA will be required to either become more productive with an ERA system or increase the number of personnel to handle the increasing volume of electronic records or some combination thereof.

2.4.1.1 NARA Personnel

CE 2.4.1.1 aggregates the costs associated with engaging in the electronic records lifecycle management processes related to the incoming electronic records.

Pay scales used for archival staff should be the OPM 2003 General Schedule (Base), GS-13, Step 5. The exact annual rate per staff member is \$69,419. The factor, or burdened rate, to be used for benefits/expenses is 32.85%. This is to be calculated above the \$69,419. The total cost per archival staff member (salary + burdened rate) equals \$92,223.

2.4.1.2 Personnel Support Costs

CE 2.4.1.2 includes office equipment, furniture, and expenses to accommodate the personnel identified in CE 2.4.1.1 due to the incoming electronic records.