

**Forest Service Manual
National Headquarters - Washington Office
Washington, DC**

**Forest Service Manual 6600 – Systems Management
Chapter 6620 - Computer Software Management**

Amendment: 6600-2009-1

Effective date: October 13, 2009

Duration: This amendment is effective until superseded or removed.

Approved by: Charles Myers, Deputy Chief, OPS

Date approved: October 13, 2009

Responsible Staff:

Last Change: 6600-2008-2 to FSM 6683-6684

Superseded Document(s): 6620, Amendment 6600-2006-5, December 06, 2006; id_6620-2008-4, September 15, 2008

Digest: Following is an explanation of the changes throughout the directive by section.

Incorporates direction found in ID 6620-2008-4.

6620.5: Adds definition for “System Development Life Cycle (SDLC) Roadmap”. The System Development Life-Cycle (SDLC), as specified in the *SDLC Roadmap*, is made permanent policy. A management mechanism for oversight, compliance, and evolution of the SDLC is defined.

6621.41: Establishes new code, caption, and direction for System Development Life Cycle Oversight Committee (SOC).

6622: Adds more detail to direction on Standards.

Forest Service Manual 6600 – Systems Management
Chapter 6620 - Computer Software Management
Amendment: 6600-2009-1
Effective date: October 13, 2009

Table of Contents

6620.1 - Authority.....	3
6620.2 - Objectives	3
6620.3 - Policy	3
6620.4 - Responsibility.....	4
6620.41 - Line and Staff Officers	4
6620.42 - Deputy Chief for Business Operations.....	4
6620.43 - Chief Information Officer (CIO).....	4
6620.44 - Change Management Board (CMB).....	5
6620.5 - Definitions.....	5
6620.51 - Abbreviations and Acronyms.....	6
6621 - Planning and Management.....	7
6621.1 - Planning and Evaluation	7
6621.2 - Acquisition	7
6621.21 - Development and Procurement Criteria	7
6621.22 - Development	8
6621.3 - Maintenance and Support	8
6621.4 - Control, Review, and Evaluation	9
6621.41 - System Development Life Cycle Oversight Committee (SOC).....	9
6621.5 - Nonproprietary Programs.....	10
6622 - Standards.....	10

6620.1 - Authority

Authorities and regulations concerning the management of information processing technologies are contained in the Department of Agriculture Departmental Regulation 3600 (DR 3600). This Departmental Regulation establishes policies on the use of common USDA and external services to deliver USDA's information and services to customers and employees. These policies are defined around USDA's enterprise architecture and investment strategies.

6620.2 - Objectives

The objective of Forest Service computer software management is to assist the Agency in continuously improving the effectiveness and efficiency of its business solutions to meet changing mission requirements by appropriately incorporating software tools.

6620.3 - Policy

1. Manage acquisition of software as a capital investment within a business solutions life-cycle methodology (BSLM), and in compliance with technical approval direction as set forth in FSM 6615. Decisions to commit people, money, technology, and other resources to acquire, use, and maintain software must take into account their necessity, effectiveness, and efficiency and must be integrated with the Agency's program budget and performance processes.
2. Incorporate software into a standardized, approved enterprise architecture (EA) so that:
 - a. The software is aligned and appropriately interoperable with the other EA components.
 - b. The Agency's ability to coordinate software acquisition and deployment will be continuously improved.
3. Ensure that only authorized and appropriately licensed software is installed and used on Forest Service information technology (IT); that the software supports the confidentiality, integrity, and availability of the Agency's information resources; and that the software meets all applicable agency information security requirements.
4. Integrate software applications that have a common information structure (common databases, standardized data elements, and standardized processing conventions) while ensuring that managers have the opportunity to exercise judgment in handling organizational differences.
5. Deploy new software and software upgrades by following agency software change and management direction as set forth in the Forest Service System Development Life-Cycle (SDLC) Roadmap.

Forest Service Manual 6600 – Systems Management
Chapter 6620 - Computer Software Management
Amendment: 6600-2009-1
Effective date: October 13, 2009

6. Cooperate with private parties and other government agencies and make Forest Service software available when mutually beneficial and authorized by the responsible line officer. The Forest Service may use information and software from other agencies when deemed appropriate by the responsible line officer.

6620.4 - Responsibility

In addition to the overall responsibilities established in FSM 6604, additional direction on computer software management responsibilities are set forth in FSM 6620.41-6620.44.

6620.41 - Line and Staff Officers

Line and staff officers at each level shall:

1. Manage software acquisitions and deployment by or on behalf of their staffs to meet mission needs in their areas of responsibility.
2. Ensure that software acquisition and deployment conducted by or on behalf of their staffs complies with agency software policies as set forth in FSM 6620.3.
3. Determine and approve capital investments for software to be acquired by their staffs.
4. Approve deployment for software acquired by their staffs.
5. Coordinate software acquisition and deployment activities with the Forest Service Chief Information Office staff.

6620.42 - Deputy Chief for Business Operations

The Deputy Chief for Business Operations shall provide national leadership for software management. Specifically, the Deputy shall institute and ensure compliance with Forest Service software concepts, policies, and standards within a business solutions management framework.

6620.43 - Chief Information Officer (CIO)

The Chief Information Officer (CIO) is responsible for:

1. Developing concepts, standards, and policies for servicewide software acquisition and deployment within a business solutions life-cycle methodology (BSLM).
2. Providing for the deployment of software after it has been approved for servicewide use by the appropriate line or staff officer.

3. Providing governance processes to ensure that agency software acquisitions and deployments are:

- a. Managed as capital investments.
- b. Coordinated across all line and staff areas of responsibility.

6620.44 - Change Management Board (CMB)

The Change Management Board (CMB) is responsible for:

- 1. Authorizing the release of hardware and software, approved departmental and agency applications, and commercial off-the-shelf (COTS) software for servicewide applications.
- 2. Evaluating, prioritizing, and scheduling proposed changes to all Forest servicewide computing and telecommunications hardware and software.
- 3. Managing the Forest Service software library.

6620.5 - Definitions

Acquisition. As used in relation to information technology (IT), the process of obtaining IT equipment, software, or services through procurement purchase, lease, donation, transfer, loan, and so on, regardless of cost.

Business Solutions Life-Cycle Methodology (BSLM). A set of guiding principles and concepts for meeting mission requirements by developing comprehensive solutions that typically involve effective, efficient leverage of IT. This approach also ensures that good change management practices are followed throughout so that employees and customers see the value of changing to the new business solutions and also understand what legacy business practices and policies are being withdrawn.

Change Management Board. A board appointed by the CIO to govern changes in the Forest Service technical architecture.

Enterprise Architecture (EA). A description of the Forest Service business and mission environment (including the Agency's strategic intent); the processes established to accomplish the mission; the resources allocated to carrying out those processes (including technical architecture); and the governance, financial, and performance inputs and results associated with the conduct of these processes. EA includes these reference models: performance reference model (PRM), business reference model (BRM), service component reference model (SRM), data reference model (DRM), and technical reference model (TRM).

Forest Service Image. The complete set of software, including the operating systems, supplied by the Forest Service for use with servers and PCs (which include desktops,

Forest Service Manual 6600 – Systems Management
Chapter 6620 - Computer Software Management
Amendment: 6600-2009-1
Effective date: October 13, 2009

laptops, and notebooks). The Forest Service image is maintained and managed by the Washington Office Chief Information Office (CIO) staff.

Information Technology Architecture (ITA). The set of hardware components, software tools and programs, networking equipment, and services that makes up the Forest Service standard computing environment.

Software. Applications, procedures, and rules that tell a computer system what tasks to perform, plus associated documentation. Includes products acquired from external sources or developed in-house.

Software Deployment. The installation and update of software products on all applicable software hosting devices that can be categorized collectively as either server devices or client devices. The software deployment method can be electronic or physical. The electronic methods can be categorized as either “push” (that is, deployed by an enterprise systems management tool such as Tivoli) or “pull” (that is, employees downloading software from the Agency’s software library to client devices).

Software Library. The repository through which the Agency files, distributes, and controls service wide software.

Systems Development Life-Cycle (SDLC) Roadmap. A roadmap for executing a systems development life cycle (SDLC) to build Forest Service software applications or more generally accomplish IT projects: that is, what things need to be done to meet Forest Service standards, regardless of how the projects are executed. The scope of this SDLC Roadmap is IT projects executed by the Forest Service, internally-developed or developed by a vendor. This SDLC Roadmap is intended to focus on the project level, and only on the IT-related aspects of projects. Business-level planning is addressed through the Business System Life Cycle Methodology (BSLM) effort.

6620.51 - Abbreviations and Acronyms

The abbreviations and acronyms for the terms used in this chapter are:

BRM - business reference model.

BSLM - Business Solutions Life-Cycle Methodology.

CD - compact disc.

CIO - Chief Information Officer.

CIO - Chief Information Office (staff) or chief information office (general).

CMB - Change Management Board.

COTS - commercial-off-the-shelf.

DRM - data reference model.

EA - enterprise architecture.

IT - information technology.

ITA - information technology architecture.

PC - personal computer, including desktop, laptop, and notebook computer models.

PRM - performance reference model.

SDLC - systems development life-cycle.

SOC - System Development Life-Cycle Oversight Committee (SOC).

SRM - service-component reference model.

TRM - technical reference model.

6621 - Planning and Management

This section contains overall Forest Service direction for planning, acquiring, deploying, and maintaining software.

6621.1 - Planning and Evaluation

Managers shall annually assess the needs of their major software applications and develop a schedule (Forest Service-Developed Software Forecast) for updates and changes to those applications. The forecast must include a summary of planned changes, projected release dates, and deployment requirements. Submit the forecast to CIO to aid in assessing the impacts of the changes and deployment dates on the Forest Service information technology architecture (ITA).

6621.2 - Acquisition

See FSM 6300, FSM 6615, and FSH 6609.12 for direction on contracting for development services. All contracts for development must require contractors to develop software that operates within the Forest Service enterprise architecture and runs on the Forest Service image.

6621.21 - Development and Procurement Criteria

Software may be developed or purchased if it meets the following criteria:

Forest Service Manual 6600 – Systems Management
Chapter 6620 - Computer Software Management
Amendment: 6600-2009-1
Effective date: October 13, 2009

1. The need for it is covered in the applicable information resources strategy or management plan.
2. It has been authorized through the capital investment program.
3. It is within the approval authority of the authorizing line officer.
4. Software in the existing enterprise architecture cannot meet the needs.
5. Its acquisition and deployment complies with agency software policy as set forth in this directive and in FSM 6615, Technical Approvals.

6621.22 - Development

Software that is to be developed by or on behalf of the Forest Service must:

1. Adhere to the Forest Service System Development Life-Cycle (SDLC) Roadmap. This SDLC Roadmap is located online and can also be found from the BAO website (<http://fsweb.wo.fs.fed.us/irm/bao/>) by following the link “System Development Life Cycle”.
2. Use standard software design procedures – consult SDLC roadmap for further guidance on such standards.
3. Undergo sufficient and timely testing to ensure that the software product will satisfy the identified need.
4. Operate without conflicting with or compromising any other components of the Forest Service information technology architecture (ITA).
5. Be adequately documented as specified in the SDLC Roadmap.

6621.3 - Maintenance and Support

Developed and acquired software must be adequately maintained and supported. Line and staff officers shall:

1. Assign responsibility for technical maintenance prior to installation or release of the software.
2. Ensure compatibility of the software with the Forest Service information technology architecture (ITA), using industry standard testing practices.
3. Ensure that users are supported through documentation, helpdesk service, training, and other assistance commensurate with the level of investment and the abilities of the intended users.

4. Ensure that a written agreement with the vendor explicitly states who is providing what levels of maintenance and support services for the fees paid, if the software has been acquired from an external vendor.
5. Ensure that a written agreement with the vendor addresses the provisions of the Forest Service SDLC Roadmap for systems that are developed by external vendors, if the software has been acquired from an external vendor.

6621.4 - Control, Review, and Evaluation

Software management effectiveness must be incorporated into the management review process defined in FSM 1400. This includes general management reviews, program and activity reviews, and service trips. Reviews should emphasize the cost-effective development, acquisition, and use of software and the data managed through such software.

6621.41 - System Development Life Cycle Oversight Committee (SOC)

It is the responsibility of the Committee to:

1. Ensure that all Forest Service technology teams are adequately informed and trained to comply with the SDLC.
2. Ensure continuous improvement of the SDLC Roadmap.

The Oversight Committee's functions are to:

1. Establish mandatory minimum areas of SDLC activities required in various project categories.
2. Establish and oversee SDLC communications and training programs.
3. Establish and oversee SDLC compliance program.
4. Continuously evaluate and improve the SDLC.

The membership of the Committee is:

1. Co-Sponsored by the Forest Service Deputy Chief of Business Operations and the Chief Information Office (CIO); and
2. Must include membership as specified in an SOC Charter approved by these two executives.

6621.5 - Nonproprietary Programs

Nonproprietary computer programs may be furnished to private individuals, corporations, or cooperators. If furnishing such programs furthers specific Forest Service program objectives, and such assistance is equally available to all who might request it, no charges need be made. If specific Forest Service program benefit does not exist, the Forest Service should be reimbursed for the cost incurred in providing the software. The following statement applies to any nonproprietary software furnished to others. Any Forest Service publication which announces the availability of such a program must contain this statement:

This software is available on request with the understanding that the U.S. Department of Agriculture cannot ensure its accuracy, completeness, reliability, or suitability. The recipient may not assert any proprietary rights thereto nor represent it to anyone as other than a government-produced computer program. For cost information, please write (insert name and address of issuing station or office).

6622 - Standards

The Chief Information Officer shall establish standards for:

1. National software products installed on agency server and client devices for common servicewide work processes, including but not limited to the following:
 - a. Text processing.
 - b. Electronic information transfer (such as mail, documents, and objects).
 - c. Data and content creation and editing.
 - d. General database and content management.
 - e. Data and content search and analysis.
 - f. Electronic records management.
 - g. Electronic content discovery and hold.
 - h. Report processing.
 - i. Presentation and graphics processing.
 - j. Digital video and audio processing.
 - k. Computer modeling including statistical modeling and analysis.

Forest Service Manual 6600 – Systems Management
Chapter 6620 - Computer Software Management
Amendment: 6600-2009-1
Effective date: October 13, 2009

- l. Spreadsheet processing.
 - m. Project management.
 - n. Calendar.
 - o. Telecommunications.
 - p. File management.
 - q. Internet access.
2. The system development life-cycle (SDLC) compliance activities and deliverables for applications software developed by or on behalf of the Forest Service.
3. Information structure, to ensure that information is sharable and accessible as appropriate for the class of information while minimizing the duplication of electronic files.
4. Software and information access and security, to ensure that software capabilities are exercisable by individuals only on an authorized basis.
5. The format and content of business cases for improvements to any capabilities within the CIO's purview.