

Technology Deployment Guide

Construct needed technology solutions - building anew, repairing the old, or migrating IT assets to a more capable platform - integrating the old with the new.

This guide defines the key activities, artifacts, and roles necessary to achieve an orderly release of technology into the HS Agency usage environments, resulting in the deployed configuration. This transition may include activities to package, distribute, configure, convert, install, and when necessary, de-install and retire the applications, platforms, networking, data files, and user or technical documentation and related IT services. The scope is broader than just those related to the technology items themselves. Activities also involve publicizing the changes, coordinating training among those who will use and administer the IT products.

Collectively, deployment activities achieve the technical goals for a plateau, as noted in the Plateau Plan. Depending on the scope of the change and associated risks, piloting and operational testing may be performed. Software licenses, operational support, service and maintenance agreements, as well as system management and administration procedures may be created, revised, or retired as appropriate.

Deployment requires coordination and interaction with individuals from all affected environments, such as the:

- Business environment, which may change parts of its business practices or work practices. It may, for example, introduce remote or mobile computing or support client direct-access to Human Services via the Web.
- Development environment, which may change its engineering practices to accommodate new or retired technology. It may, for example, involve introducing a new programming language, or decommissioning a mainframe.
- Operational environment, which may change its system monitoring, administration, and management practices and tools. It may require adjusting license agreements for installed or retired applications.

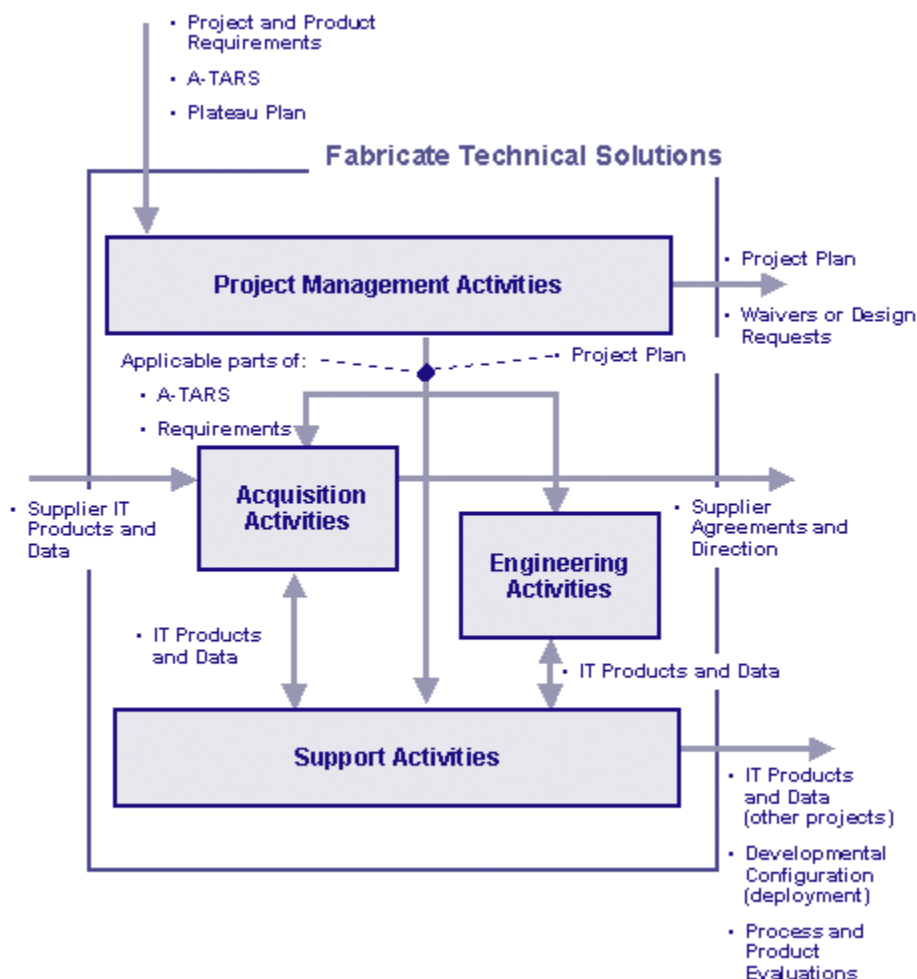
The scope of the coordination varies according to the amount of change expected. Small corrective or perfective maintenance changes may require minimal coordination. Deploying a new application or migrating a significant part of an existing, automated system to a new platform may require more coordination. Coordination includes necessary training of business, developer, operator, and administrative personnel, among others. The training may encompass both the technology and the specific business application.

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

Change in the usage environment is achieved by deployment projects and coordination within and across plateaus by the IT Evolution Plan. Circumstances for each project determine the specific mix of activities to be performed. Consideration is given to the type of products being deployed and their impact on the HS Agency business users, IT fabrication, or IT technical operation processes.

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



- **Project Management Activities** - These activities include practices necessary to plan, monitor, control, and terminate an IT deployment project.
- **Engineering Activities** - These activities include technical life-cycle practices needed to configure and tailor the technology items for use within each unique setting.
- **Acquisition Activities** - These activities include life-cycle practices needed to oversee any deployment services or products that would be obtained from outside the HS Agency.
- **Support Activities** - These activities include life-cycle practices needed to establish an effective project environment supporting the other three sets of activities. This includes CM and QA practices.

Technology Deployment 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 deployment project, manage its tasks, and coordinate with other fabrication and operations projects, as needed.

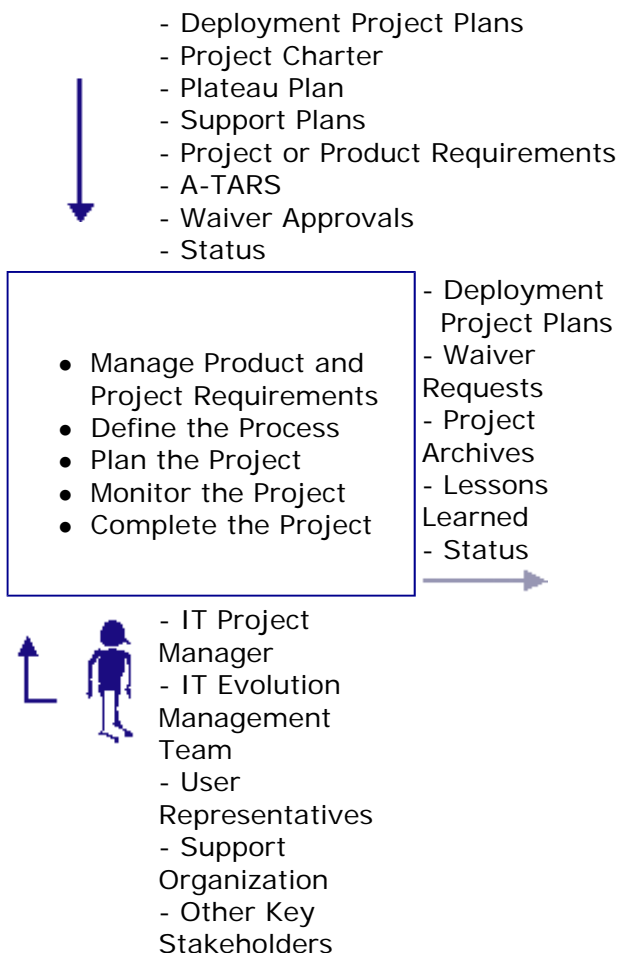
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Introduction

These activities are responsible for the life-cycle management of deployment [projects](#). Deployment projects achieve the incremental roll out of the IT products to achieve a [plateau's](#) goals. Deployment projects may implement many approaches to roll out these products. This includes:

- **Gradual release.** This generally involves piloting, where the product is initially released to selected user communities during a trial period and gradually transitioned into full use. Gradual release may be used when there are significant training, resource, logistic, or operational risks to the deployment. It may be used, for example, when deploying to many dissimilar sites in a County-administered system. As the products are gradually rolled out, the HS Agency will be operating in a hybrid mode, using a combination of old and new applications, data, networking, platforms, and business and technical procedures. Interoperability between the old and new is required.
- **Single release.** When risk of deploying a product is low, the product may be placed

into the operational environment with minimal coordination. This may occur for [corrective](#) or [perfective](#) maintenance releases or when the effect of a new technology is well understood.

The management techniques used on the deployment project should be specialized to accommodate the roll-out approach.

The lifetime of a project is assumed to be relatively short. Projects are considered complete once their products are in general use by the intended users, and responsibility for the operation and sustainment has moved to one or more [operations projects](#).

The set of deployment projects, their products, and interproject relationships are documented in the IT Evolution Plan. Deployment project-level plans detail the project's tasks within that context. Projects may be separately managed or managed as a set.

TANF Example: Typically, the TANF eligibility organization is one of the largest in the State. Deploying new or updated applications to a large number of users is inherently high risk. Planning should consider the impact of the new TANF application on dependent systems and activities. For example, if delays or problems are encountered with processing TANF eligibility cases for the day, then other HS program activities in the Agency that interface with TANF may be impacted. To reduce the magnitude of these risks, the deployment should be well coordinated with those outside the direct TANF organization. Plans must allow for adequate testing and support beyond the TANF organization.

Another consideration during deployment is adequate testing of infrequently executed functionality. While daily, weekly, or monthly processing cycles may be adequately tested, longer quarterly, semi-annual, or annual jobs may be over looked. Contractors deploying the system may no longer be available when these jobs execute (in realistic conditions) for the first time. The deployment plans should therefore address how adequate support will be available when key, infrequently executed jobs are performed. This may require Quality Assurance staff to explicitly check the results of these jobs, and having technical experts available to diagnose and correct any errors.

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Activities

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

- **Manage Product and Project Requirements.** The IT Project Team should coordinate the deployment timetable among the affected stakeholders and note interdependencies in the IT Evolution Plan. The schedule should be synchronized with the business process and coordinated with the HS program users and management.
- **Define Process.** The IT Project Team should establish the processes and detailed procedures that are to be followed to deploy the IT products and data into the operational environment. Minimally, this includes key activities that are critical to ensuring that the deployed products work as intended and that individuals can effectively use them to support their work. This may require forming a pilot team to serve as a help desk on wheels, able to travel to and work directly with users during the transition.

- **Plan the Project.** The IT Project Team should prepare and maintain a detailed deployment plan with adequate resources for all deployment activities (travel, diagnostic tools, documentation). The plan will address the specialization of the developmental configuration for each site, such as loading site-specific data. Planned activities may include performing operational testing with site-specific scenarios, assembling and releasing the products, and installing onsite specific platforms. End-of-lifetime activities such as deactivating and removing retired applications and platforms are included. Advertising and marketing, training, pilot support, and inventory control activities should also be planned as needed.
- **Monitor the Project.** The IT Project Team monitors the deployment activities. They need to make and track commitments with the affected stakeholders. These items are generally noted as assumptions in the deployment plans (e.g., training users, having adequate access to the site for installation, or defining expected networking infrastructure). These items may not be under direct control of the project. Assumptions regarding them may represent risks to the deployment project.
- **Complete the Project.** Once ownership has transitioned to the user community or HS program, the IT Project Team should collect, analyze, distribute, and archive the lessons learned and other project information, as appropriate.

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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, assisted by the [IT Project Team](#) and staff, which may include an [Estimation Analyst](#) or [Contract Manager](#). An IT Project Manager may manage one or more deployment projects simultaneously.
- [IT Evolution Management Team](#). These individuals, in particular the [IT Evolution Manager](#), have oversight responsibility for all projects. The IT Project Team coordinates with the IT Evolution Management Team when planning and controlling the project.
- [User Representatives](#). These individuals collaborate with the IT Project Team to provide details for planning and managing the deployment.
- [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 deployed products.
- [Other Key Stakeholders](#). Any group or individual with a vested interest in a deployed product. This includes representatives of [IT Project Teams](#) from other interdependent projects, [Pilot Team](#) members, and [HS program](#) users and management staff. All coordination is controlled via the Deployment 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.

- [Deployment Project Plans](#). 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 deployment activities, to coordinate actions with the stakeholders,

