

DATE: July 5, 2012
TO: DIRECTIVES POINTS OF CONTACT
FROM: KEVIN T. HAGERTY, DIRECTOR
OFFICE OF INFORMATION RESOURCES

SUBJECT: Draft DOE O 415.1, *Information Technology Project Management*

The draft directive has been posted on RevCom for review and comment. The Order provides program and project management direction for the acquisition and management of IT projects, investments, and initiatives.

INSTRUCTIONS

Headquarters DPCs have until **August 6, 2012**, to submit to the OPI consolidated comments received from subject matter experts and/or field DPCs using the Department's RevCom system (<http://www.revcom.doe.gov>).

HQ DPCs

- may set separate deadlines for field offices using the RevCom "Version" link.
- must obtain approval from their secretarial officers or designees before submitting official organization comments.

Extensions to the commenting period will be granted only with the permission of the office of primary interest and only for the requesting organization.

Comments:

Please identify comments as "Major" or "Suggested." Major comments should be identified as addressing issues serious enough to preclude or significantly hamper the Department's ability to—

- accomplish policy objectives and missions,
- comply with applicable laws, rules, and regulations, or
- fulfill contractual obligations and formal commitments.

The first issue for consideration is whether this directive should apply to your organization. If it should not apply, enter that information with justification in the "Overall Comments."

OPI: The office of primary interest must respond to all comments submitted by Headquarters DPCs.

Please address questions on the content of the draft directive to Denise Hill (IM-40) at 202-586-5848; Denise.Hill@hq.doe.gov.

Questions on the directives program should be directed to Camille Beben (MA-90) at 202-586-4014 camille.beben@hq.doe.gov.

JUNE 22 VERSION K

ORDER

DRAFT
DOE O 415.1

Approved: XX-XX-20XX

INFORMATION TECHNOLOGY PROJECT MANAGEMENT



U.S. DEPARTMENT OF ENERGY

INFORMATION TECHNOLOGY PROJECT MANAGEMENT

1. **PURPOSE.** To provide the Department of Energy (DOE) Elements, including the National Nuclear Security Administration (NNSA), with Information Technology (IT) project management guidance for the acquisition and management of IT projects and initiatives. Common IT project management requirements will ensure that IT projects are delivered within the original performance baseline, cost, and schedule and fully meet mission performance, safety, safeguards, and security standards in alignment with section 5123 of Public Law 104-106, *Performance and Results Based Management*.
 - a. To responsibly manage IT projects which will improve the efficiency and effectiveness of DOE operations and, as appropriate, the delivery of services to the public;
 - b. To establish communications within the Office of the Chief Information Officer (OCIO) and across all DOE Elements for DOE Enterprise-wide IT projects;
 - c. To align decision making within the Office of the Chief Information Officer (OCIO) and across all DOE Elements for DOE Enterprise –wide IT projects; and
 - d. To reduce duplication of effort and the Total Cost of Ownership for DOE IT projects;
2. **CANCELLATION.** DOE Guide (G) 2001 -1 to 200.1-1 Chapter 10, *Software Engineering Methodology Guide*.
3. **DEPARTMENTAL APPLICABILITY.**
 - a. **Scope.** Except for the equivalencies and exemptions in section 3(d), the scope of IT projects covered by this Order (O) includes projects with:
 - (1) A Total Project Cost (TPC) equal to or more than \$25 Million (M);
 - (2) With an impact on more than one DOE Element as determined by the Information Management Governance Council Representatives (IMGC-R); or
 - (3) With a TPC between \$5M and \$25M, the designated IMGC Representative must demonstrate to the IMGC-R, prior to project initiation, standardized project management practices that include criteria on formal gate reviews, capital planning and project performance reporting processes consisting of variances on costs and schedule, and periodic quality assurance evaluations. All reports may be presented to the IMGC-R, as requested. The requirements within this Order specifically include:

- (a) Development, Modernization, and Enhancements (DME) IT systems and software development with potential impact on multiple DOE Elements;
 - (b) Large scale Steady State (SS) cost;
 - (c) High priority projects; and
 - (d) New Commercial off the Shelf (COTS) product acquisitions, which may impact more than one DOE Element or adversely impact DOE Enterprise systems.
- b. Exclusion. IT projects that are covered by or are a component under a Capital Asset Project covered by DOE O 413.3B, *Program and Project Management for the Acquisition of Capital Assets*, are excluded from this Order 415.1. They are covered under DOE O 413.3B.
- c. IT Project Management. All IT projects require formal IT Project Management. IT projects that do not meet the scope of this order are required to be managed using a standardized approach as specified and approved by the sponsoring/funding Organization.
- d. Equivalencies/Exemptions for DOE O 415.1. Equivalencies and exemptions to this Order are processed in accordance with DOE O 251.1C, *Departmental Directives Program*. The following equivalencies and exemptions are included in this Order.
- (1) Equivalency. In accordance with the responsibilities and authorities assigned by Executive DOE O 12344, *Naval Nuclear Propulsion Program*, codified at 50 United States Code (USC) sections 2406 and 2511 and to ensure consistency through the joint Navy/DOE Naval Nuclear Propulsion Program (NNPP), the Deputy Administrator for Naval Reactors will implement and oversee requirements and practices pertaining to this Order for activities under the Director's cognizance, as deemed appropriate.
 - (2) Equivalency. Consistent with Secretarial Delegation DOE O 00-033.00B, *To the Administrator and Chief Executive Office (CEO) of Bonneville Power Administration (BPA)*, this Order does not apply to BPA.
 - (3) Exemption. This Order does not apply to Financial Assistance Awards (FAA) (grants and cooperative agreements) covered under 10 Code of Federal Regulations (CFR) Part 600, *Financial Assistance Rules*.
 - (4) Exemption. Office of Science User Facilities, which is a Federally sponsored research facility available for external use to advance scientific or technical knowledge under the conditions defined in the Office of Science, *Definition of a User Facility*, dated, January 6, 2012.

- (5) Equivalency. DOE Elements that meet all of the following criteria may demonstrate alignment with specific requirements of this Order. The intent of this equivalency is to delegate authority to the DOE Elements with the following:
- (a) Established IT Project Management Offices (IT PMO) with documented, and approved project management requirements, processes, and procedures;
 - (b) Established IT governance policies and procedures that are consistently used throughout the DOE Element with demonstrated success; and
 - (c) Demonstrated record of completing IT projects where completed projects;
 - 1. Do not exceed a cost variance of more than +/- 10% of the original cost baseline established for the original approved scope of work approved as part of the Detailed Design Review (DDR);
 - 2. Do not exceed a project schedule variance of more than +/- 10% of the original schedule baseline established for the original approved scope of work as part of the Detailed Design Review (DDR); and
 - 3. Meets the functionality requirements documented in the original approved scope of work as part of the Detailed Design Review (DDR)
 - (d) DOE Elements having this equivalency are still responsible for reporting and coordinating projects that impact multiple DOE Elements.
- (6) DOE Elements that are eligible for the equivalency must take affirmative action and obtain confirmation of the equivalency with an action memorandum from the OCIO or designated authority.
- (7) The Administrator, NNSA, will ensure that NNSA employees and contractors comply with their respective responsibilities under this Order. Nothing in this Order will be construed to interfere with the NNSA Administrator's authority under section 3212(d) of Public Law (P.L.) 106-65, *National Defense Authorization Act for Fiscal Year 2000*, to establish Administration specific policies, unless disapproved by the Secretary.
- (8) For DOE contractors, except for the equivalencies and exemptions in 3(d)4 and as stated above, the Contractor Requirements Document (CRD),

see Attachment 1 sets forth requirements of this Order that will apply to contracts that include the CRD. The CRD must be included in IT program/project management and services contracts.

- (9) As the laws, regulations, and the DOE Directive clause of IT project management and services contracts state, regardless of the performer of the work, Site/Facility management contractors with the CRD in Attachment 1 incorporated into their contract are responsible for compliance with the requirements of the CRD.

4. REQUIREMENTS.

- a. Successful management of IT projects requires that application of knowledge, skills, tools, techniques, and resources to ensure that the IT system or asset meets or exceeds the stakeholder needs and expectations. To deliver IT investments, assets, and projects on the original performance baseline, including within budget, on schedule, and fully capable of meeting mission performance, safety, safeguards, and security standards and to ensure the implementation of this Order; the following requirements must be met by each DOE/NNSA Departmental Element responsible for IT projects. The development of a project management plan that includes:
- (1) An acquisition plan documenting:
 - (a) Alternative analysis for the project
 - (b) Budget and resources
 - (c) Key decision points
 - (2) A requirements document approved by the project manager and the customer which outlines functional, operational, and acceptance criteria
 - (3) A description of the project management tools and reports that will be used during the project
 - (4) A schedule documenting design, development, testing, acceptance, and production phases
 - (5) A lifecycle management plan
 - (6) A Configuration management and change control plan
 - (7) A Cyber Security plan
- b. The implementation of project management methodologies, tools, and techniques. This approach must fully implement the provisions of DOE Secretary Delegation O No. 00-031.00A, *To the Chief Information Officer*, which delegates to the Chief

Information Officer (CIO) the responsibility of oversight and reporting on IT projects across the DOE Enterprise that:

- (1) Establish the project scope, schedule, and budget;
 - (2) Hold the Project Manager (PM) accountable for delivering the project within cost, scope, and schedule;
 - (3) Align the IT investment to the Departmental and/or Organizational Strategic Plan and objectives;
 - (4) Establish clearly defined metrics and business value based objectives;
 - (5) Are consistent with the appropriate statutory, regulatory, Office of Management and Budget (OMB), and Departmental requirements;
 - (6) Ensure the products or services are produced according to requirements and specifications, on time, and within budget;
 - (7) Ensure reporting to the Acquisition Executive (AE), IT Project Manager (IT PM), and DOE Element, as appropriate, on project plans and status;
 - (8) Strengthen line management accountability for successful IT project management results;
 - (9) Establish a DOE Enterprise culture that recognizes the need to manage risk, control cost and schedules, and invest in DOE Enterprise-wide projects with the goal of meeting DOE mission schedules, and invest in DOE Enterprise-wide IT projects with the goal of meeting DOE mission objectives on budget, on schedule, and with the functionality required; and
 - (10) Tailor projects, as appropriate.
- c. Establish an IT asset / project inventory.
- d. Requirements for Implementation. Implementation of the requirements contained in this Order must be documented in an Implementation Plan within 6 months of the issuance of this Order. The Implementation Plan must ensure that this Order is fully implemented within 1 year. IT projects initiated prior to the issuance of this Order may continue to adhere to the management and reporting requirements established for the project and the IT PMs of these projects must coordinate with the DOE Corporate IT PMO on reporting and monitoring.

- 5. RESPONSIBILITIES. See *Responsibilities*, Appendix A.
- 6. REFERENCES. See *References*, Attachment 3.
 - a. Additional References:
 - (1) *Contractor Requirements Document*, Attachment 1
 - (2) *Acronyms*, Attachment 2
 - (3) *Glossary of Terms*, Attachment 4
- 7. CONTACT. For assistance, contact the Office of the Chief Information Officer, 202-586-0166.

BY ORDER OF THE SECRETARY OF ENERGY:

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here after
approval

NAME
Deputy Secretary

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APPENDIX A
RESPONSIBILITIES

1. NATIONAL NUCLEAR SECURITY ADMINISTRATION (NNSA).

- a. For all actions on NNSA Information Technology (IT) programs, projects, and investments, the Administrator, NNSA, maintains responsibility and has the authority to delegate responsibilities and authority for implementing the relevant requirements and responsibilities of this Order (O). This includes, but is not limited to, designating Program Managers (PM), establishing nuclear security Enterprise-wide IT related metrics, delegating decision making authority relating to NNSA IT project execution, providing oversight on NNSA IT projects, and implementing corrective actions.

2. DOE CHIEF INFORMATION OFFICER.

- a. Serve as the Department of Energy (DOE) Senior Manager responsible and accountable for implementing the provisions of the Delegation Order in a collaborative manner that:
 - (1) Reinforces and enhances guidance on formalized IT project management to meet the DOE expectation that IT projects are effectively managed, meeting business needs and providing transparency through reporting in a timely manner; and
 - (2) Acknowledges the autonomy and authority of DOE Elements and fosters a core competency for supporting DOE Enterprise-wide IT initiatives.
- b. Champion DOE IT project planning, coordination, and cooperation in an effort to improve the efficiency and effectiveness of IT across all DOE Elements.
- c. Oversee the development and implementation of IT project policies, standards, and guidelines that align with the DOE Mission, as well as legislative and regulatory policies and procedures.
- d. Identify special interest projects and ensure that appropriate Senior Executive Level reviews are provided for those projects.
- e. Establish and maintain a DOE-wide process for certifying IT PMs.
- f. Affirm exemptions as defined in DOE O 415.1;
- g. Promote Enterprise Architecture (EA) as defined in DOE O 200.1A, *Information Technology Management*.
- g. Promote Information Technology Strategic Planning.

- h. Identify critical DOE IT investments and ensure that they are tracked in the Strategic Plan.
 - (1) Review the results of internal and external compliance assessments and provide transparency across the Agency;
 - (2) Ensure that IT assets are acquired and information resources are managed consistent with statutory, Office of Management and Budget (OMB), and Departmental requirements and priorities; and
 - (3) Ensure the development and management of an optimal IT portfolio that best supports Programmatic needs.
- i. Promote Capital Planning and Investment Control (CPIC) as defined in DOE O 200.1A.
 - (1) Ensure the integration and alignment of the CPIC process and tools with IT project management, EA, and other management processes; and
 - (2) Provide a means for Senior Management to monitor IT investments in terms of cost, schedule, and requirements.

3. DOE CORPORATE IT PROJECT MANAGEMENT OFFICE (PMO).

- a. Support the development, implementation, and maintenance of policies, templates, and procedures necessary to implement this Order.
 - (1) Collect, analyze, and disseminate lessons learned and best practices; and
 - (2) Provide assistance and guidance to DOE line project management organizations managing IT projects covered by this Order.
 - (3) Ensure coordination and collaboration within the Office of the Chief Information Officer (OCIO) Organization, including Capital Planning, EA, Cybersecurity, and Energy IT Services
 - (4) Implement processes to consolidate and report on IT project status.
- b. Ensure coordination and collaboration with DOE Elements on IT project management.
- c. Support an ongoing dialogue with project management functions in each DOE Element to capture and share lessons learned.

4. DOE UNDER SECRETARIES, NNSA ADMINISTRATOR/HEADS OF FIELD ELEMENTS.

- a. Maintain stewardship of Federal IT resources and ensure they are used efficiently and effectively to achieve intended program results.

- 1) Ensure sound application of IT Project Management practices for planning, management, budgeting, execution review, and reporting that demonstrates that projects are effectively managed.
- 2) Ensure projects have established and monitored performance measures that align with the DOE and Program mission.
- b. Take systematic and proactive measures to establish cost-effective and appropriate internal controls.
 - 1) Ensure that all IT PMs have the appropriate qualifications required based on the size and complexity of the project to manage successful completion of the project.
- c. Ensure IT Organizations within your control are properly informed of this Order and identify and report on IT projects governed by this Order, as required.
- d. Ensure Program Offices establish additional process-specific quality requirements to be implemented under a Quality Assurance Program (QAP) for the control of suspect/counterfeit items (S/CIs), and nuclear-safety software, as defined in DOE O 414.1D.
- e. Notify Contracting Officers of contracts affected by the requirements of this order.

5. PROGRAM MANAGERS AND HEADS OF FIELD ORGANIZATIONS.

- a. Direct initial project planning and execution roles for projects assigned by Senior Management.
- b. Establish the initial Integrated Project Team (IPT) in advance of the designation of an IT PM, when required.
- c. Oversee development of project definition, technical scope, and budget to support mission need.
- d. Assign an IT PM, as appropriate, and PMs with the training, experience, and skills necessary to meet the requirements of the project objectives, budget, and schedule.
- e. Oversee the project line management organization, and ensure the line project teams have the necessary experience, expertise, and training in IT Life Cycle Management (LCM), including budget and schedule performance management.
- f. Develop project performance measures, and monitor and evaluate project performance throughout the project ensuring compliance with DOE standards, security requirements, and other mandates.

- g. Report the cost, schedule, and performance on a monthly basis for all IT projects governed by this Order to the OCIO Corporate IT PMO.
 - (1) Steady State (SS) performance is reported through the CPIC process.
- h. Identify and correct all reportable problems including cost, schedule, and functionality requirements in a timely and effective manner.
- i. Ensure Site/Facility management, support services, and systems development contractors are responsible for flowing down the requirements of the Contractor Requirements Document (CRD) to subcontractors at any tier, to the extent necessary, to ensure IT program/project management and services contractors' compliance with the requirements.
- j. Manage the tailoring of IT investments.

6. CONTRACTING OFFICER (CO).

- a. Once notified, COs are responsible for incorporating this Order into the affected contracts via the laws, regulations, and DOE Directives clause of the contracts. Requirements identified as solely a Federal function will not be incorporated into contracts.

7. DOE CHIEF ARCHITECT (SEE DOE O 200.1A).

- a. Identify opportunities for improving the integration of EA and CPIC processes to maturity and enhance IT project management.

8. CHIEF HEALTH, SAFETY AND SECURITY OFFICER.

- a. Refer to DOE O 414.1D Vol. 7, *Quality Assurance*, for applicability, as appropriate.

9. ACQUISITION EXECUTIVE (AE).

- a. Each designated AE is guided by the specific limits of their delegated authority (see DOE/NNSA Senior Procurement Executive for contract award and modification execution authority). There can only be one designated AE per project.
 - (1) Monitor the effectiveness of IT PMs and their support staff;
 - (2) Approve project changes in compliance with the appropriately defined change control levels and funding profile changes;
 - (3) Conduct quarterly project reviews (QPRs); and

- (4) Explicitly address integration of safety into design and construction for Hazard Category 1, 2, and 3 nuclear facilities as a key consideration in the QPRs and approval of project Stage Gates.

ATTACHMENT 1

CONTRACTOR REQUIREMENTS DOCUMENT

DOE ORDER (O) 415.1, INFORMATION TECHNOLOGY PROJECT MANAGEMENT

1. THE CONTRACTOR REQUIREMENTS DOCUMENT (CRD).
 - a. This CRD establishes the requirements for the Department of Energy (DOE) Information Technology (IT) contractors with access to DOE information systems. Contractors must comply with the requirements listed in DOE Order 415.1, Information Technology Project Management as requirements of this CRD.
 - b. Regardless of the performer of the work, the contractor is responsible for complying with and flowing down the appropriate requirements of this CRD to subcontractors at any tier, to the extent necessary, to ensure the contractors' compliance with the requirements. That is, the contractor will ensure that it and its subcontractors cost effectively comply with the requirements of this CRD and incur only those costs that are reasonable and would be incurred by a prudent person in the conduct of a competitive business.
 - c. The contractor, using a formal IT Project Management process with a graded approach based on Best Business Practices, must develop a project management approach for IT investments that:
 - (1) Foster IT investments that support DOE program and mission goals;
 - (2) Describe the management methods, organization, control systems, and documentation for projects; and
 - (3) Monitor and control projects through project management practices.
 - d. For Federally directed IT investments with a Total Project Cost (TPC) of \$25 Million or more, the contractor must follow the appropriate program direction for project management (also see Appendix A, 6.a.).

ATTACHMENT 2

ACRONYMS

1. **ACRONYMS.** The acronyms listed in the following table are for terms used in the Department of Energy (DOE) Order (O) 415.1., *Information Technology Project Management*, including the appendix and the attachments.

| Acronym | Definition |
|---------------|---|
| AE | Acquisition Executive |
| BPA | Bonneville Power Administration |
| CCA | Clinger-Cohen Act |
| CEO | Chief Executive Officer |
| CFR | Code of Federal Regulations |
| CIO | Chief Information Officer |
| CO | Contracting Officer |
| COTS | Commercial off the Shelf |
| CPIC | Capital Planning Investment Control |
| CRD | Contractor Requirements Document |
| DDR | Detailed Design Review |
| DME | Development, Modernization, and Enhancement |
| DO | Delegating Official |
| DOE | Department of Energy |
| EA | Enterprise Architecture |
| FAA | Financial Assistance Awards |
| FASA | Federal Acquisition Streamlining Act |
| FISMA | Federal Information Security Management Act |
| FTE | Full Time Employee |
| G | Guide |
| GAO | Government Accountability Office |
| GISRA | Government Information Security Reform Act |
| GPRA | Government Performance and Results Act |
| HQ | Headquarters |
| IMGC-R | Information Management Governance Council Representatives |
| IPT | Integrated Project Team |
| IT | Information Technology |

| Acronym | Definition |
|------------------|--|
| IT PM | IT Project Manager |
| IT PMO | IT Project Management Offices |
| LMC | Life Cycle Management |
| M | Million |
| M&O's | Management and Operations |
| NNPP | Naval Nuclear Propulsion Program |
| NNSA | National Nuclear Security Administration |
| O | Order |
| OCIO | Office of the Associate Administrator for Information Management and Chief Information Officer |
| OMB | Office of Management and Budget |
| P.L. | Public Law |
| PM | Project Manager |
| PMO | Project Management Offices |
| PMP | Project Management Plan |
| QAP | Quality Assurance Program |
| QPR | Quarterly Project Review |
| SS | Steady State |
| TCO | Total Cost of Ownership |
| TPC | Total Project Cost |
| USC | United States Code |

ATTACHMENT 3

REFERENCES

1. REFERENCES. This attachment provides information and/or requirements associated with the Department of Energy (DOE) Order (O) 415.1 as well as information and/or requirements applicable to contracts in which the associated Contractor Requirements Document (CRD) (DOE O 415.1, *Information Technology Project Management*, Attachment 1) is inserted.
 - a. DOE, *Secretary Delegation Order No. 00-031.00A*, dated June 7, 2007.
 - b. DOE CIO Memorandum, *Enterprise Architecture Guidance*, dated January 9, 2007.
 - c. DOE O 200.1A, *Information technology Management* dated December 23, 2008.
 - d. DOE G 413.3-2, *Quality Assurance Guide for Project Management*, dated June 27, 2008.
 - e. DOE O 205.1B, *Department of Energy Cybersecurity Management Program*, dated May 16, 2011.
 - f. DOE O 243.1A, *Records Management Program*, dated November 7, 2011.
 - g. DOE O 413.1B, *Internal Control Program*, dated October 28, 2008.
 - h. DOE O 413.3B, *Program and Project Management for the Acquisition of Capital Assets*, dated November 29, 2010.
 - i. DOE O 414.1D, *Quality Assurance*, dated April 25, 2011.
 - j. DOE G 413.3-2, *Quality Assurance Guide for Project Management*, dated June 27, 2008.
 - k. DOE G 413.10-A, *Integrated Project Team Guide for Formation and Implementation*, dated February 3, 2012.
 - l. Executive Order 13011, *Federal Information Technology, FR 61-140*, dated July 19, 1996.
 - m. Government Accountability Office (GAO) Report – GAO-11-826, *OMB Needs to Improve Its Guidance on IT Investments*, dated September 29, 2011.
 - n. Office of Science, *Definition of a User Facility* Memorandum, dated January 6, 2012.
 - o. OMB Circular A-11, *Preparation, Submission and Execution of the Budget*, dated August 18, 2011.
 - p. OMB Circular A-109, *Major Systems Acquisitions*, dated April 5, 1976.

- q. OMB Circular A-123, *Management Accountability and Control*, dated December 21, 2004.
- r. OMB Circular A-127, *Financial Management Systems*, dated January 9, 2009.
- s. OMB Circular A-130, *Management of Federal Information Resources*, dated November 28, 2000.
- t. OMB Memorandum M-00-07, *Incorporating and Funding Security in Information Systems Investments*, dated February 28, 2000.
- u. OMB Memorandum M-11-29, *Chief Information Officer Authorities*, dated August 8, 2011.
- v. OMB Memorandum M-97-02, *Funding Information Systems Investments*, dated October 25, 1996.
- w. *The Clinger-Cohen Act of 1996, (CCA), (Public Law 104-106, Division E)*, dated February 10, 1996.
- x. *The E-Government Act of 2002, (Public Law 107-347)*, dated December 17 2002.
- y. *The Federal Acquisition Streamlining Act of 1994, Title V (FASA V)*, dated October 13, 1994.
- z. *The Federal Information Security Management Act (FISMA) of 2002*, dated October 24, 2002.
- aa. *The Government Information Security Reform Act (GISRA - 2000)*, dated October 30, 2000.
- bb. *The Government Paperwork Elimination Act of 1998, (Public Law 105-277, Title XVII)*, dated October 21, 1998.
- cc. *The Government Performance and Results Act of 1993 (GPRA) (Public Law 103-62)*, dated August 3, 1993. *The Paperwork Reduction Act of 1995, (Public Law 104-13)*, dated May 22, 1995.
- dd. *The President's Management Agenda*, Office of Management and Budget, Fiscal Year 2002, dated January 29, 2001.
- ee. *25 Point Implementation Plan to Reform Federal Information Technology Management*, U.S. Chief Information Officer, dated December 9, 2010.

ATTACHMENT 4

GLOSSARY OF TERMS

1. GLOSSARY OF TERMS. The Glossary of Terms listed in the following table provides definitions to the terms used in The Department of Energy (DOE) Order (O) 415.1., *Information Technology Project Management*.

| Term | Definition |
|---|--|
| Acquisition Executive (AE) | From DOE O 413B: The individual designated by the Secretary of Energy to integrate and unify the management system for a program portfolio of projects and implement prescribed policies and practices. |
| Acquisition Strategy (AS) | From DOE O 413B: A high-level business and technical-management approach designed to achieve project objectives within specified resource constraints with recognition of key project risks and the strategies identified to handle those risks. It is the framework for planning, organizing, staffing, controlling, and leading a project. It provides a master schedule for activities essential for project success and for formulating functional strategies and plans. |
| Baseline | From DOE O 413: A quantitative definition of cost, schedule, and technical performance that serves as a base or standard for measurement and control during the performance of an effort; the established plan against which the status of resources and the effort of the overall program, field program(s), project(s), task(s), or subtask(s) are measured, assessed, and controlled. Once established, baselines are subject to change control discipline. |
| Business Value | The most important factor is the alignment between IT and business processes, organization structure, and strategy. At the highest levels, this alignment is achieved through proper integration of EA, business architecture, process design, organization design, and performance metrics. |
| Capital Planning and Investment Control (CPIC) | From DOE O 200.1A: A systematic approach to managing the risk and returns of IT investments for a given mission. The CPIC process is an integrated, structured methodology to managing IT investments, which ensure that IT investments align with the overall Strategic Plan and mission in support of business needs while minimizing risks and maximizing returns throughout the investment’s life cycle. CPIC uses a systematic selection, control, and continual-evaluation process to ensure that an investment supports the overall mission and business needs. |
| Chief Information Officer (CIO) | The individual responsible for overseeing the IT investment portfolio. |

| Term | Definition |
|---|---|
| Commercial Off-the-Shelf (COTS) | A product available in the commercial market place. COTS products are sold to the general public in the course of normal commercial business operations at a price based on established catalog or market prices (Federal Acquisition Regulations). COTS products are delivered with pre-established functionality, although some degree of customization is possible. |
| Contract | A contract is a mutually binding agreement that obligates the seller to provide the specified product and obligates the buyer to pay for it. |
| Contracting Officer (CO) | The CO has the authority to enter into, administer, and/or terminate contracts and make related determinations and findings. The term includes certain authorized representatives of the CO acting within limits of his/her authority as delegated by the CO. The CO and/or his/her representative is accountable for preparing solicitation documents with technical support from the IT Project Manager and acting on behalf of the Head of the Contracting Activity. |
| Contractor Requirements Document (CRD) | From DOE O 413B: The DOE document that identifies the requirements that the prime contractor's project management system must satisfy. |
| Cybersecurity | The protection of information systems against unauthorized access to or modification of information (whether in storage, processing, or transit), loss of accountability for information and user actions, and the denial of service to authorized users, including those measures necessary to protect against, detect, and counter such threats. |
| Delegating Official (DO) | The DO has the authority for approval of information-technology projects to ensure that the proposed expenditures on IT are consistent with established policies, processes, budgets, and related requirements. |
| Demonstrated Success | Those IT projects that have been developed through a defined-information-system life cycle with consistent results of project completion within the original project schedule, within budget, and meeting the functionality requirements originally specified. |
| Departmental Directives Program | Used to establish directives as the primary means to set, communicate, and institutionalize policies, requirements, responsibilities, and procedures for Departmental Elements and contractors. Equivalencies and exemptions to this Order are processed in accordance with DOE O 251.1C, <i>Departmental Directives Program</i> . |

| Term | Definition |
|--|---|
| Development, Modernization, and Enhancement (DME) | DME means the project cost for new projects, changes, or modifications to existing systems to improve capability or performance; changes mandated by Congress or Agency leadership; personnel costs for investment management; and direct support. For major IT investments, this amount should equal the sum of amounts reported for planning and acquisition plus the associated Full time Employee (FTE) costs reported in the OMB Exhibit 300B. |
| DOE Elements | From DOE O 251.1C: Headquarters elements or first tier organizations as listed in the Correspondence Style Guide, Office of the Executive Secretariat . |
| Enterprise Architecture (EA) | From DOE O 200.1A: A business-driven plan that describes the current state, future vision, and transitional states of an operation. This is presented in terms of: strategy and performance; business; applications and services; technology; data; and security, all at the end of a two-to-five year planning horizon. |
| Enterprise-wide IT Projects | A project that spans or impacts multiple DOE Elements. |
| Equivalencies | That which has the same or almost the same characteristics or effect. |
| IMGC, IMGC-R and IMGC-AG | The IMGC serves as the DOE corporate risk executive (function) and is further defined in the DOE Order 205.1B, DOE Cyber Security Program. |
| Information | Any communication or representation of knowledge such as facts, data, or opinions in any medium or form, including textual, numerical, graphic, cartographic, narrative, or audiovisual forms. |
| Information System | From DOE O 200.1A: A combination of information, computer, and telecommunications resources; other information technology resources; and personnel resources that collect, record, process, store, communicate, retrieve, and display information. |

| Term | Definition |
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| Information Technology (IT) | From DOE O 200.1A: Information technology, as defined by the Clinger-Cohen Act of 1996, sections 5002, 5141, and 5142, means any equipment or interconnected system or subsystem of equipment that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information. For purposes of this definition, equipment is “used” by an Agency whether the Agency uses the equipment directly or it is used by a contractor under a contract with the Agency that (1) requires the use of such equipment or (2) requires the use, to a significant extent, of such equipment in the performance of a service or the furnishing of a product. Information technology includes computers, ancillary equipment, software, firmware, and similar procedures, services (including support services), and related resources. It does not include any equipment that is acquired by a Federal contractor incidental to a Federal contract. Information Technology is any proposed acquisition of information technology or information technology-related resources to support a defined business need. |
| Initiative | An initiative is created by an Organization in response to a driver or internal directives and defines the scope of the Organizational work-efforts performed. |
| Internal Controls | A process affected by an Organization's structure, work and authority flows, and people and management information systems; it is designed to help the Organization accomplish specific goals or objectives. It is a means by which an Organization's resources are directed, monitored, and measured. |

| Term | Definition |
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| IT Assets | <p>These IT assets provide the infrastructure and operational IT services necessary for accomplishing the site missions and programs. Specifically, they are locally managed IT assets or IT support services. Examples include the following:</p> <ul style="list-style-type: none"> • Networks • Telecommunications • Desktops • Internet/Intranet • Email • Collaboration Tools • IT Planning (EA/CPIC/Program Office Support) • Web Hosting • Data Storage • Contractor Business/Financial /Administrative Systems |
| IT Investment | <p>For the purpose of this Order, an IT investment is used interchangeably with an IT asset and IT project.</p> |
| IT Project | <p>A temporary planned endeavor funded by an approved information technology investment, thus achieving a specific goal and creating a unique product, service, or result. A project has a defined start and end point with specific objectives that, when attained, signify completion.</p> |
| IT Project Management Office (IT PMO) | <p>An organizational element or group that define and maintain the standards or process generally related to project management within the Organization. The PMO develops project guidance, policies, and procedures.</p> |
| IT Project Manager (IT PM) | <p>An individual in the HQ Organizational Element responsible for managing a project and its assigned activities. This individual ensures that all the projects are properly phased, funded over time, and that each project manager is meeting his/her key milestones. These individuals are the project’s advocates, ensure proper resourcing, and facilitate the execution process. They predict Programmatic risks and put mitigation strategies in place so that projects are not affected.</p> |

| Term | Definition |
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| Maintenance | An activity necessary to keep an asset functioning as designed during its operations and maintenance phase of a project. Maintenance costs include costs needed to sustain an IT asset at the current capability and performance levels including: corrective hardware/software, voice and data communications maintenance; replacement of damaged or obsolete IT equipment; and associated overhead costs. Examples of maintenance projects include operating system upgrades, technology refreshes, and security patch implementations. |
| Management and Operations (M&O's) | M&O contracts are agreements between federal government agencies and non-federal entities to support the operation of specialized federal infrastructure projects. |
| Milestone | From DOE O 413.3B: Any significant or substantive point, time, or event of the project. Milestones typically refer to points at which large schedule events or series of events have been completed, and a new phase or phases are set to begin. |
| Objective | This defines the principal areas of concern within the overall goal; it may also provide quantitative measures of future performance and may list several Strategic Targets that provide additional quantification of Agency objectives. |
| Office of the Chief Information Officer (OCIO) | From DOE O 200.1A: The Office that is responsible to ensure that IT is acquired and information resources are managed consistent with statutory, regulatory, and Departmental requirements and priorities. |
| Operation | The day to day management of an asset in the production environment and included activities to operate data centers, help desks, operational centers, telecommunication centers, and end user support services. Operational activities are reported through Section C of the Exhibit 300B. Operations costs include the expenses associated with an IT asset that is in the production environment to sustain an IT asset at the current capability and performance levels including Federal and contracted labor costs and the costs for the disposal of an asset. |
| Process | A permanent or semi-permanent collection of measurable, auditable, and repeatable activities that result in an output. |
| Project | A project has a defined start and end point with specific objectives that, when attained, signify completion thus achieving a specific goal and creating a unique product, service, or result. Built on interdependent activities planned to meet a common objective, a project focuses on attaining or completing a deliverable within a predetermined cost, schedule, and technical scope. |

| Term | Definition |
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| Project Management | Project management is the discipline of planning, organizing, securing, managing, leading, and controlling resources to achieve specific goals. A project is a temporary endeavor with a defined beginning and end (usually time-constrained, and often constrained by funding or deliverables), undertaken to meet unique goals and objectives, typically to bring about beneficial change or added value. |
| Project Management Plan | From DOE O 413.3B: The contractor prepared document that sets forth the plans, organization and systems that the contractor will utilize to manage the project. Its content and the extent of detail of the PMP will vary in accordance with the size of the type of project and state of project execution. |
| Project Performance | <p>The overall measurement of whether a project has met objectives and requirements of scope, cost, and schedule.</p> <p>A periodic measurement during the monitoring and controlling phases of a project performed to observe project execution and identify variances from the Project Management plan for proactive midigation.</p> |
| Quality Assurance Program (QAP) | In project management, an inspection of the accomplished work to ensure its alignment with the project scope. In practice, projects typically have a dedicated quality control team, which focuses on this area. |
| Requirements | A singular documented need of what a particular product or service should be or perform. It is a statement that identifies a necessary attribute, capability, characteristic, or quality of a system in order for it to have value and utility to a user. Business requirements describe in business terms what must be delivered or accomplished to provide value. Functional requirements describe the functionality that the system is to execute. |
| Risk | From DOE O 413B: Factor, element, constraint, or course of action that introduces an uncertainty of outcome either positively or negatively that could impact project objectives. |

| Term | Definition |
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| Risk Management | From DOE O 413B: The handling of risks through specific methods and techniques. Effective risk management is an essential element of every project. The DOE risk management concept is based on the principles that risk management must be analytical, forward-looking, structured, informative and continuous. Risk assessments should be performed as early as possible in the project and should identify critical technical, performance, schedule and cost risks. Once risks are identified, sound risk mitigation strategies and actions should be developed and documented. |
| Solution | A comprehensive architectural response to a business problem. Solutions address all layers of EA - strategy, business, data, applications, and technology/security. |
| Sponsoring/Funding Organization | The DOE Organization responsible for providing the necessary funding to support the project and project activities. |
| Stakeholder | Individuals and Organizations that are actively involved in the project, or whose interests may be positively or negatively affected as a result of program execution or completion. They may also exert influence over the program and its results. |
| Steady State (SS) | Steady-State means maintenance and operation costs at current capability and performance level including costs for personnel, maintenance of existing information systems, corrective software maintenance, voice and data communications maintenance, and replacement of broken IT equipment. For major IT projects, this amount should equal the amount reported for maintenance plus the associated FTE costs reported in the OMB Exhibit 300B. |
| System | An interconnected set of information resources organized for the collection, processing, maintenance, transmission, and dissemination of information, in accordance with defined procedures, whether automated or manual. |
| Total Cost of Ownership (TCO) | An analysis used to gauge the viability of any project. An Enterprise may use it as a product/process comparison tool. The TCO directly relates to an Enterprise's asset and/or related systems total costs across all projects and processes, thus giving a picture of the profitability over time. |
| Total Project Cost (TPC) | All cost planning and implementation specific to a project incurred through the startup of continual operations (capability delivered but prior to the operation of the facility). |