

Technical Operations Guide

Use the technology to serve the HS Agency mission, keep it operating efficiently, and continuously collect and analyze data to identify opportunities for improvement.

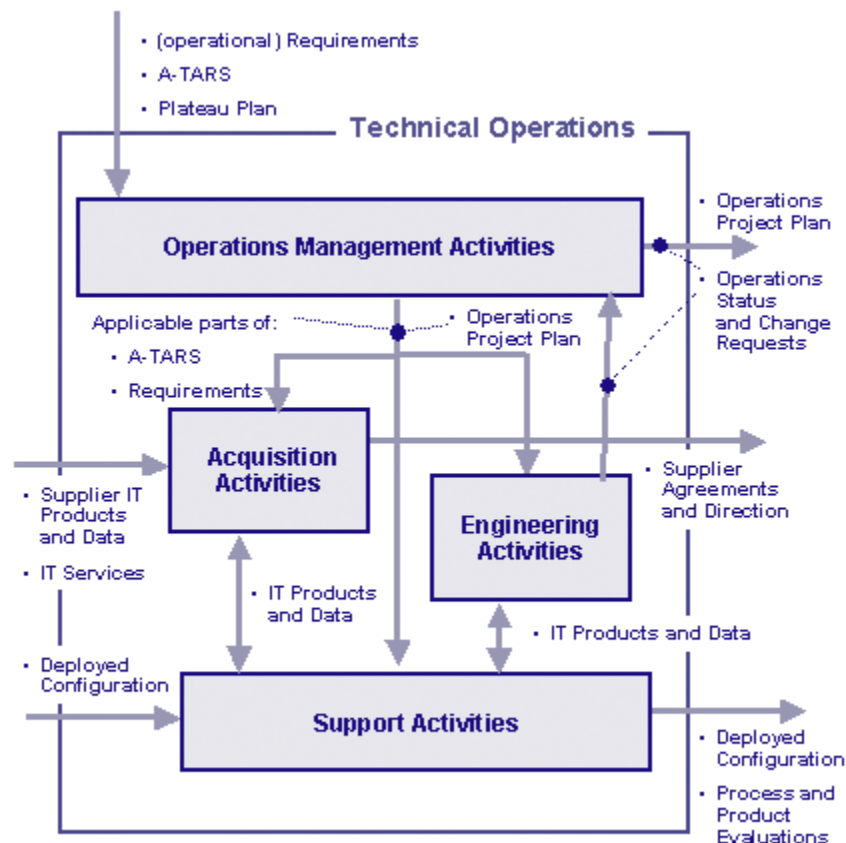
This guide defines the key activities, artifacts, and roles that are necessary to operate and sustain the deployed IT products, to gather information on their use, and to aid in their evolution within the usage environments. This entails administering to the operational needs of the products (database, user, network, security, or application administration).

See the [Organization of the IT Planning and Management Guides](#) for the relationship of the processes described in this guide to those of the other guides. [Background](#) is provided on the fundamental concepts and principles that apply across the guides. For information on how to customize this guidance, view the [Application of the IT Planning and Management Guides](#) pages.

Processes

The actions to operate and sustain the technology are achieved through one or more technical operations projects. Projects form the context for organizing, planning, executing, and tracking activities to keep the technology operating efficiently and effectively. Projects may specialize on a portion of the technology (networking, data, application), by site-location, HS program, or other, as necessary to direct and track actions and associated costs. Operations, fabrication, and deployment projects are coordinated with one another within and across plateaus by the IT Evolution Plan.

The common top-level activities are illustrated in the figure and described in the text below. Each operational project would consist of a mix of one or more of these activities.



- **Project Management Activities** - These activities include practices necessary to plan, monitor, control, and terminate technical operations projects.
- **Engineering Activities** - These activities include technical life-cycle practices needed to operate and sustain the technology elements in the usage environments.
- **Acquisition Activities** - These activities include those life-cycle practices needed to acquire or replenish any deployed products or obtain vendor-provided services necessary to keep the technical assets operational.
- **Support Activities** - These activities include those life-cycle practices needed to establish a project environment supporting the other three sets of activities. This includes CM and QA practices.

Technical Operations Guide Resources - A consolidated set of items that can be used to implement the activities defined in this guide are listed in the consolidated resources

Project Management Activities

Form the technical operations project, manage its tasks, and coordinate with other fabrication and deployment projects, as needed.

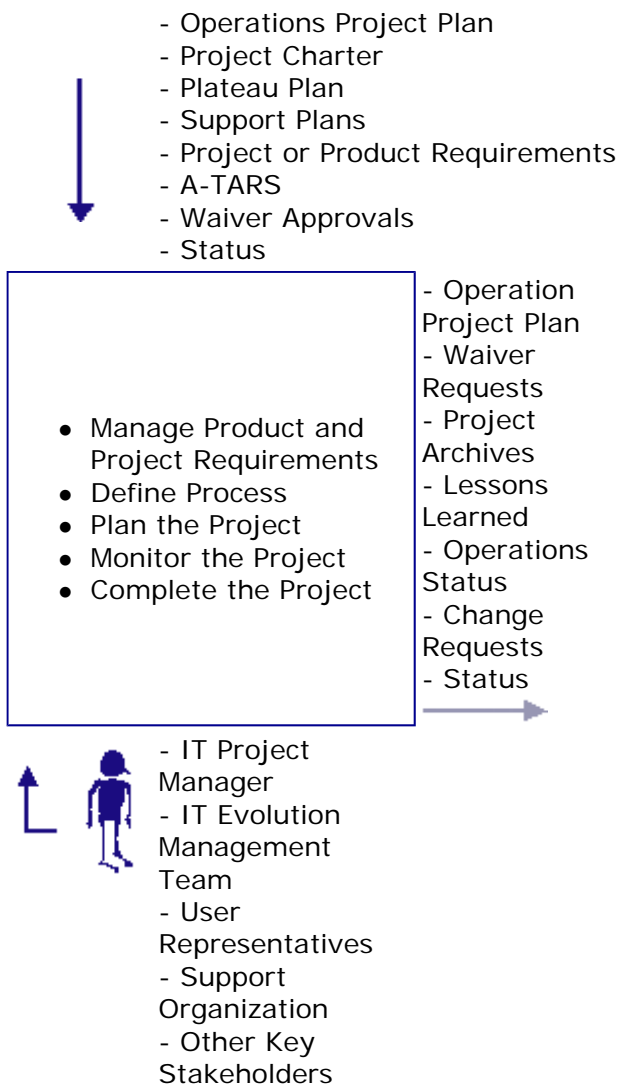
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Introduction

These activities are responsible for the life-cycle management of technical operations [projects](#). Operations projects provide resources to effectively and efficiently operate and sustain the technical assets once they are deployed into the usage environments. Measurements are collected and analyzed on the quality and performance of the technical assets as well as the cost of operations. New technology needs are identified and forwarded as improvement requests to the [IT evolution planning and management activities](#).

The lifetime of an operations project is generally for a single [plateau](#). Because each plateau represents a change in technical capability for the HS Agency, the resources to administer and operate the technical assets need to be reallocated to reflect each change.

Operations projects overlap across plateaus to provide continuity.

Operations projects may be organized to provide support across all of the HS Agency, for a specific site (a county), or by technical specialty (help desk, database administration, computer operations, network operations). Projects may be individually managed, or managed as a set.

These projects primarily consist of event-driven, level-of-effort activities rather than having preplanned tasks. Periodic and routine activities may be scheduled and tracked, as appropriate.

The set of operations projects, their responsibilities, and interproject relationships are documented in the IT Evolution Plan. Project-level plans detail each project's responsibilities.

TANF Example: State TANF systems generally operate in a networked environment, sharing networking resources with other HS programs. Technical support management must consider how it will track network charges and operational costs. Management should determine required cost allocations to application systems that are funded from various sources at the federal level. For example, measures of actual network traffic may be used as a basis of applying charges to each program.

Current and projected network capacity and throughput should be analyzed prior to deployment of application systems. The analysis should be based on monitoring the actual flow and volume of network traffic, before and after deployment. The needed bandwidth is often underestimated, and the unanticipated cost to acquire more may significantly impact the operational budget.

With many States considering outsourcing of network operations, contractors will increasingly handle much of the operational functions for the Agency. Technical support management will increasingly depend on its skills to identify and select operational support contractors, as well as monitor and assure the quality of services they provide.

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Activities

The basic [fabrication management activities](#) also apply to the operations projects. You may refer to those activities for additional detail. Actions applicable to operations projects are described below:

- **Manage Product and Project Requirements.** These requirements may focus on operation services and quality, such as availability or response times. Preventive and corrective maintenance actions must be coordinated with the user community to minimize impact on business users. Service requirements may affect scheduling of server reboots, data backup, vendor maintenance and upgrades, or even the training operations staff.
- **Define Process.** The IT Project Team will establish the processes and detailed procedures that will be followed to support and sustain the IT products and data in the operational environment. Minimally, this includes key activities that are critical to maintaining the integrity and efficiency of the deployed IT products and data.
- **Plan the Project.** The IT Project Team will establish and maintain a detailed operations plan. The plan must provide adequate resources to account for new,

significantly modified, or retired technical assets and the level of service the users expect. Planning can be started once the developmental configuration for the plateau is defined and revise it to account for the specifics of a deployment.

- **Monitor the Project.** The IT Project Team will collect and analyze operations activities data on the performance and cost of ownership for the technology, including any external service providers (measures against quality of service commitments). Periodically they should survey the user and operations personnel. This survey allows them to identify improvement opportunities for technical services and assets. Information from these surveys is provided to the [IT evolution planning and management](#) evolution planning and management activities.
- **Complete the Project.** The IT Project Team will terminate an operations project if the technology or systems the project sustains is being retired. The project will be replanned when significant IT changes are made. The team should collect and analyze lessons learned periodically.

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Roles and Responsibilities

The key roles and their responsibilities are as follows:

- [IT Project Manager](#). This individual has primary responsibility for these activities. The IT Project Manager may be assisted by an [IT Project Team](#), an [Estimation Analyst](#) or a [Contract Manager](#), as needed. An IT Project Manager may manage one or more operations projects simultaneously.
- [IT Evolution Management Team](#). These individuals, specifically the [IT Evolution Manager](#), have oversight responsibility for these projects. The IT Project Team coordinates with the IT Evolution Management Team when planning and controlling the operations project.
- [User Representatives](#). These individuals collaborate with the IT Project Team to provide user perspectives, helping to establish the operational schedules and support needed (quality of service expectations).
- [Support Organization](#). Individuals with expertise in the [QA](#) or [CM](#) disciplines assist the management staff. They participate in the early project planning activities and provide oversight of the project practices and developing products.
- [Other Key Stakeholders](#). Any group or individual with a vested interest in the operations project performance. This includes representatives of [IT Project Teams](#) from other interdependent projects, the [Technical Operations Support Team](#), and [HS Program](#) users and management staff. All coordination is controlled via the Operations Project Plan.

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Artifacts

The following information is used or produced by these activities. Templates, examples, and checklists for identifying and documenting these items are available through the [Additional Resources](#) section at the end of this page.

- [Operations Project Plan](#). These work-level plans are the main product of these activities, updating the previous version, if it exists. They are used to guide the execution of all technical operations project activities, to coordinate actions with the stakeholders, and to report progress.
- [Project Charter](#). The project charter sets the scope and explains authorities of the

- project management. It is the foundation for the management approach.
- [Plateau Plan](#). The appropriate portion of the [IT Evolution Plan](#) identifies constraints and expectations for the project with regard to other projects. Operations Project Plans must be consistent with it.
 - [Support Plans](#). These [Configuration Management](#) and [Quality Assurance](#) Plans are integrated into the overall Operations Project Plans.
 - [Project or Product Requirements](#). This consolidates all the operational requirements and expectations imposed on the project from all sources: IT Evolution Plan, the [HS Program](#), [HS IT Division](#), the Project Charter (constraints), and others. These requirements are used as a basis of defining and planning the project. Project success is defined by how well the requirements are satisfied. Plans are appropriately updated when any of these change.
 - [A-TARS](#). The appropriate part of the A-TARS is used to guide technical management decisions for the project.
 - [Waiver Requests](#). Projects file waivers to be relieved from mandatory A-TARS requirements.
 - [Waiver Approvals](#). Projects receive formal approval when they deviate from the A-TARS.
 - [Status](#). Activity progress and issues from engineering, acquisition, or support activities are used to manage project activities. Project status is summarized and provided to the [IT Evolution Manager](#) and other oversight authorities on a periodic and event-driven basis.
 - [Project Archives](#). Technical and management data from a project is archived for later analysis. This may be done periodically (every 6 months), or when transitioning from one plateau to another.
 - [Lessons Learned](#). These are formally captured and disseminated either periodically or at project completion.
 - [Change Requests](#). Any request to change the deployed configuration is documented and analyzed. The request will be routed to the [IT evolution planning and management](#) activities for disposition, such as scheduling a maintenance change into a future release.
 - [Operations Status](#). Operational data is collected and analyzed as a basis of measuring effectiveness and cost of operations, as well as identifying improvement opportunities.

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Additional Resources

Resources applicable to this activity are cataloged below. Some items from the [fabrication project management resources](#) also may be used to perform the operations project management activities. Lists of all available resources may be found in the [Resources](#) portion of the IT Planning and Management Guides.

[Checklist: Technical Operations](#)

A tailorable checklist to use for identifying items that may affect the technical operations. 04-04-02

[Template: Project Charters](#)

Template for developing the charters for projects covered by the IT Evolution Plan. 02-01-02

[Example: Risk Management Plan](#)

Example of a Risk Management Plan that defines a specific risk analysis and management process. 02-01-02

Guidelines: Development of a Work Breakdown Structure (WBS)

Lists the steps in the development of either an activity-based WBS or a work-product-based WBS. 02-01-02