*caARRAY*

Project Management Plan

Version Number: 2.0

Version Date: 1/4/2013

VERSION HISTORY

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| **Version Number** | **Implemented**  **By** | **Revision**  **Date** | **Approved**  **By** | **Approval**  **Date** | **Description of Change** |
| 1.0 | Rashmi Srinivasa | 7/21/2011 |  |  | Initial Draft |
| 1.1 | Rashmi Srinivasa | 10/12/2011 |  |  | Updated personnel roster |
| 1.2 | Rashmi Srinivasa | 12/6/2011 |  |  | Updated personnel roster |
| 2.0 | Rashmi Srinivasa | 1/4/2013 |  |  | Rewrote in DHHS EPLC format |
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# Introduction

## Purpose of Project Management Plan

The intended audience of the caArray PMP is all project stakeholders including the government sponsor, NCI leadership, the SAIC-F Technical Project Manager (TPM), and the project team. caArray is a software tool to support the management of microarray data and associated experiment and sample annotations. This document lays out the approach that 5AM Solutions has chosen to take in managing the project.

## Project Characterization

HHS Strategic Goals: Accelerate the process of scientific discovery to improve patient care. This includes expand the knowledge base in biomedical and behavioral sciences by investing in fundamental and service system research, human capital development, and scientific information systems.

HHS Enterprise Architecture Segment: System Maintenance (Information & Technology Management)

# Executive Summary of Project Charter

caArray is a software tool to support the management of microarray data and associated experiment and sample annotations. It consists of a web-based user interface as well as both caGrid and Enterprise Java Bean-based programmatic interfaces. The system is intended for installation at institutions requiring local management and control of their microarray data; in addition, NCI CBIIT hosts an instance of the system for public use. Users may upload sample annotations and files using forms provided through the graphical user interface; alternatively, they may bulk upload data that has been formatted as MAGE-TAB. All details of the project are available on the NCI Wiki and subversion repository, and the project charter/vision can be found here: https://ncisvn.nci.nih.gov/svn/caarray2/trunk/docs/requirements

# Scope Management

The caArray project team follows an Agile/Scrum software development methodology. Our approach to scope management is as follows.

The project team works with the government sponsor, SAIC-F TPM, senior leadership and other team members to create a product backlog based on the contract deliverables. This will be available on the NCI CBIIT JIRA instance - <https://tracker.nci.nih.gov/browse/ARRAY>. The team estimates the level of effort for each of the items in the product backlog every two weeks, and works with the government and SAIC-F stakeholders to prioritize the backlog and define the scope for every planned release.

The scope is continuously revisited and reprioritized (if necessary) every 2 weeks at the iteration boundaries. The iteration boundary also provides an opportunity to demonstrate to the stakeholders any new features that have been implemented.

Any additions to the product backlog (deviation from contract deliverables) will be addressed with the SAIC-F TPM and contracting officer to assess the impact. If approved, the items will be added to the product backlog for prioritization and implementation.

## Work Breakdown Structure

We plan releases, iterations and milestones at various levels:

1. A coarse-grained release plan that describes the entire project in phases, including a backlog of client-prioritized items. This is maintained in a Microsoft Project plan. The caArray release plan is available here: <https://ncisvn.nci.nih.gov/svn/caarray2/trunk/docs/project_management/>caArray\_Project\_Plan.mpp.
2. A series of fine-grained Iteration Plans, which are fleshed out at the start of the 2-week iterations. An Iteration Plan defines and tracks the detailed tasks planned in that iteration. These are maintained in the Jira tracker for caArray: <https://tracker.nci.nih.gov/browse/ARRAY>

## Deployment Plan

### Software Release Process

There will be 2 release candidates planned for in the project schedule, where the focus will be on addressing critical bug fixes found by the QA team or during user acceptance testing. Once the final release candidate has been regression-tested by the QA team on the QA tier as well as the STAGE tier and approved, the caArray team will work with the CBIIT Systems team to deploy the release candidate to the caArray PRODUCTION tier. After smoke tests have been run to verify the deployment, a release announcement will be sent out, and the application will be available for users.

### Security

The CBIIT Security team will run appscans on the first release candidate and the last release candidate on the STAGE tiers, and will certify that the application is sufficiently secure to be deployed to the PRODUCTION environment.

### 508 Compliance

The caArray team will designate a 508 compliance lead who will run or request the CBIIT Systems team to run 508 compliance scans regularly. The scans are currently done using Accenture’s Maxamine/ADDE Knowledge Platform, and use HHS custom-defined rules – these are the only violations that the caArray team will consider. The scanning process is done by a spider program from an HHS-based server. Any 508 compliance issues will be identified, estimated and prioritized on the backlog, and the caArray team will address them as prioritized. The analysts will keep 508 compliance requirements in mind as they define new requirements, and the developers will keep 508 compliance requirements in mind as they write new code. The current mandate for NCI applications is a compliance score of 90%.

### Operations and Maintenance

The caArray team will work with the CBIIT Systems and App Support team to integrate caArray into their existing O&M processes. It is expected that the Systems team Helpdesk will triage user-reported issues and act as the first tier of support. Issues that cannot be resolved by them will be communicated to the caArray team who will investigate, estimate and prioritize the task, and resolve it.

## Change Control Management

CBIIT Change Management procedures will be used for all change control and management. The handbook and forms used are available at <https://wiki.nci.nih.gov/download/attachments/75013345/Change+Control+Handbook.pdf> and <https://wiki.nci.nih.gov/download/attachments/75013345/Change+Control+Form.doc>

All changes will be reviewed for potential impact and necessary changes to schedule and deliverables will be made as required.

SVN will be employed as the Software Configuration Management server. This server is maintained by CBIIT. At the most fundamental level, there are three types of change requests – feature requests/improvements, defects and tasks. Change requests are artifacts of the interaction between the stakeholder community and the product team where either the scope of what is available or the evaluation of what has been provided is in potential conflict with the stakeholder needs. **Tasks** will be used as the foundation for managing the project’s activities and communication.

**Feature requests** indicate a desire from someone in the stakeholder community to submit features for consideration by the caArray Change Control Group (CCB) that are unmet by any of the existing features, supplemental requirements or use cases. **Defects** represent a suggestion by the stakeholder community that an agreed upon piece of functionality does not work as advertised.

The caArray CM process consists of the following phases:

1. Classification – A change is identified and routed to the appropriate organization for resolution via a change request (CR) form that takes the form of a Jira ticket. The CR provides information concerning the need to change a baseline system or system component (hardware, software, or documentation).
2. Evaluation – An initial solution is identified. CM control is provided by either the caArray Change Control Board (CCB) or Architecture Review Group depending on the nature of the proposed solution (component-only or caArray application architecture).
3. Modeling and Testing – If the proposed solution involves an architectural change, the change is modeled and tested to determine its effect on the existing caArray architecture.
4. Implementation – The final solution is approved and deployed to the caArray.

The caArray Change Control Board comprises of key stakeholders including the NCI CBIIT Product Owner, the CBIIT Engineering Manager, the SAIC-F TPM, and representatives from the caArray team (Project Manager, QA Lead, Analyst Lead, Technical Lead, Systems/Deployment Lead, Documentation Lead).

# Schedule/Time Management

Our software development process is called the Glassbox™ process, and can be characterized as an iterative, agile process organized into the Phases defined by the Rational Unified Process. For these projects, we have chosen 2-week iterations. At the end of every iteration, we deliver complete and deployable software to the independent QA team to test. We also use this end-of-iteration meeting to review how the iteration went and to make any adjustments needed to improve productivity.

The team has daily scrums to monitor progress that are attended by the developers, analysts, project manager and QA personnel. The Microsoft Project Plan reflects progress and is reviewed weekly with the whole team including the government and SAIC-F stakeholders. Any deviation from the plan including delays, unplanned or unexpected results will be communicated to the leadership for next steps and planning.

## Milestones

The table below lists the milestones for this project, along with their estimated completion timeframe.

| **Milestones** | **Estimated Completion Timeframe** |
| --- | --- |
| Project Kickoff | 12/6/2012 |
| Release 2.5.1 | 06/30/2013 |
| Release 2.5.2 | 11/22/2013 |

## Project Schedule

The caArray project schedule is available here: <https://ncisvn.nci.nih.gov/svn/caarray2/trunk/docs/project_management/>caArray\_Project\_Plan.mpp

### Dependencies

1. Access to the NCIP channel in GitHub.

2. QA Signoff from the Independent QA team.

3. Deployments and security appscans from the NCI Systems and Security teams.

# Cost/Budget Management

The 5AM Project Manager provides monthly financial reports to the SAIC-F COTR. The 5AM Project Manager (Delivery Manager) works closely with the 5AM Chief Operations Officer on a bi-weekly basis to review budget actuals and projections. 5AM uses the Netsuite time tracking tool to capture all labor hours worked by an employee. These hours are captured by project and task / labor category. Hours are submitted weekly and are approved by the Delivery Manager as well as the COO. These hours are then captured and reported to the client through a monthly status report as well as a monthly invoice.

# Quality Management

The development team uses unit testing and code quality checks to ensure that the code committed to the repository is of good quality. An independent QA team will conduct the formal quality assurance and testing. The QA team will work closely with the development team during the iterations to create test plans, execute test cases and report test results.

# Staffing Management

All proposed resource additions and changes will be sent to the SAIC-F TPM for approval. The SAIC-F TPM is responsible for clearing the resource changes with the NCI Project Officers. The 5AM Project Manager (Delivery Manager) will be responsible for the actual procurement and assignment of resources to the project.

## Project Team Training

No training requirements are expected for this phase of the project.

# Communications Management

The Communication Plan is shown below.

| **Communication Audience** | **Purpose** | **Communication Method** | **Occurrence** | **Participants** |
| --- | --- | --- | --- | --- |
| Users, API partners | Requirements gathering and review | Teleconferences, face-to-face meetings, questionnaires, surveys. | As needed | Requirements Analyst, Project Manager, Tech Lead |
| SAIC-F TPM/COTR | Project status updates | Email communication, Phone call | Weekly or as required | Project Manager |
| Project Officer, full project team (QA, Systems team, tech writer) | Project status updates | Face-to-face meeting and teleconference | Weekly | Full project team including Project Officer |
| Users, API partners | Release Notices | Wiki, MAT-KC forums, ListServs | Concurrent with release cycle | Users |

# Risk Management

Risks will be identified throughout the course of the project, and communicated to the COTR. Risks in all categories – technical, schedule, resources, budget, environment, external dependencies – will be considered. Communication of risks will be done explicitly at the status meetings with SAIC-F. The risk matrix will also be available in the NCI subversion repository, captured in monthly status reports, and linked off the project wiki page.

For risk management, the following steps will be followed:

1. Consider/Identify risks – evaluate
2. Grade the risk with the potential impact.
3. Grade the risk with the probability of it occurring.
4. Write down a Prevention Plan - to prevent each risk from occurring.
5. Write down a Mitigation Plan - to lower the Impact if the problem occurs.
6. Write down a Contingency Plan - Optional
7. Keep checking the list and executing the Prevention Plans.

## Risk Log

The current statuses of all caArray risks are available here: <https://ncisvn.nci.nih.gov/svn/caarray2/trunk/docs/project_management/>

# Issue Management

Issue management is covered as part of risk management. See section 9.

# Acquisition Strategy

Not Applicable.

# Compliance-Related Planning

The following areas of compliance will be planned for and executed:

* Security - C&A
* CBIIT Enterprise Architecture
* Section 508 Compliance
* Privacy Impact Assessment (PIA)

For any release of the caArray application to the STAGE or PRODUCTION tier, the NCI CBIIT Security Team tests the system to verify its security status. Testing the system helps to ensure that the security posture of the system has not been adversely affected due to any changes made to the system. The ST&E is part of the Certification and Accreditation (C&A) program.

The caArray team complies with the NIH policy to ensure that all High and Medium security vulnerabilities found must be remedied before release to PRODUCTION.

Appendix A: Project Management Plan Approval

The undersigned acknowledge that they have reviewed the ***caArray* Project Management Plan** and agree with the information presented within this document. Changes to this **Project Management Plan** will be coordinated with, and approved by, the undersigned, or their designated representatives.

[List the individuals whose signatures are desired. Examples of such individuals are Business Owner, Project Manager (if identified), and any appropriate stakeholders. Add additional lines for signature as necessary.]

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