Delivery Operations Information System (DOIS) Deployment Toolkit

DOIS Deployment Management Guide – Section 1

March 1, 2009
Section 1 – Introduction

The Delivery Operations Information System (DOIS) is a United States Postal Service (USPS) client/server application. Delivery unit supervisors use DOIS to effectively manage the daily activities of city carriers. DOIS interfaces with systems such as the Address Management System (AMS), Data Collection Device (DCD), End of Run (EOR), Electronic Time Clock System (ETC), Time and Attendance Collection System (TACS), and the Delivery Routing System (DRS).

Section 1.1
DOIS Background

DOIS is a system developed to improve the management of delivery unit operations. DOIS replaces two existing USPS applications: Decision Support Information System (DSIS) and Route Examination System (RES). The applications date back to the 1980s and consist of various programming languages, data structures, and communication methods. DSIS and RES were limited for the following reasons:

- Limited performance measurement capability;
- Time-consuming;
- Inconsistent deployment to the field.

Section 1.1.1
Delivery Computer Application Committee (DCAC) Studies

The DCAC, formed in 1996, conducted a study of the amount of time delivery unit supervisors spent entering data at the Delivery Unit Computer (DUC). The DCAC set up focus groups to assess and prioritize needs identified by field users or field support. They ranked DUC applications by performance and importance in managing the delivery unit.

The DCAC visited two districts per area and collected 295 surveys. The results of this survey showed the following:

- DSIS was not used by delivery unit supervisors to support decisions;
- Too much time was spent each day on the DUC entering data;
- Delivery unit supervisors were managing input of data, leaving little time to manage the delivery unit;
- Large technical issues existed, including limited help, lack of ownership, poor response, and lack of application support.

Additionally, the DCAC identified a need to provide one tool to assist delivery unit supervisors and route examiners in conducting route inspections and adjustments. A retooling effort was launched to
make the DUC usable and valuable for day-to-day decision-making by combining technology with highly integrated applications, a central data repository, a consistent user interface, as well as a standard and scalable technical architecture.

The focus groups identified the (DSIS) and the (RES) as ineffective, but critical to delivery unit management. The decision to replace these systems resulted in the Delivery Operations Information System (DOIS) Research and Development project.

Section 1.1.2  
Business Benefits

The USPS envisions DOIS as a tool to help delivery unit supervisors manage delivery units that currently service about 170,000 routes within the national delivery network. DOIS supports:

- Consistent time of day delivery, and optimal route coverage;
- Efficient route inspections;
- Scheduling of overtime and the route inspection and adjustment process;
- Reduced operating costs through improved scheduling and deployment of city carriers, based on daily mail volumes and route structures;
- Improved employee productivity through a balanced distribution of workload across delivery units and routes.

Section 1.1.3  
DOIS Project Background

The USPS Board of Governors originally approved DOIS Research and Development in June 1998. The goal of the DOIS project was to create a quality software application for the USPS that provides improved delivery unit management information and meets the benefits outlined above.

The DOIS solution was developed in four phases: design, build, test, and pilot. These phases were utilized for building all components of the solution, including application, training, and communications.

The DOIS build stage, completed in June 1999, translated the DOIS detailed design into an operational system that assists in driving the expected outcomes for the USPS. DOIS is a client/server application utilizing a Visual Basic 5.0 client, NEON messaging middleware, COBOL remote procedure calls, and a DB2 database.

Between June and December of 1999, DOIS was deployed on a pilot basis to over 300 sites in six USPS districts (Salt Lake City, New Hampshire, Sacramento, Lancaster, Erie, and Fort Worth). Over 1200 delivery unit supervisors and managers were trained during DOIS Pilot Deployment. Pilot user input proved to be an invaluable
resource in evaluating DOIS for National Deployment. The suggestions from pilot users were considered as the basis for enhancements for both the application and training.

On August 29, 2000, following the success of the DOIS Pilot Deployment, the USPS Board of Governors approved DOIS National Deployment. As DOIS is deployed nationally to the remaining 79 USPS districts, over 15,000 people will be trained.

**Section 1.1.4 DOIS Functionality**

This section describes the following DOIS functional areas:

- Office management;
- Route management;
- Deployment management.

**Office Management**

The office management portion of DOIS supports delivery unit supervisors in daily office management activities, such as:

- Recording mail volumes;
- Evaluating carrier performance using various reports;
- Planning workforce requirements based on projected workload;
- Managing resource requirements (such as tracking carrier overtime and ensuring equitability);
- Providing consistent time of day delivery.

DOIS provides delivery unit supervisors with immediate updates to workload projections when volumes are loaded. This enables delivery unit supervisors to make decisions related to workload management. A major advantage of DOIS is the ability to balance workload among available resources, which leads to:

- Equitable distribution of workload among available resources;
- Consistent time of day delivery;
- More focus on workload projections;
- Increased focus on productivity.

**Route Inspections and Adjustments**

The route management portion of DOIS provides enhanced capabilities for proactive management of city route structures and the ongoing inspection and adjustment of city delivery routes.

- DOIS supports route examiners in performing formal and special route inspections.
- DOIS supports route examiners in analyzing inspection results; adjustments that create routes that fall as close to eight hours as possible; conducting and implementing route inspections within
the required 52-day timeframe.

- DOIS supports minor adjustments, including DPS volume impact and the adding/removing of delivery points.

After route inspections and adjustments have been completed, the updated information is used on the office management side of DOIS to ensure consistent and up-to-date workload information.

DOIS provides the following:

- Automatic random timecard analysis calculation, saving time;
- Creation of multiple route adjustment scenarios — the adjusted data for the scenario selected becomes the current base data;
- Printed 52-day implementation plan to support fulfillment of the 52-day implementation requirement.

DOIS serves as a complete on-line tool that supports the end-to-end route inspection processes. DOIS interfaces with AMS to provide current delivery information. The system supports minor adjustments, keeping route information more accurate. DOIS also allows the delivery unit supervisor to create multiple scenarios providing a method to evaluate a decision before implementing route adjustments.

Deployment Management

DOIS also provides deployment management functionality that supports the activities that occur in the Readiness Phase prior to DOIS deployment. Readiness activities are critical in ensuring that districts are fully prepared for the deployment of DOIS. The Deployment Management functionality contains three parts:

- Deployment and Training Workbench;
- Assessment Workbench;
- Data Preparation Workbench.

The Deployment and Training Workbench enables DOIS Deployment personnel to access deployment and training management materials, deployment management templates, training management templates, and reports.

The Assessment Workbench contains the general contact information for the location for which the assessment is being completed (such as the Location Name and Type, Address, Phone Number(s), cc:Mail Address and Point of Contact information). This information enables the DOIS District Deployment Team to contact the site throughout the deployment period. The Assessment Workbench also serves as a
navigational window, linking the user to the delivery unit and the Data Site Assessment windows.

The Data Preparation Workbench is used to load data into DOIS in three steps: workload, workforce, and interfaces. The workbench has buttons that open standard DOIS windows and some specialized data preparation windows used to enter the data. The DOIS Site Activator activates the delivery unit on Friday before activation.
Section 1.2
DOIS National Deployment Approach

DOIS National Deployment follows an area-by-area approach. Within each area, the deployment process consists of four major phases. Each of these phases corresponds to sections of the DOIS Deployment Management Guide (DDMG): Deployment Organization and Preparation (Section 2), Readiness (Section 3), Training and Deployment Execution (Section 4), and DOIS Transition (Section 5). The DOIS National Deployment Roadmap (located at the beginning of the paper-based copy of this guide) provides a graphical depiction of these phases, including the major activities occurring during each phase and the personnel involved in the activities.

Section 1.2.1
Area Deployment Overview

Deployment Organization and Preparation (Section 2)
The Deployment Organization and Preparation Phase of DOIS deployment provides key area and district personnel with the processes and procedures used during DOIS National Deployment. During this phase, key area and district management are briefed on DOIS, as well as the support required. Critical DOIS deployment personnel are also identified during this phase. In addition to the selection of key personnel, discussions regarding the area and district level preparation activities are reviewed. DOIS National Deployment Training occurs during this phase.

Readiness (Section 3)
Activities completed during the Readiness Phase are critical in ensuring that districts are fully prepared for the deployment of DOIS. The Readiness Phase of the DOIS deployment process involves determining current readiness status of each delivery unit, the identification of outstanding issues, and the correction of these issues. DOIS Deployment Team Training Phase 1 is conducted during this phase, as well. This training session introduces the various DOIS District Deployment Team members to DOIS and the DOIS deployment process. Following DOIS Deployment Team Training Phase 1, readiness assessments are conducted at each delivery unit and timekeeping data site and the results are analyzed using the Assessment Analysis Report. The DOIS District Coordinator uses the results of this assessment to identify district and site-level issues and to develop their district level Readiness Action Plan.

Training and Deployment Execution Phase begins after
Deployment Execution (Section 4) readiness assessments have been completed and the results of these assessments have been analyzed. Several activities occur during this period. DOIS Deployment Team Training Phase 2 prepares the DOIS Site Activators and DOIS Facilitators to perform their designated roles in the DOIS deployment process. Each district selects a DOIS Pilot Site during Activation Scheduling in Section 3.1. The pilot site is activated prior to all other sites in the district. Pilot activation takes place shortly after DOIS Deployment Team Training Phase 2, providing the DOIS District Deployment Team with an opportunity to execute the DOIS deployment process in a controlled setting. DOIS Site Activators execute essential data preparation activities, including the data translation and data entry processes. DOIS for End Users and DOIS for Managers training are held to prepare participants to use DOIS for daily management of city routes within their delivery units.

DOIS site activations also occur during this period. Activations include the actual cutover to DOIS, as well as several days of on-site support for the delivery unit. During on-site support, DOIS District Deployment Team members conduct a Best Business Practice Review. This review assesses delivery unit practices.

DOIS Transition (Section 5) The DOIS Transition Phase allows for an organized transition from active deployment execution to ongoing operations and support of DOIS within a district. During this phase, DOIS District Deployment Team members transfer their knowledge of DOIS and the deployment process to district personnel. Information shared during this transition includes the process for managing future DOIS implementations and conducting future training sessions.

Section 1.2.2 Area Deployment Organization USPS personnel from the area and districts execute DOIS National Deployment activities with support from the DOIS Project Management Office (PMO).

The organization chart in Figure 1-1 illustrates how USPS and DOIS PMO personnel work together in deploying DOIS to an area. These individuals perform key roles in ensuring the successful deployment of DOIS. These roles include DOIS Area Champion, DOIS Area Coordinator, DOIS District Champion, and DOIS District Coordinator. Additionally, USPS personnel act as DOIS Training Leads, DOIS Facilitators, DOIS Activation Leads, and DOIS Site Activators. These roles and responsibilities are outlined in Section 1.2.3.
Figure 1-1
DOIS National Deployment Team Structure
## Section 1.2.3
Area Deployment Roles and Responsibilities

The following chart includes the roles and responsibilities of DOIS National Deployment Team PMO members.

<table>
<thead>
<tr>
<th>Team Name</th>
<th>Team Member(s)</th>
<th>Roles and Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOIS National Deployment</td>
<td>Program Management Team</td>
<td>• DOIS Client Program Manager;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• DOIS Program Partner;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• DOIS Deployment/Application Solution Lead;</td>
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<tr>
<td></td>
<td></td>
<td>• DOIS Human Performance Support Solution Lead;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• DOIS Deployment Manager.</td>
</tr>
<tr>
<td>Central Support Team (DOIS PMO)</td>
<td>Central Program Management Support Team</td>
<td>• Provides management support for the deployment effort — tracking/ monitoring field efforts,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>implementation/management of the deployment support materials.</td>
</tr>
<tr>
<td></td>
<td>National Deployment Support Desk Team</td>
<td>• Provides training, technical, and site activation support for the DOIS Deployment field teams.</td>
</tr>
<tr>
<td>Area Deployment Support Team</td>
<td>Area Lead</td>
<td>• Facilitate the management of the area deployment efforts.</td>
</tr>
<tr>
<td>(DOIS PMO)</td>
<td></td>
<td>• Manage the work efforts of the DOIS PMO Area Sub-Leads and other PMO members in the area.</td>
</tr>
<tr>
<td></td>
<td>Area Sub-Lead</td>
<td>• Track and report district deployment progress to DOIS PMO Area Lead.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Manage the work efforts of the DOIS PMO District Leads.</td>
</tr>
<tr>
<td>District Deployment</td>
<td>District Lead(s) (one per district)</td>
<td>• Facilitate the management of district deployment efforts.</td>
</tr>
</tbody>
</table>
The following chart includes the roles and responsibilities of the USPS members of the DOIS National Deployment Area Team.

<table>
<thead>
<tr>
<th>Team Name</th>
<th>Team Member(s)</th>
<th>Roles and Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area Deployment Support (USPS)</td>
<td>DOIS Area Champion</td>
<td>• Lead area level sponsorship session.</td>
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<tr>
<td></td>
<td></td>
<td>• Meet with district managers to ensure area support for DOIS deployment efforts.</td>
</tr>
<tr>
<td></td>
<td>DOIS Area Coordinator</td>
<td>• Plan and manage the execution of the area level DOIS deployment efforts.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Lead area level progress reporting session.</td>
</tr>
<tr>
<td>District Deployment Support (USPS)</td>
<td>DOIS District Champion</td>
<td>• Act as a liaison between the DOIS District Coordinator and the district manager, POOMs, MOPS, and delivery managers to ensure support for the DOIS deployment efforts.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Plan and manage the execution of the district level DOIS deployment efforts.</td>
</tr>
<tr>
<td></td>
<td>DOIS District Coordinator</td>
<td>• Schedule site activations.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Coordinate the distribution of district level communications.</td>
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<tr>
<td></td>
<td>DOIS Activation Lead</td>
<td>• Coordinate site activations within the district, including pilot site activation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Execute delivery unit site activation tasks.</td>
</tr>
<tr>
<td></td>
<td>DOIS Site Activators</td>
<td>• Execute delivery unit site activation tasks.</td>
</tr>
<tr>
<td></td>
<td>DOIS Training Lead</td>
<td>• Facilitate management of DOIS training tasks and schedule users for training.</td>
</tr>
</tbody>
</table>
### Section 1.3

**DOIS Deployment Support**

In order to assist the DOIS National Deployment Team members, several support materials and resources have been developed. These include the DOIS National Deployment Toolkit, DOIS training courses, and the DOIS National Deployment Support Desk (NDSD). This support provides the necessary knowledge and tools to execute DOIS National Deployment.

### Section 1.3.1

**DOIS National Deployment Toolkit**


The purpose of the DOIS National Deployment Toolkit is to simplify and streamline the deployment management process. The procedures, templates, and tools contained in the Toolkit incorporate best practices developed during DOIS Pilot Deployment. The DOIS National Deployment Toolkit serves as a comprehensive tool to use as a reference when dealing with procedural questions related to DOIS deployment.

The DOIS Deployment Management Guide (DDMG), used by the DOIS National Deployment Team members, provides a set of guidelines along with support materials (spreadsheets, templates) that will be used to structure the management of the area and district deployment activities.

The DOIS Site Activation Guide (DSAG), primarily used by DOIS Site Activators and Activation Leads, provides specific instructions on how to activate DOIS within a delivery unit. This includes detailed instructions for performing data preparation, application installation, and post-activation site support.

The DOIS Training Management Guide (DTMG), primarily used by DOIS District Training Leads and DOIS Facilitators, provides specific instructions and guidelines on how to organize and manage the execution of district training activities during DOIS deployment. It provides an outline of the activities for monitoring and reporting on the training sessions conducted.

<table>
<thead>
<tr>
<th><strong>DOIS Facilitators</strong></th>
<th>• Facilitate the DOIS for End Users, DOIS for Managers, and DOIS for Site Activators courses.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>•</strong> Manage the E1357 process for DOIS District Deployment Team and DOIS end users.</td>
<td>• Conduct district training efforts.</td>
</tr>
</tbody>
</table>

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Within the DOIS Deployment Management Guide, there is a timeline at the beginning of each section depicting the major activities that occur during that phase. At the end of each section, there is a checklist to ensure that all activities described within the section have been completed. The sections within the DOIS Deployment Management Guide contain timeframes such as, a particular event/activity occurring within a specified period, “x-12” weeks. The countdown of events is based on the first (non-pilot) activation in a district, which is represented as “x”. Once the first (non-pilot) site has been activated in the district, “x” represents each individual site. DOIS Deployment Management Guide sections also include an audience for each section that outlines which DOIS Deployment Team members should focus on each particular section.

For each section, there may also be supporting documentation to assist in completion of that phase’s activities. Examples of supporting documentation are talking points, templates, and quick reference guides.

At the end of the DOIS Deployment Management Guide, there is a master checklist that details all activities by date. All of these tools are designed to ensure readiness and deployment activities are completed in order, in their entirety, and on time.

The DOIS National Toolkit will be distributed by the DOIS PMO to those taking active roles in the DOIS National Deployment, through meetings and training sessions.

These tools are available in a paper-based format and can be accessed electronically from the Deployment and Training Workbench in DOIS. Note that the templates available electronically through the Deployment and Training Workbench will be “read-only” documents. In order to enter text or data into these templates, the files will need to be saved to your hard drive with a different file name. Once the files have been saved to your hard drive, you may work within the templates.

DOIS Deployment Team members attend DOIS training courses based on their roles and when they join the deployment team. This classroom training provides users with an opportunity to gain hands on experience with DOIS, exchange ideas with National Deployment Team members, and ask DOIS experts questions.

DOIS Deployment Team members take a combination of DOIS courses during the different training course conducts. There are three parts of DOIS Deployment Team training:
DOIS Deployment Management Guide

- DOIS National Deployment Training;
- DOIS Deployment Team Training Phase 1;
- DOIS Deployment Team Training Phase 2.

DOIS National Training occurs during the Deployment Organization and Preparation Phase. Members of the DOIS PMO facilitate this training for the DOIS Area Coordinator, DOIS District Coordinator, and the DOIS Training Lead. This training consists of the following courses:
- DOIS for End Users;
- DOIS for Managers;
- DOIS for Site Activators;
- DOIS for Facilitators.

In addition, these participants attend the Deployment Planning Workshop, which provides guidance on the DOIS Deployment process.

DOIS Deployment Team Training Phase 1 occurs during the Readiness Phase. The DOIS Training Lead facilitates this training provided to the DOIS Activation Lead, DOIS Facilitator, and the DUC Coordinator. The courses taught during this training include:
- DOIS for End Users;
- DOIS for Managers;
- DOIS for Site Activators;
- DOIS for Facilitators.

DOIS Deployment Team Training Phase 2 occurs during the Training and Deployment Execution Phase. The DOIS Facilitator provides this training to the DOIS Site Activators and the DOIS Pilot Site Supervisor. The courses taught during this training include:
- DOIS for End Users;
- DOIS for Managers;
- DOIS for Site Activators.

Section 1.3.3
DOIS National Deployment Support Desk

The National Deployment Support Desk (NDSD) provides training, technical, and site activation support for the DOIS Deployment field teams, which are located at the area and district levels. For more information, contact the DOIS PMO representative.