Alert Watch and Response Engine (AWARE)

Data Management Plan

VA logo

January 2014

Prepared by Harris Corporation

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# Introduction

This section provides a basic and high-level introduction to the Alert Watch and Response Engine (AWARE) Data Management Plan (DMP). It describes the purpose and scope of this document, and provides general data requirements along with basic oversight practices. This document is internal to Harris and not intended to be delivered to the customer.

## Overview

Data management planning is critical to the process of successfully managing an engagement. Data management involves developing systematic processes and protocols designed to provide a framework for safeguarding and maintaining quality information. These processes must provide a coherent method for capturing, processing, storing, and retrieving data for the engagement. In addition, data elements – and their definitions – must be documented in a standard manner so all project members understand what information is supported by the engagement and how it is to be processed and used.

AWARE will manage the data it generates by adhering to data requirements and providing necessary data to its users, stakeholders, and clients, where appropriate. The DMP identifies the collective data needs and data tools of the project in this document along with the AWARE SharePoint Data Management site, providing a consistent approach to data management within the organization.

### Purpose

Data standardization reduces the cost, complexity, and level of resources expended on the management of engagement data. This DMP provides a framework to assess and inventory the data being developed, maintained, and analyzed by the engagement. It also provides an infrastructure in which new data may be implemented effectively and seamlessly.

### Document Scope

This document provides a broad guide to the AWARE data management process. This DMP provides the details of management and acquisition of data only at the engagement-level. It is not intended to be all-inclusive since it does not provide specifics for data that is maintained at the division or corporate levels.[[1]](#footnote-1) The data managed by AWARE is broken-down into the following sections:

* Staff Management Activities
* Training Materials and Records
* Process Directives
* Quality Management
* Solution Implementation
* Project Management Documents
* Handling of Sensitive Client Data
* Backup and Disaster Recovery

### Goals and Objectives

The goals and objectives of the AWARE DMP are to:

* Identify standards and requirements for data collection and use.
* Identify and document data storage locations, access levels, conservation periods, distribution methods, data custodians, and any other important attributes.
* Promote data consistency throughout the engagement.
* Minimize unwanted duplication in collecting, processing, storing and distributing data.
* Safeguard data and make information available to managers, project members, stakeholders and clients, where appropriate, through an integrated and collaborative infrastructure.

### Roles and Responsibilities

**Data Owner**: A Data Owner is the “owner” or manager of a particular set of data. The Data Owner of an engagement is responsible for determining who has access to the data – or parts of it – and the type of access that will be granted (edit, contribute, read-only, etc.). The Data Owner also consults with user groups to determine data needs and documents the data management plan and the requirements/handbook for data tools.

The identification of and consultation with data users is the most fundamental aspect of the data management process. Data Owners must identify data users and consult with them prior to setting the data collection program’s objectives and goals.

The needs of the data users will constrain and guide:

* The type of data collected.
* The methods/tools of data collection.
* The standards to which data collection is carried out.
* Appropriate data processing methodologies.
* Appropriate means of dissemination or publication.

**The AWARE Project Manager will serve as Data Owner for AWARE project.**

## General Data Requirements

The AWARE team has established the following data collection and management standards:

* Requirements for the development of project-specific tools to collect, analyze, and/or store engagement data should be documented and reviewed by relevant stakeholders.
* Project-developed or customized tools shall adhere to all AWARE infrastructure standards.
* Appropriate levels of security access to data will be enforced.
* Engagement data will be preserved for use in disaster recovery through short-term backup and long-term archival of data.
* Geographic disparity of project members will be considered when determining data management tools and procedures. Data will be made available on platforms appropriate for the location of members and clients, when appropriate.

## Data Oversight

The AWARE Project Manager (Data Owner) will review the DMP on a regular basis (e.g. annually or for each period of performance) to compare the validity of the existing plan against the needs of the engagement within its current scope of activity. The Project Manager may also review the DMP upon major changes, such as:

* Corporate or client demands for additions/modifications
* Process improvements or audit findings
* AWARE requirements for data insight or implementation of best practice tools and methodologies.

## Data Quality Assurance

An objective of data management is to provide information needed by an engagement for its day-to-day operations and decision-making. If this objective is to be met, data must be useful and available.

To verify that AWARE project data satisfies this objective, the Data Owner (or his/her designee, such as someone in the role of Configuration Manager) will audit engagement data for accuracy, completeness, consistency, uniqueness and validity, and in accordance with the engagement’s Configuration Management Plan (CMP). Audit findings of poor data quality are reported to project management for immediate correction.

## Key to Following Data Management Charts

The following section specifies the detailed data management attributes of data being collected and stored. These are standard attributes to be considered in the management of data based on ISO, CMMI and SOX requirements.

The AWARE Data Management SharePoint List site captures the data management attributes for each artifact. This table is found on the AWARE SharePoint List site at the following location:

* AWARE Program > Data Management (under lists)  
  (<https://partners.harris.com/vap/aware/Lists/Data%20Management/All%20Items.aspx>)

The table below defines the attributes maintained under this site.

Table - Data Attributes Key

|  |  |
| --- | --- |
| **File Contents:** | What is being controlled? What form are the records in? (Are they records in a tool, hard or softcopy documents?) |
| **File Location:** | Where are the files located? Provide breadcrumbs and/or hyperlinks. |
| **File Sequence:** | What is the unique index for these records (chronological, alphabetical, numerical sequence, unique assigned alphanumeric key, etc.)? |
| **Conservation Period:** | How long will the records be maintained while the engagement is active (e.g., 6 months, 1 year, until next sprint or milestone, until contract ends, etc.)? |
| **Access:** | Who (which groups or roles) has access to the data? What degree of access does each (group or role) have? For example: read, edit, or administrative access? |
| **Data Custodian:** | Who (roles or individuals) has ultimate responsibility for managing this data and granting access to authorized users based on access levels set by the Data Owner? |
| **Electronic Support:** | Is this in electronic format? Are there hardcopies? Is an electronic signature or stamp recorded? (If so, provide details). |
| **Distribution:** | What, if any, is the distribution of the information? Is it sent on a consistent basis to particular groups/roles? If so, how often and how? Is it just available for access, but not distributed? |
| **Comments:** | Is there any additional information about the data, such as planned changes or implementation of systems that may impact data integrity or format. |

# Staff Management Activities

This section provides the plan for managing staff records specific to the AWARE Project.

For each subsection listed below, refer to the AWARE [Data Management](https://partners.harris.com/vap/aware/Lists/Data%20Management/All%20Items.aspx) SharePoint List site for the applicable data, organized by Data Management Area (Staff Management Activities), and by appropriate Title.

## Organization Chart

The AWARE Project maintains an organization chart to document the structure and reporting relationships of its staff. This chart provides the first level of insight into stakeholder relationships and defining responsibilities.

## Roles and Responsibilities

The Project Manager is responsible for determining the appropriate roles and responsibilities needed to complete the engagement. Roles are determined for the engagement based on the work to be completed and available resources.

## Staffing Plans

The Project Manager is responsible for maintaining a Staffing Plan for the AWARE Project. These records are used to monitor and proactively plan staffing needs.

# Training Materials and Records

Training is a critical element to the continued growth of the employees in the AWARE Project. Only project-specific training, in the forms of brown bags, on-the-job (OJT) training, mentoring, etc., is captured here.

Employee training records that are part of the corporate training curriculum are maintained at the corporate level, and HITS Process Training records are maintained per the HITS DMP.

For each subsection listed below, refer to the AWARE [Data Management](https://partners.harris.com/vap/aware/Lists/Data%20Management/All%20Items.aspx) SharePoint List site for the applicable data, organized by Data Management Area (Training Materials and Records), and by appropriate Title.

## Training Materials

The AWARE Project seeks to build quality training materials that can be reused across the organization. All training materials created in support of conducting a training session are documented and stored. Members are provided access to the training materials and other engagements may reuse them, where applicable.

## Training Records

The AWARE Project maintains attendance records of all project-specific training sessions conducted. These documents provide confirmation of course completion.

## Project Training Plan

The AWARE Project team members have training requirements based on their roles on the project.

Project-specific requirements are outlined in the AWARE PMP, and organization training requirements are outlined in the AWARE Organizational training-Required Roles Matrix.

# Process Directives

This section provides the plan for managing project-specific processes and procedures.

For each subsection listed below, refer to the AWARE [Data Management](https://partners.harris.com/vap/aware/Lists/Data%20Management/All%20Items.aspx) SharePoint List site for the applicable data, organized by Data Management Area (Process Directives), and by appropriate Title.

## Tailoring Workbook

The AWARE Project Manager maintains a Tailoring Workbook for the engagement to define if and how the engagement will tailor the approved HITS processes based on its size and type. Operations Assurance (OA) must approve the specified tailoring before the engagement may execute on it.

## Process/Procedure Directives

The AWARE team maintains applicable process and/or procedure directives to further define project specific guidance. Depending on the subject, appropriate team members should be involved in establishing and approving process/procedure directives.

## Job Aids and Guides

The AWARE Project provides a number of job aids and guides such as VA or Harris templates to assist the project team in completing their tasks.

## Lessons Learned

The AWARE Project team will conduct and document lessons learned at the end of each contract period to record findings of how to improve any aspects of the project operations. Identifying lessons learned provides valuable feedback on areas needing improvement and areas which are excelling.

# Quality Management

Quality Management is a key success area. This section provides the plan for managing data records of the quality assurance operations for the AWARE Project.

For each subsection listed below, refer to the AWARE [Data Management](https://partners.harris.com/vap/aware/Lists/Data%20Management/All%20Items.aspx)SharePoint List site for the applicable data, organized by Data Management Area (Quality Management), and by appropriate Title.

## Verification Data

The purpose of Verification is to validate that work products meet their requirements. Verification of work products increases the likelihood that the product will meet the need of the client.

## Validation Data

The work products (e.g. requirements, designs, and prototypes) and mechanism used for testing is selected by determining which will be the best predictors of how well the product will satisfy the user’s needs.

## Configuration Items (CI) List

The AWARE Project team identifies products which need to be under configuration management so the integrity of these products is maintained throughout the engagement life cycle.

## Configuration Management Audits

The AWARE Configuration Manager conducts CM audits to verify that the characteristics of engagement work products meet the requirements specified in the CM Plan.

# Solution Implementation

This section provides the plan for managing data records of the AWARE Project solution implementation.

For each subsection listed below, refer to the AWARE [Data Management](https://partners.harris.com/vap/aware/Lists/Data%20Management/All%20Items.aspx) SharePoint List site for the applicable data, organized by Data Management Area (Solution Implementation), and by appropriate Title.

## Analysis

During any AWARE Project initiative, a documented analysis and/or architectural process will be created.

## Requirements

System or initiative requirements document our understanding of the client needs and establish a baseline for the development of our solution to meet those needs.

## System Design

System design specifications interpret the software requirements and begin the solution development process. The requirements are maintained in a centralized requirements repository and kept current during the engagement.

## Development

Development consists of the data and activities associated with implementing our solutions.

## Implementation Documents

Implementation data includes documents which are used to manage the implementation of the identified solution.

## Operations

During the solution cycle there are several data documents which do not particularly fall into one category or another. These documents generally support the day-to-day activities of the AWARE Project. These could possibly be operating procedures and outputs resulting from managed services or continuing services initiatives.

## Change Request Documentation

Managing change requests is a critical area of importance to AWARE Project. Change requests are used to document changes to the work products under configuration management. It allows those changes to be tracked and controlled.

# Project Management Documents

This section provides the details for managing the project management documents of the AWARE Project.

For each subsection listed below, refer to the AWARE [Data Management](https://partners.harris.com/vap/aware/Lists/Data%20Management/All%20Items.aspx) SharePoint List site for the applicable data, organized by Data Management Area (Project Management Documents), and by appropriate Title.

## Schedule and WBS

The AWARE Project manages engagement activities and timelines by utilizing Work Breakdown Structure (WBS) and schedules. The use of these documents helps to monitor the engagement status to completion.

## Project Plans

The AWARE Project manages project plans to include PMP, Implementation Plan, DMP, etc. The use of these documents helps to control engagement progress throughout the project lifecycle.

## Accounting and Financial Files

The AWARE Project maintains, reviews, and signs its own accounting files (invoices, procurements, etc.) with the assistance of a Program Financial Analyst.

## Subcontractor/Supplier Management

The AWARE Project captures and records all information concerning suppliers for the engagement.

## Client Approvals

The AWARE Project maintains records of client approvals of deliverables.

## Communication Plan

The AWARE Project Communication Plan outlines the audience and vehicles of communication within the engagement. It validates communication methods are established and documented for all relevant stakeholders.

## Status Reports

The AWARE Project documents internal and external status reports. This information is captured to record project activity during the life of the project.

## Program Monthly Reviews (PMRs)

The AWARE Project creates internal PMRs as a way to present program status to Senior Management.

## Meeting Notes/Minutes

The AWARE Project documents internal and external meetings. This information is captured to record discussions, decisions, action items and general information identified during the meetings.

## Metrics

The AWARE Project team captures and records metrics data on the progress and performance of the engagement. These metrics provide a qualitative evaluation on the performance of the engagement.

## Risk Management

The AWARE Project team captures and documents all risks which may cause problems to the schedule and resources of the engagement. Identifying these risks allows the management team to plan mitigation strategies early to effectively reduce the impact of problems which could jeopardize the success of the engagement.

## Issue Management

In addition to risk management, the AWARE Project also tracks and manages any issues which may arise during the life of the engagement.

## Test Tracking

The AWARE Project tracks and manages any reports generated by test activity through the Test Tracking Report (TTR).

# Handling of Sensitive Client Data

The AWARE project does not aniticpate the need to handle sensitive client data. The VA will supply a fabricated test environment that resembles the live VA environments.

In the event of a sensitive client data breach or any violation of Privacy and Security Policies and Procedures or Privacy and Security Rules, the Harris team member must contact and report to the Harris HIPAA Division Official, as instructed through HIPAA training. The official will answer questions and provide guidance through this event. To contact the appropriate Harris HIPAA Division Official, refer to:

<http://my.harris.com/information-services/security/pdf/HIPAA_Officials_Contact_Information.pdf>

# Backup and Disaster Recovery

## Overview

This section describes how the AWARE team protects against any loss of data (original, normalized, or cleansed) or files, such as source code and configuration files. In the event it is necessary to recover lost data, our backup and recovery strategy will provide a process for data to be recovered in its entirety, or by any portion. This validates the data will be available during all cycles of the project life cycle and during client use of the application.

## Data on Harris Systems

All data stored on a company database, network and/or server is backed-up, recovered and supported by the Harris Assured Infrastructure Management team. The backup and disaster recovery plan for this set of data is described in the HITS DMP.

## Non-Harris Data/Systems

### Description of Non-Harris Data/Systems

This section of the AWARE Data Management Plan refers to the VA’s Innovation Cloud for virtual computing space for the purposes of developing and testing AWARE.

### Method of Backup

Backups are automated daily snapshots for the VA Innovation Cloud. Each snapshot reflects each of the cloud’s virtual servers. Each snapshot is archived for 30 days.

### File Recovery Plan

The VHA Innovation Program web help desk site is used to request assistance such as file restores. In order to use this resource, one must first have a sandbox account or login by following the instructions on <http://vacloud.us/groups/sandboxdocs>.

File restores may be requested from <http://help.vacloud.us>.

Provide the following information at a minimum:

1. Identify the file(s) that need to be recovered.
2. Identify and select the date and time of the file(s) that need to be recovered.
3. Request the file(s).
4. Validate the recovered file(s) were restored properly

# Capability Maturity Model Integration Reference Matrix

This chapter cross-references the items listed below to the sections within this document that address each item:

* Table 2 - Data Management-Reference Matrix – Project Planning maps the CMMI Practice of each CMMI Specific Goal for the Data Management Specific Goal of the Project Planning Process Area
* Table 3 - Data Management-Reference Matrix – Project Monitoring and Control maps the CMMI Practices of each CMMI Specific Goal for the Data Management Specific Goal of the Project Monitoring and Control Process Area maps the Common Features of the CMMI Generic Goals for the PPQA Process Area.

Table - Data Management-Reference Matrix – Project Planning

| **Specific Goal/ Practice** | **Key Practice** | **Cross Reference Section** |
| --- | --- | --- |
| PP SP 2.3 | Plan for the management of project data | All |
|  |  |  |

Table - Data Management-Reference Matrix – Project Monitoring and Control

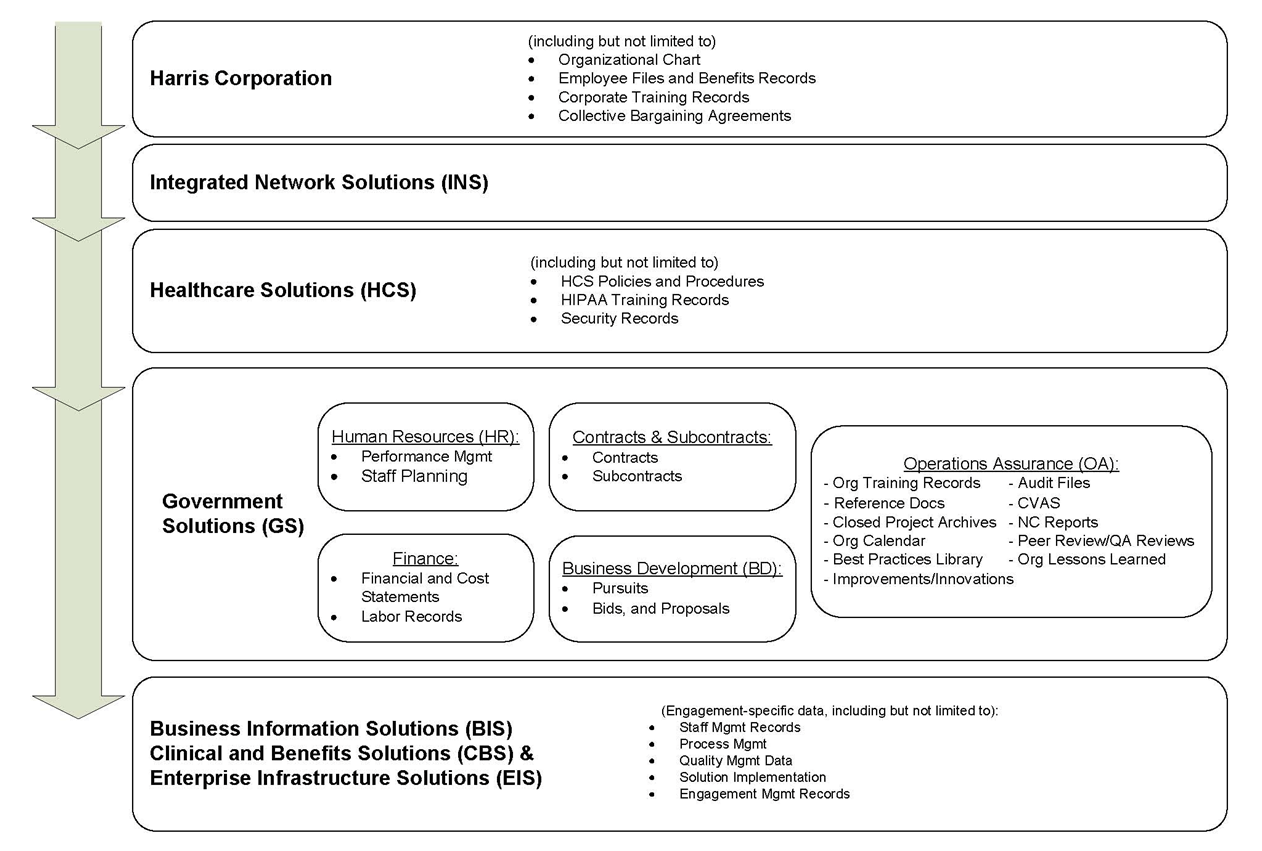
| **Specific Goal/ Practice** | **Key Practice** | **Cross Reference Section** |
| --- | --- | --- |
| PMC SP 1.4 | Monitor the management of project data against the project plan. | All |
|  |  |  |

# Appendix A: Checklist of Data Considerations

Have you considered and addressed the following typical areas of data concern?

* Do you store information on your C: Drive? Is this information necessary to continue operations in your absence? Would the information be completely lost if your C: Drive irretrievably crashed?
* Do you store project information on the LAN or online (e.g., SharePoint)? If so, is it accessible by everyone? Should the information be limited to certain groups?
* Do you own/run servers? Do you backup or archive this data? Is the storage media kept offsite in case of disaster?
* Does your client provide you with sensitive data for use in the project (e.g., requirements or testing), such as files with health information, SSNs, financial/budget information?
* How do you store salary information for your staff (e.g., PFMs, cost books)? Do non-management team members have access to it?
* Do you have any proprietary or sensitive information on your desk at client site? Is any proprietary or sensitive information stored on a client provided computer or network?
* Does your entire team always remember to archive and publish any official correspondence, such as task requests, approvals, issues, complaints, etc? If an individual does archive the correspondence, do others on the team have access to the archive?
* When someone joins the project, are they routed to individuals for information necessary to do this work? Do they get referred to multiple people before finally finding the information? Is the information just in the person’s mind, computer, or files?

# Appendix B: HITS Data Management Chart



1. See Appendix B for details on the type of data that is maintained at the division and corporate levels. [↑](#footnote-ref-1)