Form No. DTMB-3521 (Rev. 4/2012)
AUTHORITY: Act 431 of 1984
COMPLETION: Required
PENALTY: Contract change will not be executed unless form is filed

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
PROCUREMENT
P.O. BOX 30026, LANSING, MI 48909
OR
530 W. ALLEGAN, LANSING, MI 48933

CHANGE NOTICE NO. 18
to
CONTRACT NO. 071B6200168
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF CONTRACTOR:	PRIMARY CONTACT	EMAIL
Client Network Services, Inc. (CNSI) 702 King Farm Boulevard, 2nd Floor Rockville, MD 20850	John H. Cousins III	john.cousins@cns-inc.com
	TELEPHONE	CONTRACTOR #, MAIL CODE
	(301) 634-4600	

STATE CONTACTS	AGENCY	NAME	PHONE	EMAIL
CONTRACT COMPLIANCE INSPECTOR:	DTMB	John Spitzley	(517) 335-6612	spitzleyj1@michigan.gov
BUYER:	DTMB	Steve Motz	(517) 241-3215	motzs@michigan.gov

CONTRACT SUMMARY:

DESCRIPTION: **Medicaid Services Administration**

INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL OPTIONS INCLUDED	CURRENT EXPIRATION DATE
March 14, 2006	September 30, 2011	Two One-Year	September 30, 2018
PAYMENT TERMS	F.O.B	SHIPPED	SHIPPED FROM
N/A	N/A	N/A	N/A

ALTERNATE PAYMENT OPTIONS:	AVAILABLE TO MiDEAL PARTICIPANTS
☐ P-card ☐ Direct Voucher (DV) ☐ Other	☐ YES ☒ NO

MINIMUM DELIVERY REQUIREMENTS:

N/A

DESCRIPTION OF CHANGE NOTICE:

OPTION EXERCISED:	EFFECTIVE DATE OF CHANGE:	EXPIRATION DATE:
☒ NO ☐ YES	November 12, 2013	September 30, 2018

The following Community Health Administrative Management Payment System (CHAMPS) initiatives have been approved by the Michigan Department of Community Health and their Statements of Work are incorporated into this contract:, 1) Data Management Portal (DMP), 2) Healthy Michigan, 3) Beneficiary Monitoring Plan (BMP), 4) EFT.ERA Core Operating Rules, 5) CMS 1500 ADA Forms, 6) Provider Screening/Sight Visit Verification, and 7) Medicaid Integrated Care.

All other terms, conditions, pricing and specifications remain unchanged.

Per Administrative Board Approval on November 12, 2013.

VALUE/COST OF CHANGE NOTICE:	$ 0.00
ESTIMATED AGGREGATE CONTRACT VALUE:	$ 371,392,904.00

FOR THE CONTRACTOR:	FOR THE STATE:
Client Network Services, Inc. (CNSI)	Kim Stephen
Firm Name	Signature
John H. Cousins III	Kim Stephen, Director of the Bureau of Budget and Purchasing
Authorized Agent Signature	Name/Title
JOHN H. COUSINS III VICE PRESIDENT OF CONTRACTS AND CORPORATE COUNSEL	**Michigan Department of Community Health**
Authorized Agent (Print or Type)	Enter Name of Agency
12/23/2013	1/15/14
Date	Date

Documentation Management Portal Implementation Statement of Work

Prepared For:

State of Michigan
Department of Community Health
400 South Pine Street
Lansing, Michigan 48909

Prepared By:

CNSI
6465 Millennium Drive, Suite 150
Lansing, MI 48917

April 19, 2013

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Section 1: Introduction

CNSI is pleased to present this statement of work to implement the Document Management Portal (DMP) for the State of Michigan Department of Community Health (MDCH). CNSI proposes to implement the DMP using the IBM® FileNet® P8 platform to replace the current document management application under a fixed-cost agreement.

1.1 Regulatory and Business Drivers for Change

MDCH currently uses a third-party web application that enables providers to submit support documentation for Medicaid claims, programs, and services. MDCH staff must access both the Community Health Automated Medicaid Processing System (CHAMPS) and its document management application to review claims data and support documentation. This reduces overall productivity. Additionally, the State's current document management application is provided by a third-party as a hosted solution. This creates a compliance risk due to support documentation residing in a separate system outside the State network.

To improve staff productivity and mitigate compliance risks, MDCH and the Department of Technology, Management & Budget (DTMB) is planning to discontinue the use of its current document management application by expanding the current IBM® FileNet® P8 platform to provide functions and features available in the document management application.

To assist MDCH in this endeavor, CNSI will provide a portal for providers and other participants in the State's Medicaid program. Using the DMP, providers will be able to electronically submit authorization and consent forms, documentation supporting Medicaid claims, and other program-specific documents. This solution aligns with the State's objectives to:

- Mitigate regulatory compliance risk by having a single content repository.
- Remove dependency on third-party vendor systems and resources.
- Have a central governance of the system rather than multiple systems and owners.
- Leverage existing technology to enhance processes and service levels for Medicaid information submission and exchange.

1.2 CNSI Capabilities

CNSI's approach to implement the DMP and integrate it with CHAMPS is based on its ongoing partnership with MDCH and DTMB and its extensive knowledge of CHAMPS design, implementation, and operation. As system developers and integrators, CNSI aligns its clients' business processes and information systems to provide access to the right information at the right time, enabling the achievement of their desired business results and creating enterprise value. CNSI will employ its extensive technological experience in the industry and incorporate its flexible tools and methodologies to deliver

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quality results on time and within budget. CNSI completes jobs for clients by delivering on commitments with speed and purpose in accordance with the client's specifications and expectations.

CNSI will build upon its extensive knowledge gained from designing, developing, implementing, and operating CHAMPS for the State, as well as previous CHAMPS efforts, including the Health Insurance Portability and Accountability Act (HIPAA) 5010 compliance implementation, and the ongoing International Classification of Diseases, Tenth Edition (ICD-10), transition and remediation. In implementing the DMP and integrating it with CHAMPS, CNSI will continue to collaborate with the State's business and technical personnel and provide an experienced team of Medicaid subject matter experts (SMEs) who have the technical, business, and project management expertise to support this endeavor.

CNSI's experience working on prior Medicaid health information technology (IT) initiatives has led to incorporating the following factors in developing this statement of work:

- **CNSI's capability to conduct complex analysis of Medicaid system requirements**

  CNSI's project teams have a wealth of experience with multiple Medicaid programs, which allows them to efficiently conduct the data-gathering and analysis activities for this initiative. Architects and SMEs who have worked with CHAMPS for a variety of Medicaid health IT initiatives are among the team members involved in this effort.

- **CNSI's sensitivity to the State of Michigan's needs and constraints**

  CNSI is uniquely qualified to remain sensitive to the State's needs and constraints in defining the approach to the DMP development and implementation. The team will employ an orderly, structured, professional approach that is sufficiently flexible to respond to changes in requirements that evolve from additional understanding. Overall, CNSI has practical "hands-on" experience of what does and does not work.

CNSI has engaged HTC Global Services as a subcontractor to provide specific technical and business expertise that will complement CNSI's capabilities. For the State of Michigan, CNSI has previously engaged HTC Global Services to develop the Electronic Document Management System (EDMS) for CHAMPS. For this engagement, HTC Global Services will provide the technology to supply the DMP.

Throughout this engagement, CNSI will be wholly responsible for the work done by HTC Global Services. HTC Global Services will be held accountable to comply with CNSI, MDCH, and DTMB applicable standards. CNSI will oversee and approve all work done by HTC Global Services, including professional services, software, and deliverables produced by HTC Global Services under this statement of work.

1.3 Proposed Project Organization

CNSI believes that this statement of work represents the best possible combination of architecture, technology, support, and experience to complete this project. The proposed team members are each the best possible candidates of their respective disciplines. The underlying logic behind identifying each member of this group is that:

- They share the same philosophical approach for undertaking this project – **the customer comes first**.

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- They understand the values that each member brings to successfully implementing the project.
- They are committed to understanding and incorporating the State's requirements.
- They understand the necessary advanced technologies, business needs, and operational issues.

CNSI's primary objective is the successful implementation and completion of the project. Its team is fully dedicated to the DMP implementation and is confident in its ability to achieve that goal.

However, an effective project management plan cannot work with participation only by CNSI. As the customer, the State is the most important member of the project team. The customer must be actively engaged in the process at all levels. Implementation is only as good as the partnership established and maintained between all involved parties.

Figure 1 below shows the organization structure for executing the DMP project. As depicted in the organization structure, HTC is going to be an integral part of CNSI team to effectively manage and execute the DMP project. CNSI senior management will oversee the whole engagement including HTC team to ensure schedule and quality compliance.

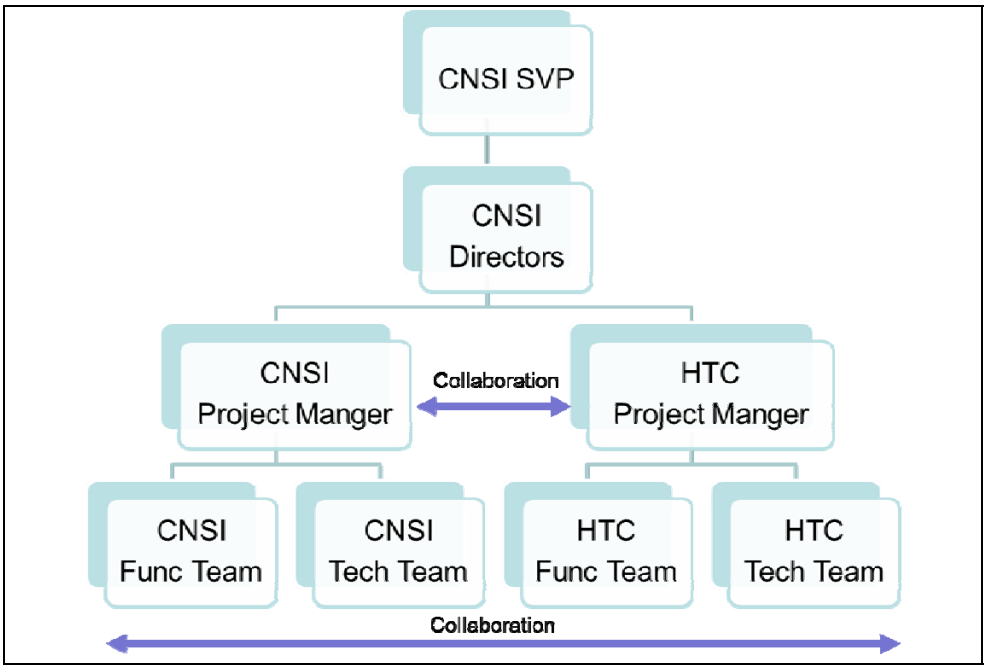

Figure 1. Organization Chart

1.4 Subcontractor Profile

Established in 1990 and headquartered in Troy, Michigan, HTC Global Services is a global provider of IT solutions and business process outsourcing services. HTC Global Services' clients include several Global 2000 organizations. HTC Global Services manages and improves IT environments, applications, and business processes for customers and has experience in providing enterprise-class document management systems, including its feature-rich docuSTACK product.

Since 2005, CNSI and HTC Global Services have successfully collaborated on previous Medicaid management information system (MMIS) projects in multiple states. HTC Global Services was involved

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in implementing the document management system for CHAMPS in Michigan and ProviderOne in Washington.

As part of HTC Global Services' work in creating the DMP solution, it will provide CNSI with the following work products:

- Requirements Specification Document
- Design Specification Document
- System Test Results Report

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Section 2: Project Management, Methodology, Tools, and Technical Approach

This section presents CNSI's project management and technical approaches, methodology, tools, and phased work plan for accomplishing all activities required for the DMP implementation and integration with CHAMPS. This section describes the scope of activities to be addressed throughout the project, from the initiation phase to final implementation, as well as the techniques and methodologies CNSI's project team will use.

Each of the following subsections will contain a high-level description of the three-phase approach for this project. For each phase, the major activities and anticipated deliverables are presented, followed by a high-level description of the major milestones and approximate timelines.

2.1 Project Management Approach

The project's successful implementation relies on the framework and environment provided by project and quality management. Figure 2 shows CNSI's project and quality management framework and how the related activities interact with project tasks.

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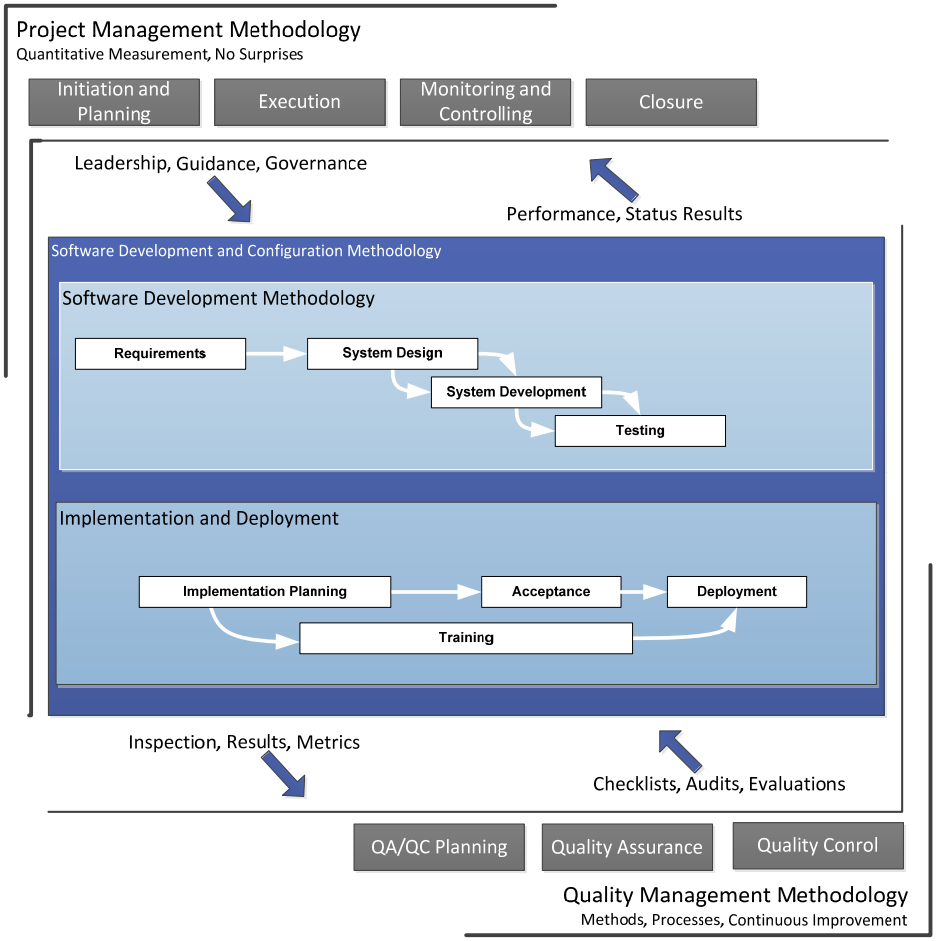

Figure 2. CNSI's Project Management and Quality Management Framework

Although all projects are unique, they share common components and processes. The generally accepted process groups defined by the *Project Management Body of Knowledge* (*PMBOK*), as incorporated into the CNSI project management process, are:

- **Initiating:** This process group defines the project objectives and grants authority to proceed. For CNSI, the initiating processes are largely incorporated into the proposal development process, during which required partners are identified.
- **Planning:** This process group refines the project objectives and scope and plans the tasks, activities, and steps necessary to meet the project's objectives. The planning processes start during proposal development and proceed following contract award while CNSI works with the customer to establish and baseline the project management plan. The project management plan is modified and updated as necessary over the course of the project. It is the culmination of the planning processes for scope definition and management, time (scheduling), staffing (human resources), communications, and risk management.
- **Executing:** This process group puts the project's plans into motion. This is where the bulk of the work for the project is performed.

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- **Monitoring and Controlling:** This process group measures the performance of the project's executing activities and reports these performance results to project managers and stakeholders. Output is used to refine, improve, and/or change project management (including plans and schedules) as necessary to meet the project's objectives.
- **Closing:** This process group documents the formal acceptance and approval of the project's product and brings all aspects of the project to a close.

CNSI is confident it has the correct methodology and project framework in place to successfully implement the DMP. CNSI continually improves its project management processes using lessons learned from previous projects and through the proficiency and continuous education of its program and project managers, senior technical and engineering staff, and senior and corporate management. This ensures a number of advantages:

- The project management philosophy is firmly entrenched within the entire project team, including MDCH and CNSI.
- Project management is a core competency.
- The project staff is focused on successfully implementing the project.
- Project management, quality management, and cost management processes are fully integrated and their infrastructure is in place.
- Effective project status reporting is established throughout the project life cycle.
- Project and software development methodologies are well documented.
- Project information is communicated continuously to the right people at the right time.
- The project is continuously monitored against performance.
- Excellence in quality and delivery are built in.
- Deliverable review and approval processes are in place.

Through developing the project management plan, CNSI expects to collaborate with the MDCH project management team to further customize CNSI's project management system to successfully complete the project.

2.2 Project Methodology

CNSI's holistic approach for this project will use its proven methodology as the overarching framework and bring an experienced team of program managers, SMEs, technical experts, and change management resources to support this effort.

The project methodology is a framework that facilitates the integration of CNSI's extensive system experience, which is rooted in application implementations, methodologies, and delivery tools. This framework allows CNSI to deliver services to its clients consistently across its footprint and gather continued enhancements for its supporting methodology, thereby providing continued value for its clients.

CNSI's methodology is an integrated methodology that combines its best delivery assets. The methodology:

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- Provides a scalable, integrated collection of assets.
- Provides a consistent level of detail and presentation.
- Supports tailoring to scale, which provides a unique, but consistent cost-effective delivery approach.

CNSI's methodology approach consists of the following:

- The **Manage** work approach provides a single, consistent approach to managing CNSI's engagements. Within the Manage Approach is the Quality Management activity, which verifies that deliverables and processes meet requirements. The Quality Management activity also supports continuous process improvement, as well as the methodology.
- The **Life Cycle** work approach addresses unique expertise while providing overall integration across the full implementation life cycle.

CNSI's methodology has the flexibility to be adapted to meet MDCH's unique requirements while confirming that its experienced staff members follow established practices.

While no two engagements are the same, MDCH expects CNSI to deliver in a consistent, systematic approach. The proposed project methodology incorporates CNSI's staff's delivery experience into a single, integrated approach. It provides the structure for integrating CNSI's capabilities while allowing individual project teams the flexibility to use client-mandated tools. The right assembly of technologies, techniques, and deliverable processes requires the specific experience and expertise found in CNSI's staff.

Investing time to create an effective plan with clear objectives is integral to effective project execution. CNSI's methodology provides a structured approach to the planning process. While this may appear to require more initial effort than desired, experience has shown that following these processes reduces the likelihood of planning mistakes and results in lower risk and a more cost-effective, rapid delivery.

CNSI's methodology incorporates a consistent approach for identifying, tracking, and measuring the value derived from ongoing projects. CNSI's experience developing and delivering various client projects is incorporated into the project strategy and planning activities.

In undertaking this project, CNSI will employ its iVision360 system development life cycle (SDLC) methodology tailored for the DMP implementation and integration with CHAMPS. This offers the following benefits:

- **User is at the Center:** CNSI's primary motivation in developing iVision360 is to put the user at the center of the project life cycle. Successful projects have high interaction with end users and place the user at the center of the project. Every phase and activity of iVision360 focuses on interaction and collaboration with the user community. CNSI does this by implementing agile techniques and building working software in an iterative fashion with user validation at periodic intervals.
- **Common Goals:** Users actively participate in configuration sessions with an integrated team of developers, analysts, and testers. This method avoids the pitfalls of waterfall methods. iVision360 provides the team with a sense of purpose, a goal, and the drive to accomplish the end objective: software that meets the requirements.

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- **Early and Often Testing:** iVision360 provides an opportunity to test early and often so formal system test phases and subsequent test phases are more likely to meet schedule expectations with a lower error-discovery rate.

By introducing the baseline management features of waterfall, CNSI minimizes the risk of scope creep that is sometimes associated with iterative methods. Moreover, implementing and integrating with project management processes will provide integrated change, issue, and risk management. Table 1 describes the key benefits of each of the industry-standard methodologies that are blended into iVision360.

Table 1. SDLC Methodology Comparison

Methodology	Key Benefits Blended into iVision360
Waterfall	Baseline approval of requirements Structured documents and customer approvals Formalized testing
Iterative/Agile	Frequent customer interaction Decomposing work into small meaningful features that are presented in working software Frequent course corrections Sense of real progress Early and frequent testing
Extreme Programming	Teams formed between developing organization and customer Sense of common vision and goal

iVision360 has been adapted for the purposes of this project. The customized version is presented in *Section 2.5.1 iVision360 Iterative Design, Testing, and Documentation Approach*.

2.3 Project Management Tools

Tools, when properly applied within the methodology framework, will reduce the time to complete a project by providing predefined processes, templates, documents, and training materials. More importantly, use of the appropriate tools will help reduce risk and increase efficiency.

CNSI will continue to use the tools already proven effective during the previous undertakings to reduce the time to complete the project and mitigate risk. Table 2 lists the tools CNSI will utilize for the project.

Table 2. CNSI Project Tools

Tool	Purpose
ReqTrace®	CNSI's requirements database used during design and test phases
Microsoft Visio	Develop use case diagrams, technical architecture diagrams, and support process flows
Microsoft	Develop project deliverables as well as presentations and spreadsheet artifacts needed to support

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Office	deliverables
As-One	Repository for deliverables, presentations, and artifacts

Microsoft Visio and Microsoft Office are industry-standard tools. The following subsections provide additional information about ReqTrace and As-One.

2.3.1 ReqTrace

CNSI will use its ReqTrace web application for requirements analysis and validation.

During project initiation and requirements planning, ReqTrace will be loaded with the functional, technical, and support requirements. ReqTrace is CNSI's requirements management tool of choice being used in MMIS projects. ReqTrace provides the ability to trace requirements to use cases, related test cases, and results. The application can store requirements-related attributes, including revisions, notes, and comments.

CNSI began using ReqTrace during the implementation of CHAMPS. The requirements validation processes used on the project, as well as the use of ReqTrace, resulted in the requirements validation phase being completed ahead of schedule.

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2.3.2 As-One

Believing that continuous collaboration and information-sharing are key factors to successful project execution, CNSI will use As-One, its web-based enterprise program management solution. Figure 3 illustrates how As-One is designed to support team collaboration, knowledge management, and process improvement. As-One will provide a convenient repository for all program data and will give MDCH oversight personnel direct visibility into project performance.

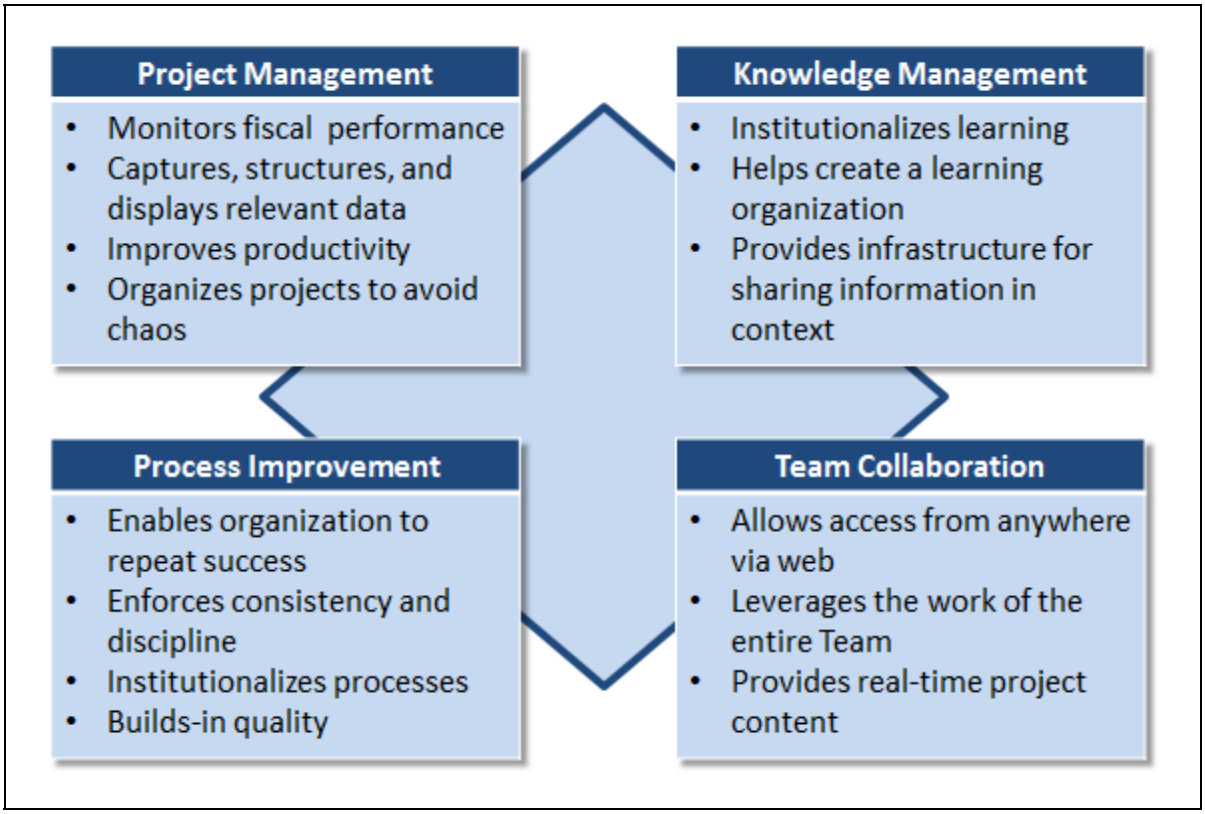

Figure 3. As-One Collaboration and Improvement

As-One is an "out-of-the-box" solution that supports CNSI's program management philosophy: experienced people, managed processes, and enabling technology.

As-One will allow CNSI users to share real-time data specific to the user's authority and association and is accessed via a standard web browser. CNSI's previous and ongoing projects with MDCH and DTMB use As-One. Training will be provided for team members new to the program.

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2.4 Document Management Portal Solution

This section will review CNSI's proposed DMP solution, including technical and functional overviews and a summary of CHAMPS' integration with the DMP.

2.4.1 Technical Overview

CNSI proposes that the DMP be built using the State's current IBM® FileNet® P8platform as a foundation. IBM® FileNet® P8 is a reliable and scalable enterprise platform allowing for the capture, storing, managing, securing, and processing of information to increase operational efficiency at a lower total cost of ownership. The IBM® FileNet® P8 platform enables the streamlining and automating of business processes, accessing and managing of content, and automating records management to meet compliance needs.

Figure 4 depicts the proposed DMP environment, its integration with CHAMPS, and the expected flow of data.

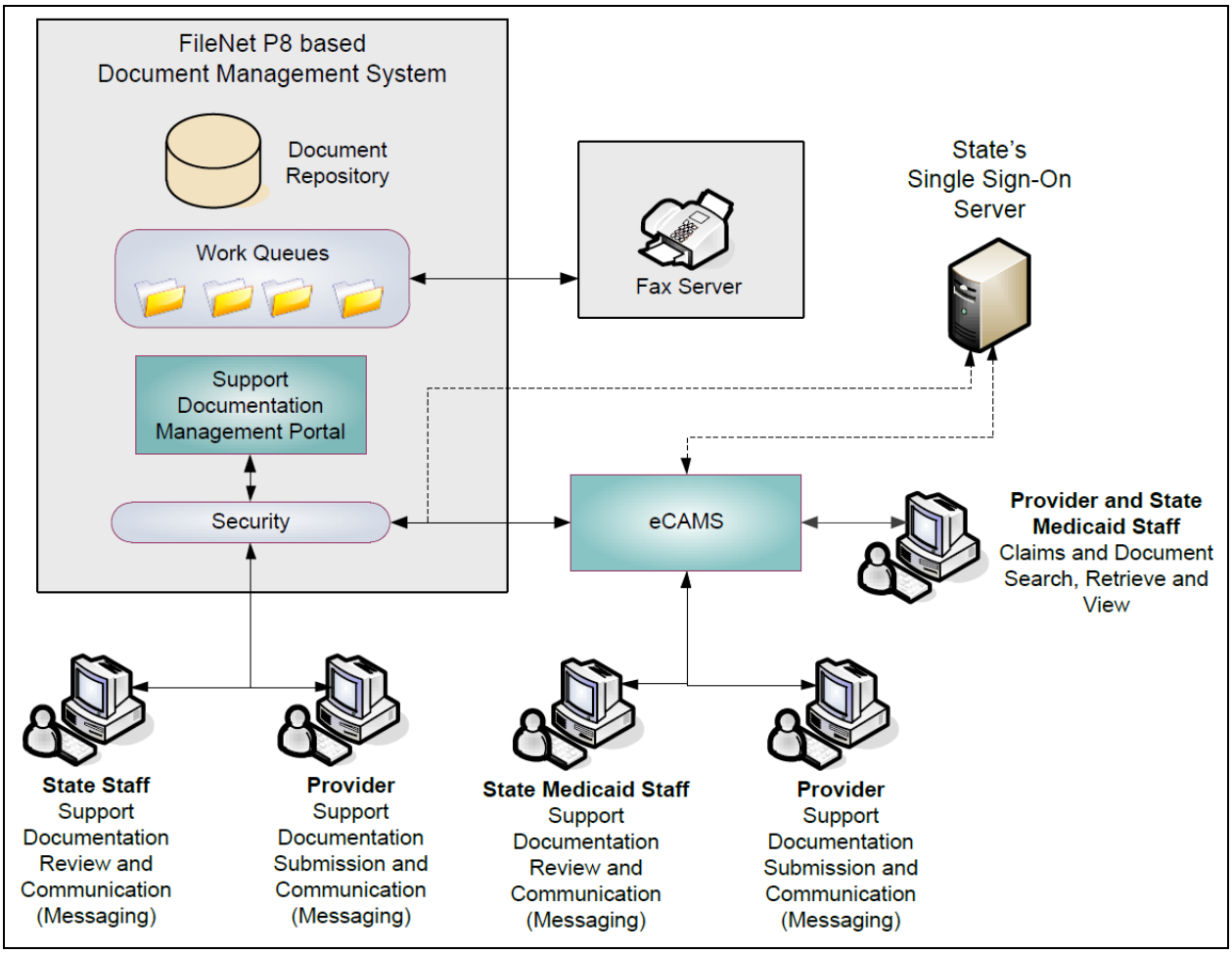

Figure 4. DMP Solution Environment

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Through web services, the DMP will be integrated with CHAMPS. As a result, users will be able to access DMP functionality either directly or through a CHAMPS interface. Users directly accessing the DMP will be authenticated via the State's Single Sign-On system. Access to various functions, features, work queues, and documents will be managed through user roles and user groups defined in the State's directory services server.

By accessing the DMP through CHAMPS, providers will be able to submit Medicaid-related documents and collaborate with State staff. Users accessing the DMP through CHAMPS will be able to:

- Submit support documents and authorizations.
- Send and receive messages pertaining to the submitted documents.
- Review, approve, and archive documents.
- View documents and correspondence history.

By directly accessing the DMP, State staff and other users will be able to submit Medicaid-related documents that may or may not be related to claims. Users accessing directly accessing the DMP will be able to:

- Submit support documents.
- Submit documents for authorization and approval.
- Submit requests for documentation.
- Send and receive messages pertaining to submitted documents.
- Review, approve, and archive documents, as appropriate.
- View documents and associated correspondence history.

2.4.2 Functionality

The DMP solution will provide a browser-based interface to perform various tasks pertaining to submission of documents, review and approvals, collaboration, and retrieval. The DMP's features and functionality are identified and described below.

Document Submission

Users will be able to submit multiple documents with metadata, such as date of service, beneficiary details, claim number, case number, and/or provider details. In addition to entering metadata, users will be able to enter a message for each submitted document. This message will be available to all parties viewing the submitted document.

After a document is submitted, the system will notify the appropriate parties. The document submission will also trigger an event to create a work item in the appropriate document- or case-processing queue.

For claim-related documents, the provider can submit documents through CHAMPS. For other document submissions, the users will directly use the DMP.

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Document Processing Workflow

Users will be able to set up a workflow for each case type or document type defined in the system. Work items created in the workflow are routed through each step based on predefined business rules and user-entered parameters. The system will notify the appropriate parties about tasks completed for the work item.

Messaging and Collaboration

Users will be able to "send" and/or "reply to" messages for documents submitted in the system. The complete message thread for each such document will be maintained in the system. When a message is created for a document, the system will notify the appropriate parties about the new message.

Document Archival

The DMP will use the IBM® FileNet® P8 content repository to archive submitted documents. Documents will be stored in associated metadata and message threads and additional metadata fields will be used to implement document retention policies.

Document Search and Retrieval

All documents archived in the IBM® FileNet® P8 content repository will be searchable using keywords that may be present in the document metadata. All documents will be viewable in their native format, and a full-text search feature will be available for some document types.

Users will also be able to retrieve documents through CHAMPS. Users will be able to retrieve all available documents associated with a record, including claims, providers, and beneficiaries.

Documentation Requests

Users will be able to receive and process requests for documentation directly through the MDCH portal. Documentation requests will create a work item in the request work queue. State staff will be able to review the request, assemble the documentation package, and publish it to be accessed by the requesting party. The system may provide the ability to securely deliver requested documents in encrypted formats through the Internet or a secured FTP.

Security and Authentication

The DMP will provide a security feature to manage access privileges by user roles. Access to documents, work items, and messages will be able to be managed by role, including the ability to set "read-only" and "read/write" access. The DMP will integrate with the State's Single Sign-On system for user authentication and application access. Authentication of users accessing this solution from CHAMPS will be managed within CHAMPS.

Audit Logs

The DMP will capture all system transaction details, including logins, access, and data changes. Reports will be available for such audit information.

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2.4.3 CHAMPS Integration

CHAMPS will integrate with the DMP through the use of web services and HTTPS redirects. This integration will provide users with the ability to upload claims attachments from the Claims Direct Data Entry (DDE) screen. Providers will be able to attach a claim document using beneficiary IDs, date of service (DOS), and billing national provider identifications (NPIs). The uploaded document will be archived in the IBM® FileNet® P8 system using the DMP application program interface. The transaction control number (TCN) can be linked to the claim attachment through the batch interface process.

Attachment Viewer

Users can view claim attachments through online claims screens by TCN or query all claim attachments submitted by a provider.

Notifications

CHAMPS integration with the DMP will also allow for secured communications between State users and providers through online screens. Email notices will automatically be sent when the provider uploads an attachment after the request is added to the State user's work queue.

Authentication

Once users are authenticated through CHAMPS Single Sign-On, users will access the DMP within the CHAMPS application to provide a seamless integration capability.

2.5 Technical and Phased Approach Work Plan

CNSI has created an initial work plan and timeline for the DMP implementation. This work plan describes the expected activities for the proposed phases and major activities. This information is presented in Figure 5 below. A detailed description of the major activities within each phase is presented in *Section 2.5.2 Phased Approach Work Plan*.

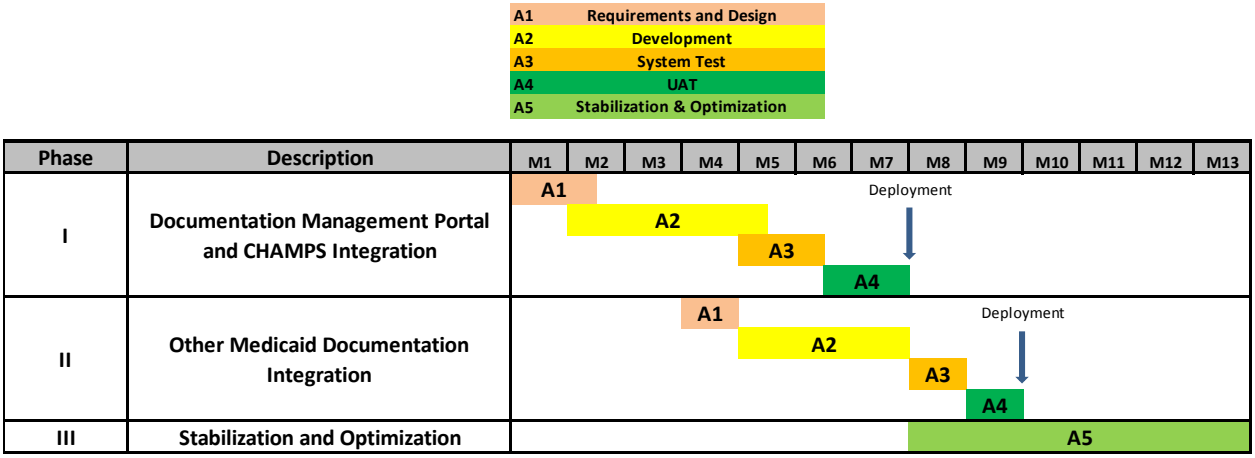

Figure 5. Initial Project Work Plan

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CNSI structured this work plan to address the overall relationships of the phases and activities required to complete the project. It effectively uses the professional resources required to accomplish these phases and produce high-quality products in a cost-conscious manner.

The following subsections further describe how CNSI intends to accomplish the goals of the work plan by employing its iVision360 methodology in the proposed approach for the DMP implementation and integration with CHAMPS.

2.5.1 iVision360 Iterative Design, Testing, and Documentation Approach

In this section, CNSI provides an outline of its iVision360 SDLC. The SDLC is a full-featured methodology that includes standard design and development processes. CNSI's SDLC processes have been adapted to address the specific needs of the project. This project will be divided into three phases, including two software releases adding specific system functionality.

CNSI will engage in iterative requirements analysis and design with State at the beginning of each release. The State will be able to review requirements analysis and design documents as soon as a logical set of iterations are completed. CNSI expects initial State signoff upon acceptance of the iteration's document scope. This will help reduce the time required for document review and approval. The documents reviewed at any time will have a smaller scope to help the State perform a thorough review. At the end of all iterations for a release, an overall document will be produced for a final delivery and acceptance to State.

The iterative/agile development and testing portion of the iVision360 methodology is visible in each release of design and coding. During this phase, technical design specifications for impacted functions and user stories are constructed in parallel by developers and the SMEs. As the impacted function's design is completed, the team lead will plan the related development iterations.

Developers will build internal design documentation prior to, and during, the iterations. The beginning of each iteration is reserved for startup activities, including finalizing the internal design documentation. The developer meets with the data modeling team on Day 1 of an iteration to conduct a walkthrough of any required data model changes. The data modeling team makes the required changes to the database schema and approves the physical model for coding. Developers also develop iteration test cases (for the tasks that may not be tested with automatic internal iteration test code), which are required to test each story completely.

Coding begins when the internal design and pre-coding work is completed for the iteration. The developer will write internal iteration test scripts in parallel to actual working code and update screens and other system functions to fit the physical mode. The developer will execute the iteration test scripts as they complete sections of code. The codes will be built and tested incrementally. The developer will coordinate daily stand-up meetings and communicate any development issues.

This development approach ensures developers do not work in silos. It also avoids the traditional approach of throwing design documentation "over the fence" to developers to begin coding, only to discover later that major rework is required halfway through the development process.

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Developers eventually test the code against internal auto-unit-code and manual internal iteration test scripts. As they reach the end of the iteration, they will run the code against functional scripts developed by the test team. Discrepancies are identified and corrected, and the developer retests to ensure all discrepancies are corrected and closed before the iteration ends. The developer will conduct a peer review of the impacted function's code on the last day of the iteration and then update the code based on the review. When developer iteration testing and software code reviews are successfully completed for the iteration, the code will be promoted to the integration test stream. The code will be released to the test team for system testing when coding and developer iteration testing is completed for all of an impacted functions user stories.

During initial development iterations, the test team will develop system test cases based on requirements specification. During system testing, the test team will execute system test cases to validate system results against requirements.

CNSI plans to engage the test and development teams early on to build the regression test suite for critical functions. This will help to speed up testing and improve overall quality of implementation. During system testing, if required, regression tests will be performed on impacted functions based on changes to a previously tested baseline. The intent of regression testing is to demonstrate that the CHAMPS system continues to meet all approved requirements after changes have been introduced to a previously tested baseline.

As soon as system testing is completed for an activity, CNSI will deliver the code to the UAT environment. CNSI plan to engage the State as early as possible and well before the beginning of the planned UAT phase. This will ensure enough time is allowed for thorough UAT and reduce the risk of schedule slippage for UAT completion.

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Figure 6 presents a graphical overview of the processes that are part of the iVision360 methodology.

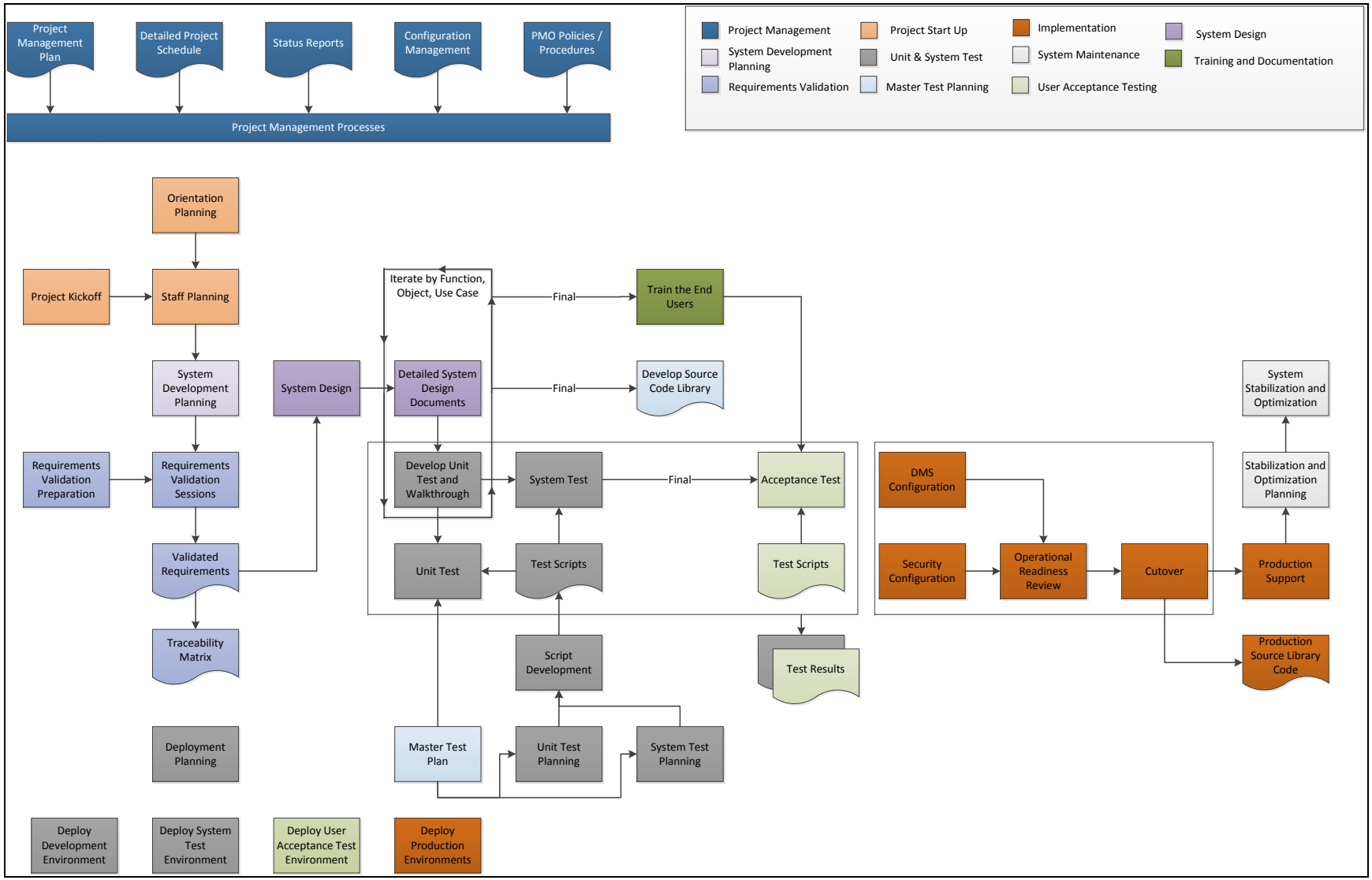

Figure 6. iVision360 Process Diagram

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2.5.2 Phased Approach Work Plan

CNSI proposes an overlapping, three-phase approach to the DMP implementation and integration with CHAMPS, consisting of the design, development, and implementation of two software releases and a stabilization and optimization phase.

The three phases are:

- **Phase I – DMP and CHAMPS Integration:** The first phase includes the design, development, and implementation of the first software release. This release's functionality will include:
  - Documentation Submission and Processing Workflow
  - Messaging and Collaboration
  - Document Archival, Search, and Retrieval
  - CHAMPS Integration
  - Claims Submission
  - Security, Authentication, and Audit Logs
- **Phase II – Other Medicaid Documentation Integration:** The second phase includes the design, development, and implementation of the second software release. This release's functionality will include:
  - Documentation Submission
  - Documentation Sharing and Management
  - MDCH Portal Integration
- **Phase III – Stabilization and Optimization:** Stabilization and optimization activities include post-deployment verification, post-deployment monitoring, issue resolution, performance analysis, and performance tuning.

Figure 7 provides a high-level overview of the three phases, their major activities, and expected timelines.

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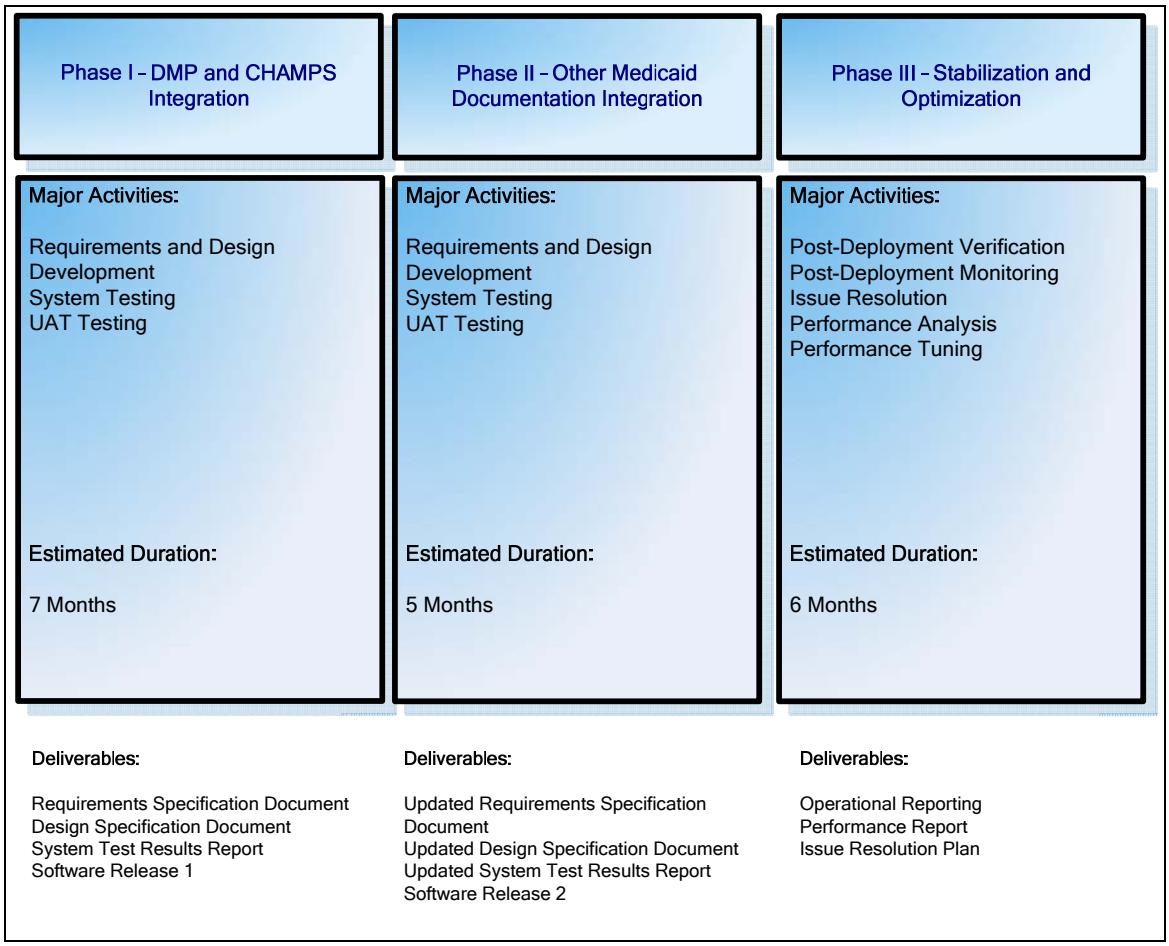

Figure 7. High-Level Project Phases and Activities

With every project, there are critical milestones to be met and work products and deliverables that must be developed and produced in order to provide the inputs necessary to perform the next phase. Table 3 elaborates on the key high-level milestones of the proposed implementation plan, along with the expected deliverables.

Table 3. High-Level Activities and Milestones by Phase

Major Activity	Description	Phase
Requirements and Design	CNSI will work with the State to elicit and evaluate requirements and document detailed system design changes relevant to the first software release.	Phase I
Development	CNSI will develop the software required to support the functional design relevant to the first software release.	Phase I

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Major Activity	Description	Phase
System Testing	CNSI will test developed functionality after development of the first software release has completed.	Phase I
UAT Testing	The State will conduct UAT testing prior to software deployment.	Phase I
Phase I Deliverables • Requirements Specification Document • Design Specification Document • System Test Results Report • DMP Software Release 1		
Requirements and Design	CNSI will work with the State to elicit and evaluate requirements and document detailed system design changes relevant to the second software release.	Phase II
Development	CNSI will develop the software required to support the functional design relevant to the second software release.	Phase II
System Testing	CNSI will test developed functionality after development of the second software release has completed.	Phase II
UAT Testing	The State will conduct UAT/B2B testing prior to software deployment.	Phase II
Phase II Deliverable • Updated Requirements Specification Document • Updated Design Specification Document • Updated System Test Results Report • DMP Software Release 2		
Stabilization and Optimization	After software deployment, CNSI will engage in stabilization and optimization activities, including post-deployment verification, post-deployment monitoring, issue resolution, performance analysis, and performance tuning.	Phase III

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Major Activity	Description	Phase
Phase III Deliverable • Operational Reporting • Performance Report • Issue Resolution Plan		

2.5.2.1 Phase I – DMP and CHAMPS Integration

Activity 1: Requirements and Design

CNSI will host requirements CAD sessions to define the gaps between the State's existing documentation management system and the proposed DMP solution, including the functionality targeted under the scope of the first software release:

- Document submission and processing workflow
- Messaging and collaboration
- Document archival, search, and retrieval
- CHAMPS integration
- Claims submission
- Security, authentication, and audit logs

The requirements CAD sessions will help CNSI and the State to:

- Define the scope of requirements.
- Elicit and validate requirements.
- Understand the underlying assumptions for each identified requirement.
- Classify the requirements as functional and non-functional.

After the requirements are identified, CNSI will create design specification documents to incorporate all gaps identified in the requirements sessions. Updates may include the addition, deletion, and modification of use cases, main and alternate flows, business and system rules, data models, and screenshots. Once baselined, any change made to the design specification documents shall be treated as a change order and will follow a formal change order process.

The major milestones associated with this activity are:

- The completion of requirements elicitation and validation activities.
- The delivery of the requirements specification document.
- The delivery of the design specification document.

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Activity 2: Development

CNSI will develop and code the software required to support the implementation of the DMP solution and the updated functionality of CHAMPS using the toolsets and standards in place for the CHAMPS project. The modifications will be performed and released through an iterative development process.

The major milestone associated with this activity is the completion of development iterations, including the development of the DMP solution's code and the development and customization of the CHAMPS base code to accommodate and achieve the functional design of the project's first software release.

Activity 3: System Testing

CNSI will conduct internal system testing activities to test the developed functionality of the DMP solution at the component, subsystem, and system level.

The major milestone of this activity is the delivery of system test results report.

Activity 4: UAT Testing

CNSI will deploy the final code of the first software release to the UAT environment. MDCH will conduct UAT testing at this point, with CNSI assisting in the development of the UAT plan and related test scenarios and test cases.

After UAT is completed, the first software release will be implemented in accordance with the current CHAMPS release schedule.

2.5.2.2 Phase II – Other Medicaid Documentation Integration

Activity 1: Requirements and Design

CNSI will host requirements CAD sessions to define the gaps between the State's existing documentation management system and the proposed DMP solution, including the functionality targeted under the scope of the second software release:

- Documentation submission
- Documentation sharing and management
- MDCH portal integration

The requirements CAD sessions will help CNSI, MDCH, and DTMB to:

- Define the scope of requirements.
- Elicit and validate requirements.
- Understand the underlying assumptions for each identified requirement.
- Classify the requirements as functional and non-functional.

After the requirements are identified, CNSI will update the design specification documents to incorporate all gaps identified in the requirements sessions. Updates may include the addition, deletion, and modification of use cases, main and alternate flows, business and system rules, data models, and

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screenshots. Once baselined, any change made to the design specification documents shall be treated as a change order and will follow a formal change order process.

The major milestones associated with this activity are:

- The completion of requirements elicitation and validation activities.
- The delivery of the updated requirements specification document.
- The delivery of the updated design specification document.

Activity 2: Development

CNSI will develop and code the software required to support the implementation of the DMP solution and the updated functional design of CHAMPS using the toolsets and standards in place for the CHAMPS project. The modifications will be performed and released through an iterative development process.

The major milestone associated with this activity is the completion of development iterations, including the development of the DMP solution's code and the development and customization of the CHAMPS base code to accommodate and achieve the functional design of the project's second software release.

Activity 3: System Testing

CNSI will conduct internal system testing activities to test the developed functionality of the DMP solution at the component, subsystem, and system level.

The major milestone of this activity is the delivery of the updated system test results report.

Activity 4: UAT Testing

CNSI will deploy the final code of the second software release to the UAT environment. MDCH will conduct UAT testing at this point, with CNSI assisting in the development of the UAT plan and related test scenarios and test cases.

After UAT is completed, the second software release will be implemented in accordance with the current CHAMPS release schedule.

2.5.2.3 Phase III – Stabilization and Optimization

After implementing each software release, CNSI will engage in post-deployment stabilization and optimization activities.

The major milestones associated with this activity are:

- Verification of installation and operation for all components and functions.
- Overall system monitoring in the months after the application upgrade has gone live.
- Resolution of issues reported over a six-month period after successful implementation of the first software release. Issues will be addressed according to the CHAMPS Operations Incident Management, Application Support, Change Management, and Release Management processes, and resulting updates will be assigned to CHAMPS operations releases in accordance with the approved schedule.

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- Analysis of CHAMPS performance after the software releases have gone live.
- Remediation of any identified CHAMPS performance issues.

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Section 3: General Assumptions

This statement of work is presented based on the following assumptions:

1. State users and other stakeholders will be available for any discussions relevant to the project.
2. The State will provide the necessary hardware and software on a timely basis that supports the project schedule.
3. The DMP will be developed using the IBM® FileNet® P8, software version 4.x. The DMP will be built on a JAVA-based IBM® FileNet® P8 workplace/XT software component. The workplace/XT may be customized as per the user interface requirements.
4. Data migration from the current third-party-hosted document management application is not within the scope of this project.
5. Changes to the State's Single Sign-On system are not within the scope of this project.
6. The State will be responsible for provider training and outreach.

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Section 4: Pricing

This section presents CNSI's fixed-price, overall labor cost for completing the Document Management Project. The cost was derived based on the expected effort required, as presented in our initial work plan, composed of the three phases depicted in Figure 8. The total fixed-price labor cost for the Document Management Project is $2,257,111.36.

However, CNSI will offer a discount to MDCH of $500,000 to complete this proposed project. Thus the final cost for undertaking this project would be $1,757,111.36.

The cost represented in the Phase breakout below depicted in Figure 8 represents the discounted price.

Phase I – DMP and CHAMPS Integration	Phase II – Other Medicaid Documentation Integration	Phase III – Stabilization and Optimization
Major Activities: Requirements and Design Development System Testing UAT Testing	**Major Activities:** Requirements and Design Development System Testing UAT Testing	**Major Activities:** Post-Deployment Verification Post-Deployment Monitoring Issue Resolution Performance Analysis Performance Tuning
Estimated Duration: 7 Months **$471,028.80**	**Estimated Duration:** 5 Months **$842,057.60**	**Estimated Duration:** 6 Months **$444,024.96**
Deliverables: Requirements Specification Document Design Specification Document System Test Results Report Software Release 1	**Deliverables:** Updated Requirements Specification Document Updated Design Specification Document Updated System Test Results Report Software Release 2	**Deliverables:** Operational Reporting Performance Report Issue Resolution Plan

Figure 8. Project Deliverables and Cost by Phase

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Statement of Work

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State of Michigan
Department of Community Health
Grants and Purchasing Division

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October 18, 2013

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Section 1: Introduction

This Statement of Work (SOW) provides an overview of CNSI's approach to incorporate the final legislation, as defined in Public Act No. 107 for the enrolled House Bill number 4714 into CHAMPS in order to support the Healthy Michigan Plan. This plan provides a framework for comprehensive medical benefits and health care reform, and makes quality health care affordable and accessible for all Michigan citizens up to 133% of the federal poverty level (FPL) who are otherwise not eligible for Medicaid at the time of enrollment.

CNSI and MDCH anticipated many aspects of the Healthy Michigan Plan and *already* designed and developed changes to CHAMPS under the April 8, 2013 "Impact of Change to Healthy Michigan Program Requirements on CHAMPS" SOW. Specifically, the changes already covered under that previous SOW include:

1. Modification of existing inbound and outbound data interfaces as needed to accommodate new ACA coverage group information.
2. Correctly assign both legacy benefit plan identifiers and the new federally mandated ACA coverage groups on the beneficiary's records.
3. Accurately adjudicate claims, enroll beneficiaries into managed care plans and pay those plans, and provide eligibility verification responses in accordance with the ACA benefit plans as well as the legacy benefit plans assigned to the beneficiary.
4. Receive the following new data elements from BRIDGES which will be stored in the Eligibility and Benefit Plan segments.
    - MAGI Category Indicator
    - Beneficiary Percent of Federal Poverty Level (FPL %)
    - Presumptive Eligibility Flag
    - Written Language
5. Receive additional values for the following existing data elements to support the streamlined online eligibility application form:
    - Ethnicity
    - Third Party Type Code
    - Race Codes
6. Continue to receive the existing coding from BRIDGES (scope/coverage, program, etc.) as well as MIChild, in addition to the new data above.
7. Continue to assign the existing Benefit Plans except for the Healthy Michigan population, which will be assigned to a Medicaid Expansion, and other programs that will be eliminated (TMA-Plus, Plan First & Adult Benefit Waiver (ABW)).

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8. End the existing ABW benefit plan and use the same eligibility factors to assign Healthy Michigan beneficiaries to new Medicaid Expansion benefit plans.
9. Use the FPL % for the Healthy Michigan population to set a "Copay Tier", which is used to determine the copay amount for these beneficiaries.

The purpose of this new SOW is to outline the *remaining* scope of work required to augment CHAMPS in order to support the Healthy Michigan Plan. This work essentially reflects functionality that was unknown and could not be anticipated until the Final Bill became law. While the precise changes required of CHAMPS cannot be iterated until functional requirements for each system are defined, this SOW enables CNSI and MDCH to assist the Medicaid Compliance Program (MCP) in functional requirements elicitation; followed by project-level design, development and testing; through MCP-level integration testing and production implementation; and ending with post-implementation optimization and stabilization. The scope of work supported by this SOW includes:

1. CNSI participation in MCP-level functional requirement elicitation
2. Design, development and implementation (DDI) of the following functions and features.
    a. Change all "Medicaid Expansion" benefit plan names to "Healthy Michigan" names.
    b. Support the ability to associate one provider number to many managed care program codes.
    c. Add HK-Dental and Nursing Facility benefits to the Healthy Michigan benefit plans as needed.
    d. Receive beneficiary cost-share data, (e.g. co-pay and MI Health account data, including non-payment) from Medicaid Health Plans. Display the cost-share data online and include in outbound interfaces to external systems as needed.
    e. Create new interfaces to the Department of Treasury and State Lottery Commission to report beneficiary non-payment of cost share requirements, based on data received from the Medicaid Health Plans.
    f. Support a process to receive information from an external system, such as OSIG, regarding beneficiary assistance in fraud and abuse detection; then distribute such information to the Medicaid Health Plans.
    g. Track the number of months in which beneficiaries are enrolled in Healthy Michigan benefit plans. Report the enrollment duration to Medicaid Health Plans.
    h. Generate beneficiary correspondence letters 60 days prior the end of the beneficiary's 48th month of enrollment in a Healthy Michigan benefit plan.

CNSI recognizes that MDCH and the MCP desire to distribute the above functions over a time-phased release schedule which will be determined during the project planning phase.

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1.1 Regulatory and Business Drivers for Change

This project supports MDCH's goal to fully assess and implement changes to all existing Medicaid systems downstream of eligibility determination in order to comply with ACA regulations, including Medicaid Expansion under the Healthy Michigan Plan. Medicaid processing includes, but is not limited to, selecting a Medicaid health plan, enrolling into a health plan, de-enrollment, reactivation, redeterminations, administrative changes to beneficiary information, claims payment, cost sharing, and so on.

The project aligns Michigan's CHAMPS Medicaid management information system (MMIS) to seamlessly support the Healthy Michigan Program requirements and:

- Supports Medicaid Expansion as defined in Public Act No. 107 for the enrolled House Bill number 4714 and MDCH's Healthy Michigan Plan.
- Retains existing eligibility, benefit plan, and managed care programs and processes while accommodating new programs and processes required to support ACA.
- Preserves support for waiver eligibility from non-MAGI sources, such as Children Special Health Care Services (CSHCS), Serious Emotional Disturbance Waiver (SED), Children's Home and Community Based Services Waiver Program (CWP), and Habilitation Supports Waiver Program (HSW).
- Improves Medicaid eligibility processing efficiency through tighter coupling of Medicaid eligibility determination, eligibility verification, managed care enrollment, and claim processing.
- Delivers the most cost-effective solution with realistic, proven strategies to ensure implementation within the required timeline.

1.2 CNSI Capabilities

CNSI's approach to conducting this project is based on its extensive knowledge of CHAMPS design, implementation, and operations. As a solution provider, CNSI aligns its clients' business processes and information systems to allow them to access the right information at the right time, empowering them to achieve their desired business results and create enterprise value. Our professionals have extensive industry and technology experience and flexible tools and methodologies to deliver on time and on budget. CNSI completes jobs for its clients by delivering on its promises with speed and purpose in accordance with client specifications and expectations.

For the CHAMPS Medicaid Compliance Healthy Michigan project, we will use our business, technical, and operational knowledge of the MDCH Medicaid program, CHAMPS system capabilities, CHAMPS Medicaid Compliance design and Public Act No. 107 for the enrolled House Bill number 4714 to

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identify, design, test, and implement the changes required in CHAMPS to support Michigan's Healthy Michigan Plan requirements.

CNSI brings an experienced team of Medicaid and CHAMPS subject matter experts (SME), technical and architectural experts, and project management expertise to support this endeavor in the collaborative style CNSI has used in its previous work with MDCH. CNSI's experience working with MDCH has led it to incorporate the following factors in developing this statement of work:

- **CNSI's success to-date with the CHAMPS Medicaid Compliance project**

  CNSI and MDCH have enjoyed a successful, on-schedule CHAMPS Medicaid Compliance project. We succeeded in converting ambiguous high-level requirements into actionable functional requirements traced to specific subsystems and design use cases. We not only met our timeline for approval of detailed design documentation for all MCP Release 2 functionality, but we *anticipated* and included key functionality to position CHAMPS to support Medicaid Expansion.

- **CNSI's experience with the Federal Data Services Hub**

  The Federal Data Services Hub enables the communication between health insurance entities, including Federally Funded Exchanges (FFEs), federal agencies, and states. It acts as a single interface point for exchanges to the federal agency partners and provides common functional service support, simplifying the integration required of the exchanges. Common services allow for adherence to federal and industry standards regarding security, data transport, and information safeguards management.

  CNSI holds a position of the Chief Architect on the Federal Data Services Hub Project. As a major partner on the project team, CNSI designed and built the data services hub. CNSI's areas of expertise include solutions architecture, business analysis, large systems development, service-oriented architecture (SOA), and agile development.

- **CNSI's capability to conduct detailed analysis of CHAMPS system requirements**

  Above all else, CHAMPS is a multifunctional MMIS-certified information system that integrates all Medicaid activities into a complete system. As such, the existing CHAMPS (designed, developed, and implemented by CNSI) system is the baseline from which the required changes to support Medicaid Compliance eligibility requirements were be defined. CNSI is positioned to take advantage of the extensive knowledge accumulated during the CHAMPS implementation, HIPAA 5010 migration, ICD-10 assessment project, and ICD-10 remediation project to strategically apply to the CHAMPS Medicaid Compliance Healthy Michigan project.

- **CNSI's capability to define and validate business requirements**

  The prompt identification and validation of business requirements for the Healthy Michigan Program is key to ensuring the system meets MDCH's Medicaid expansion processing needs.

CNSI offers to participate in the MCP's requirement definition activities. Our goal is to help ensure requirements are defined which are actionable and assigned to specific systems.

CNSI's proven approach to requirement validation will ensure the following design, development, testing, and implementation phases succeed. CNSI will conduct collaborative application design (CAD) sessions where each requirement is reviewed and validated among a focus group of MDCH and CNSI business and technical experts. The results of the requirement validation CAD sessions are documented in a formal requirement specification document (RSD) deliverable. This document provides the foundation upon which system design will be created.

- **CNSI's detailed understanding of CHAMPS' integration with other systems within the Medicaid enterprise**

  CNSI is uniquely qualified to remain sensitive to the State's needs while determining the granular business and technical changes needed to maintain seamless integration between CHAMPS, BRIDGES, MAXSTAR, Pharmacy Benefit Management, and multiple waiver program eligibility systems. Because of its multi-year history of collaboration with MDCH and understanding of CHAMPS, CNSI can provide business and technical expertise in support of requirement validation, design, and testing while allowing MDCH SMEs to participate strategically, as required. CNSI understands that MDCH staff members are involved in multiple implementation efforts in addition to their regular production workload. It is critical to the success of the project that MDCH staff members are involved at the right time and in the correct context. Using its knowledge of the system, the CNSI team will be able to minimize MDCH involvement to the sessions most critical to the completion of the project.

- **CNSI's technical leadership to support MDCH's vision**

  Beginning with the implementation of the CHAMPS system, CNSI has continually shown technical leadership. Through collaboration with its equally forward-thinking MDCH leadership, CNSI has jointly achieved milestones that have moved Medicaid business into a modern state. CNSI has continued to drive innovation through the implementation of eMIPP, HealthBeat, and myHealthButton. This proven technical leadership will help deliver the most effective and efficient changes and seamlessly integrate the Healthy Michigan Program into Michigan's Medicaid enterprise.

1.3 Proposed Project Organization

CNSI believes that this statement of work represents the best possible combination of architecture, technology, support, and experience to complete this project. The proposed team members are each the best possible candidates of their respective disciplines. The underlying logic behind identifying each member of this group is that:

- They share the same philosophical approach for undertaking this project – **the customer comes first**.

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- They understand the values that each member brings to successfully implementing the project.
- They are committed to understanding and incorporating MDCH's requirements.
- They understand the necessary advanced technologies, business needs, and operational issues.

CNSI's primary objective is the successful implementation and completion of the project. CNSI is confident in its team's ability to achieve that goal. CNSI has assembled a team with the best combination of technology, support, project implementation skills, experience, and expertise who are dedicated to the CHAMPS Medicaid Compliance Healthy Michigan project initiative and overall successful implementation of Michigan's Healthy Michigan Program processing. Figure 2 depicts CNSI's proven, customer-centric project high level organization chart for the CHAMPS Medicaid Compliance Healthy Michigan project.

However, MDCH is the most important member of the project team. An effective project management plan cannot work with participation only by CNSI. The customer must be actively engaged in the process at all levels.

Implementation is only as good as the partnership established and maintained between all involved parties. This includes, first and foremost, MDCH's project team.

The project's success depends on the full and active participation of MDCH's designated staff members from the initial planning activity through the requirements, design, and testing activities that will ultimately lead to the project's completion, acceptance, and implementation.

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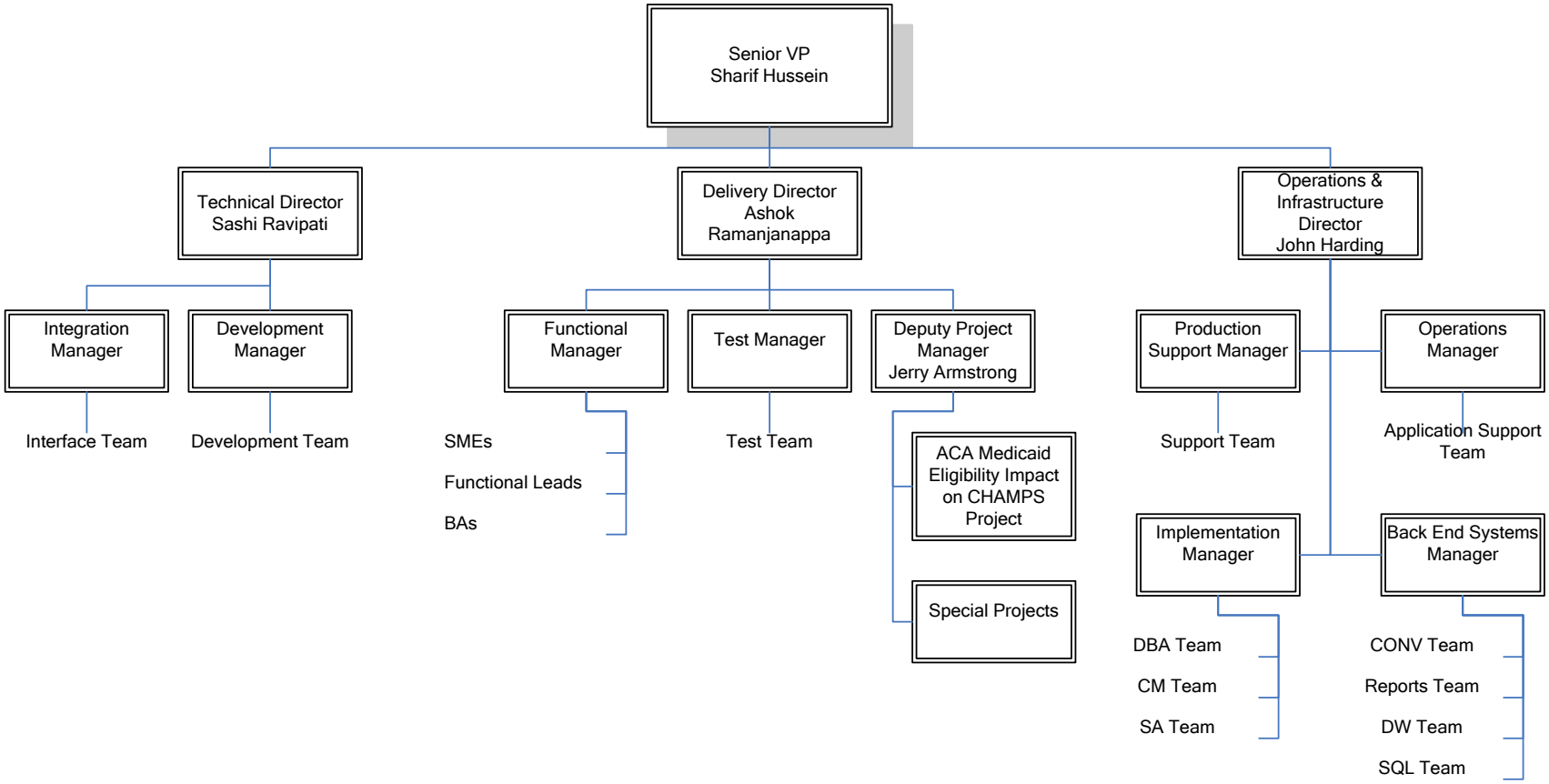

Figure 1. CNSI's Proven Customer-Centric Project Organization

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Figure 3 depicts the integration of the CHAMPS Medicaid Compliance project Coordinating Committee with the overall MCP organization.

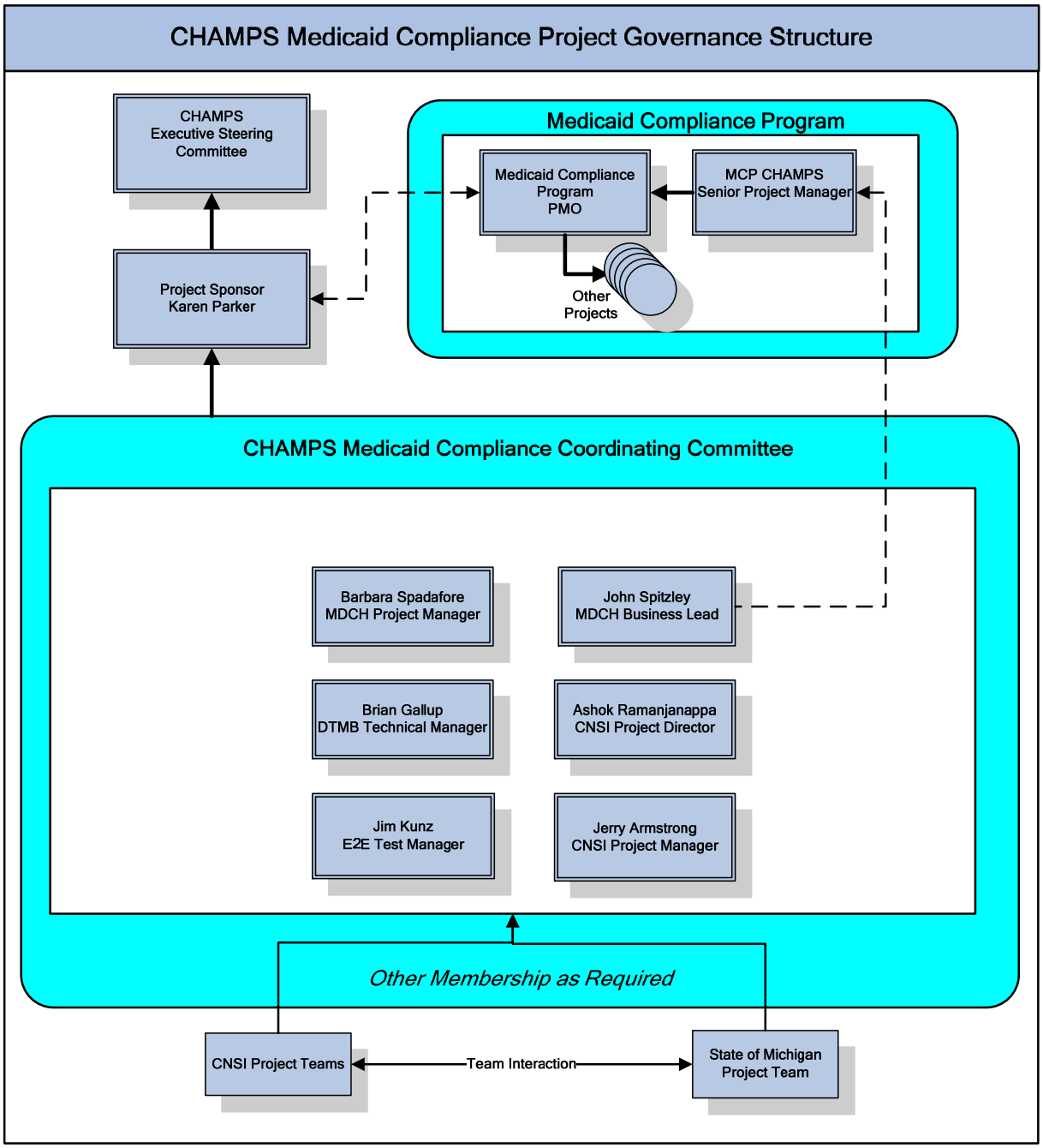

Figure 3 - CMC Coordinating Committee Integration with MCP

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Section 2: Project Management, Methodology, Tools, and Technical Approach

This section presents our project management approach, methodology, tools, technical approach, and phased work plan for accomplishing all tasks required for the CHAMPS Medicaid Compliance Healthy Michigan project and overall successful implementation of Michigan's Healthy Michigan Program. This section describes the scope of activities to be addressed throughout the project, from the Requirement Validation phase to the Optimization and Stabilization phase, and the techniques and methodologies the project team will use. The goal of this section is to demonstrate that CNSI understands how to validate requirements, produce detailed design, and develop, test, and implement the functionality needed to seamlessly integrate Healthy Michigan Program into Michigan's Medicaid enterprise.

Each of the following subsections will contain a high-level description of the four phases we will use throughout the project. For each phase, the major activities and anticipated deliverables are presented. This is followed by a high-level description of the major milestones and approximate timelines.

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2.1 Project Management Approach

The project's successful implementation relies on the framework and environment provided by project and quality management. Figure 2 shows CNSI's project and quality management framework and how the related activities interact with other project tasks.

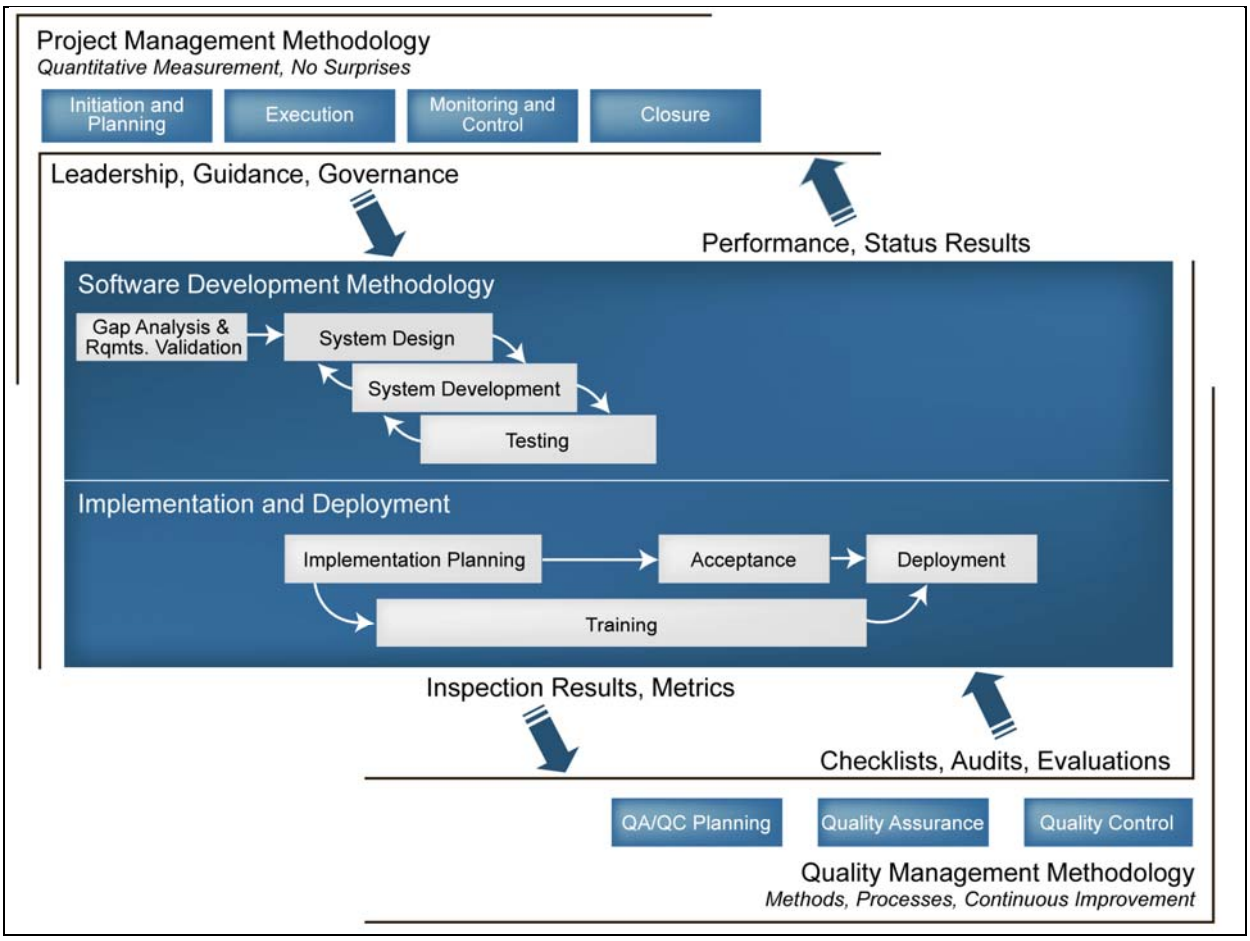

Figure 2. CNSI's Project Management and Quality Management Framework

Although all projects are unique, they share common components and processes. The generally-accepted process groups defined by the Project Management Body of Knowledge (PMBOK), as incorporated into the CNSI project management processes, are:

- **Initiating:** This process group defines the project objectives and grants authority to proceed. For CNSI, the initiating processes are largely incorporated into the proposal development process, during which required partners are identified. The request-for-proposal acts as a project charter and the proposal itself is the preliminary scope statement.

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- **Planning:** This process group refines the project objectives and scope and plans the tasks, activities, and steps necessary to meet the project's objectives. The project management plan (PMP) is modified and updated as necessary over the course of the project and is the culmination of the planning processes for scope definition and management, time (scheduling), staffing (human resources), communications, and risk management.
- **Executing:** This process group puts the project's plans into motion and performs the work of the project. For the design phase, this will include the software development methodology included in the iVision360 approach.
- **Monitoring and Controlling:** This process group measures the performance of the project's executing activities and reports these performance results to project managers and stakeholders. Output is used to refine, improve, and/or change project management (including plans and schedules) as necessary to meet the project's objectives.
- **Closing:** This process group documents the formal acceptance and approval of the project's product and brings all aspects of the project to a close.

CNSI is confident it has the correct methodology and project framework in place to successfully complete the CHAMPS Medicaid Compliance Healthy Michigan project. CNSI continually improves its project management processes using lessons learned from previous projects and through the proficiency and continuous education of its program and project managers, senior technical and engineering staff, and senior and corporate management. This ensures a number of advantages:

- The project management philosophy is firmly entrenched within the entire project team, including CNSI and MDCH.
- Project management is a core competency.
- The project staff is focused on successfully implementing the project.
- Project management, quality management, and cost management processes are fully integrated and their infrastructure is in place.
- Effective project status reporting is established throughout the project life cycle.
- Project and software development methodologies are well documented.
- Project staff is provided comprehensive training.
- Project information is communicated continuously to the right people at the right time.
- The project is continuously monitored against performance.
- Excellence in quality and delivery are built in.
- Deliverable review and approval processes are in place.

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Through developing the PMP, CNSI expects to collaborate with the MDCH project management team to further customize CNSI's project management system to successfully complete the project.

The overall engagement will be managed by DCH project manager, while the CHAMPS Medicaid Compliance Healthy Michigan project will be managed by CNSI's project manager. CNSI Project manager will provide weekly updates on the status of the CHAMPS Medicaid Compliance Healthy Michigan project to State project manager.

An integrated project management board will be set up that consists of State and CNSI members. The board will meet on a weekly basis to discuss the status of the project, to resolve any issues or discrepancies and identify /resolve / mitigate risks. The board will also control the change management related to the project.

2.2 Project Methodology

CNSI's holistic approach for this project will use its proven methodology as the overarching framework and bring an experienced team of program managers, SMEs, technical experts, and change management resources to support this effort.

The project methodology is a framework that facilitates the integration of CNSI's extensive system experience, which is rooted in application implementations, methodologies, and delivery tools. This framework allows CNSI to deliver services to its clients consistently across its footprint and to gather continued enhancements for its supporting methodology, thereby providing continued value for its clients.

CNSI's methodology is an integrated methodology that combines its best delivery assets. The methodology:

- Provides a scalable, integrated collection of assets.
- Provides a consistent level of detail and presentation.
- Supports tailoring to scale, which provides a unique, but consistent, cost-effective delivery approach for MDCH.

CNSI's methodology provides a consistent and flexible approach to address the following:

- The **Manage** work approach provides a single, consistent approach to managing CNSI's engagements. Within the Manage approach is the Quality Management sub-work activity, which verifies that deliverables and processes meet requirements. The Quality Management activity also supports continuous process improvement for MDCH and the methodology.
- The **Life Cycle** work approach addresses unique expertise while providing overall integration across the full CHAMPS Medicaid Compliance Healthy Michigan project life cycle.
- The flexibility to be adapted to meet MDCH's unique requirements, while confirming that our experienced staff members follow our established practices.

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- The ability to integrate additional application- and technology-specific requirements to further enhance the quality and speed of our delivery.

While no two engagements are the same, MDCH expects CNSI to deliver in a consistent, systematic approach. The proposed project methodology incorporates CNSI's staff's delivery experience with CHAMPS into a single, integrated approach. It provides the structure for integrating our capabilities while allowing individual project teams the flexibility to use client-mandated tools.

CNSI's methodology abstracts the specifics of technologies and techniques. The right assembly of technologies, techniques, and deliverable processes requires the specific experience and expertise found with CNSI's staff.

Time invested in an effective plan with clear objectives has repeatedly shown to be a key to effective execution. CNSI's methodology provides a structured approach to the planning process. While this may appear to require more initial effort than desirable, experience has shown that following these processes reduces the likelihood of planning mistakes and results in lower risk and more cost-effective rapid delivery.

Moreover, CNSI's methodology incorporates a consistent approach for identifying, tracking, and measuring the value derived from ongoing projects. CNSI's experience developing and delivering various client projects are incorporated into the project strategy and planning activities.

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In undertaking this project, CNSI will employ its iVision360 system development life cycle (SDLC) methodology tailored for the CHAMPS Medicaid Compliance Healthy Michigan project initiative.

CNSI's iVision360 is a unique blend of the waterfall methodology, iterative agile development, and rapid prototyping. This offers the following benefits:

- **User is at the Center:** CNSI's primary motivation in developing iVision360 is to put the user at the center of the entire life cycle. Software projects succeed or fail largely from the developer's understanding of the customer's business rules, requirements, and needs. The more insight the developing organization has, the greater the quality and likelihood of success for the project. Successful projects have high interaction with end users and place the user at the center of the development life cycle. Every phase and task of iVision360 focuses on interaction and collaboration with the user community. CNSI does this by implementing agile techniques and building working software in an iterative fashion with user validation at periodic intervals.
- **Common Goals:** Users actively participate in design sessions with an integrated team of developers, analysts, and testers. This method avoids the pitfalls of waterfall development and test methods which leave, for example, test case refinement and execution until the completion of development. It also provides the team with a sense of purpose, a goal, and the drive to accomplish the end objective: software that meets the requirements.
- **Early and Often Testing:** iVision360 provides an opportunity to test early and often so formal system test phases and subsequent test phases are more likely to meet schedule expectations with a lower error-discovery rate.
- **Prototyping to Reduce Complexity:** Prototypes are developed when necessary (and if applicable to the project) to model and present complex interactions. Prototyping is not applicable for this project.

The collaborative, and somewhat "free-form," nature of iterative, agile development is balanced with the structure and baseline management features of the waterfall methodology. By introducing the baseline management features of waterfall, CNSI minimizes the risk of scope creep that is sometimes associated with iterative development. Moreover, implementing and integrating with our project management processes will incorporate change, issue, and risk management processes. Table 1 describes the key benefits of each of the industry-standard methodologies that are blended into iVision360.

Table 1. SDLC Methodology Comparison

Methodology	Key Benefits Blended into iVision360
Waterfall	Baseline approval of requirements Structured documents and customer approvals Formalized testing

Methodology	Key Benefits Blended into iVision360
Iterative/Agile	Frequent customer interaction Decomposing work into small meaningful features that are presented in working software Frequent course corrections Sense of real progress Early and frequent testing
Rapid Prototyping	Reduce risk by visualizing complex features "A picture is worth 1,000 words" Immediate sense of progress
Extreme Programming	Teams formed between developing organization and customer Sense of common vision and goal

The iVision360 methodology uses a phased process to organize tasks associated with building and testing software. These phases represent major bodies of work that must be accomplished to move systematically through the life cycle. Table 2 describes the phases of iVision360.

Table 2. iVision360 Phases and Artifacts

Supporting Task	Major Activities	Artifacts
Configuration Management	• Support change management • Perform configuration identification, control, and status reporting • Provide baseline management	• Configuration Management Plan • Configuration Status Reports • Release Notes
Data Model Support	• Develop scripts to maintain standard data in the system's databases • Develop scripts to maintain the data structure for the system's databases	• Data Modification Scripts • Schema Modification Scripts • Logical and Physical Data Model • Data Dictionary

Supporting Task	Major Activities	Artifacts
System and Data Administration	• Maintain servers and configuration • Establish and maintain connectivity between sites • Manage database configurations • Lead performance improvement initiatives	• Performance Testing Plan • Performance Test Results • System Configuration Information • Database Configuration Information

2.3 Project Management Tools

Tools, properly applied within the methodology framework, will reduce the time to project completion by providing predefined processes, templates, documents and training materials. More importantly, the use of appropriate tools will help reduce risk and increase the benefits from the project.

It is also important to note, that we will continue to use the tools already proven effective during the previous undertaking to reduce time to completion and mitigate risk.

Table 3 depicts the tools CNSI will utilize on the project.

Table 3. CNSI Project Tools

Tool	Purpose
ReqTrace	CNSI's requirements database, used during requirements validation sessions and design and test phases
Microsoft Visio	Develop use case diagrams, technical architecture diagrams, and support process flows
Microsoft Office	Develop project deliverables as well as presentations and spreadsheet artifacts needed to support deliverables
As-One	Repository for deliverables, presentations, and artifacts

While Microsoft Visio and Microsoft Office are industry-standard tools, the following subsections provide additional information about ReqTrace and As-One.

2.3.1 ReqTrace

CNSI will use its ReqTrace database application for requirements analysis and validation.

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During project initiation and requirements planning, ReqTrace will be loaded with the functional, technical, and support requirements. ReqTrace is CNSI's requirements management tool of choice that is being used in our MMIS projects. ReqTrace has the capability for storing several attributes for requirements, revisions, notes, and comments.

CNSI began using ReqTrace with the CHAMPS project. The requirements validation processes used on the project, as well as the use of ReqTrace, resulted in the requirements validation phase being completed ahead of schedule.

2.3.2 As-One

Believing that continuous collaboration and information-sharing are key factors to successful project execution, CNSI will use its web-based enterprise program management solution, As-One. As shown in Figure 3, As-One is designed to support team collaboration, knowledge management, and process improvement. As-One will provide a convenient repository for all program data, and will give MDCH oversight personnel direct visibility into project performance.

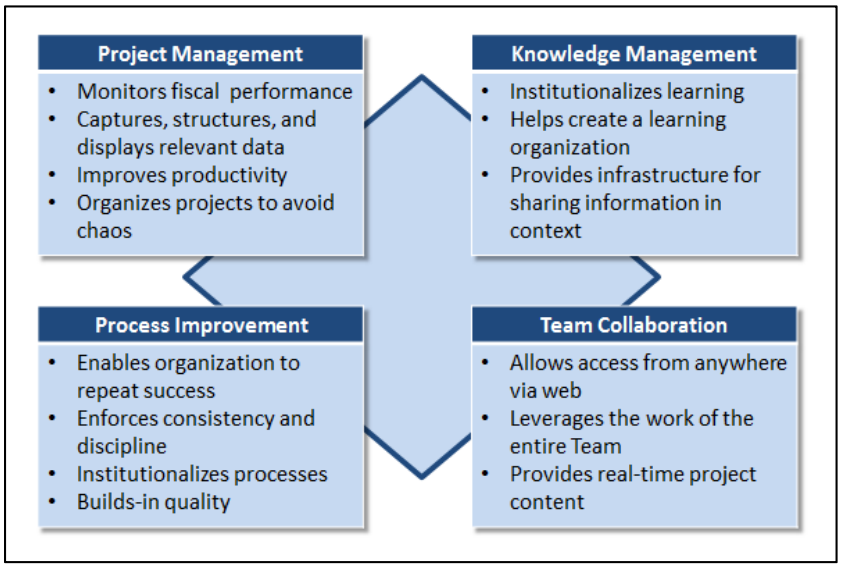

Figure 3. As-One Collaboration and Improvement Conceptual Model

As-One is an "out-of-the-box" solution that supports CNSI's program management philosophy: experienced people, managed processes, and enabling technology.

As-One has proven to be a successful project knowledge base for CHAMPS which allows CNSI and DCH users to share real-time data specific to authorized users. As-One will continue to be used as the project knowledge base for the CHAMPS Medicaid Compliance Healthy Michigan project.

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2.4 Technical and Phased Approach Work Plan

CNSI has created an initial work plan and timeline for the CHAMPS Medicaid Compliance Healthy Michigan project. This work plan describes the expected tasks for the proposed phases and major activities CNSI proposes to use for this project. This information is presented in Figure 4. A detailed description of the activities within each phase is presented in *Section 2.4.1 iVision360 Iterative Development, Testing, and Documentation Approach*.

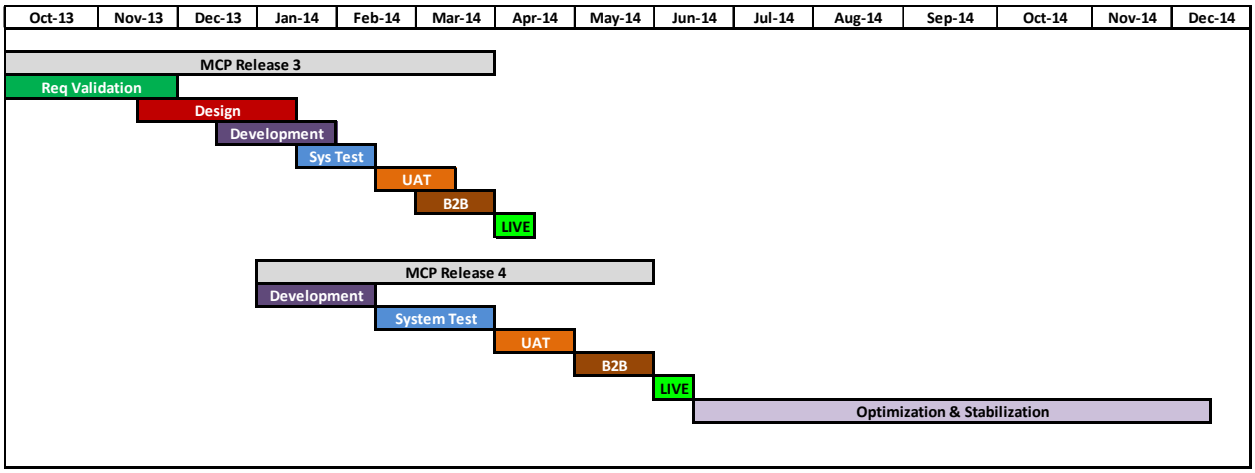

Figure 4. Initial Project Work Plan

CNSI structures work plans to address the overall relationships of the numerous phases, activities, and tasks required to complete the project. It effectively uses the professional resources required to accomplish these phases and produce high-quality products in a cost-conscious manner.

The essence of a successful project is planning, and proper planning requires developing a detailed, task-oriented approach. By reviewing CNSI's work plan, MDCH can obtain a clear and thorough understanding of our proposed technical approach to the project. CNSI proposes a four-phased approach, as described in *Section 2.4.2 Phased Approach Work Plan*, to the implementation and rollout of the CHAMPS Medicaid Compliance Healthy Michigan project.

The following subsections further describe how CNSI will employ its iVision360 methodology in the proposed iterative development, testing, and documentation approach for the CHAMPS Medicaid Compliance Healthy Michigan project.

2.4.1 iVision360 Iterative Development, Testing, and Documentation Approach

CNSI will engage in iterative analysis and design with MDCH early on in Phase I in order to begin early iterative development in Phase II. CNSI plans to produce deliverables during each phase.

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During Phase I, CNSI will assist with elicitation of functional requirements and provide an opportunity for MDCH to review requirements analysis and design documents as soon as a set of logical iterations are completed for a use case. CNSI will expect initial signoff from MDCH upon acceptance of iteration document scope. This will help cut down the time required for overall document review and approval. The documents to be reviewed comprise specific use cases for each subsystem. At the end of all iterations for a phase, an overall As-Built Detailed System Design Document (DSDD) will also be produced for final delivery and acceptance to State.

The iterative/agile development and testing portion of the iVision360 methodology is visible in Phase II for the CHAMPS Medicaid Compliance Healthy Michigan project. During this phase, technical design specifications for impacted functions and user stories are constructed in parallel by the developers and SMEs. As the impacted function's design is being completed, the team lead plans the iterations required to complete development.

Development work is planned based on a two-week iteration schedule. Developers build internal design documentation prior to, and during, the two-week iterations. The first day of each iteration is reserved for startup activities, including finalizing the iteration's internal design documentation. The developer meets with the Data Modeling Team on the first day of the iteration and conducts a walkthrough of any required data model changes. The Data Modeling Team makes the required changes to the database schema and approves the physical model for coding. Developers also develop iteration test cases for tasks that may not be tested with automatic internal iteration test codes, which are required to test each story completely.

Coding begins once the internal design and pre-coding work is completed for the iteration. The developer writes internal iteration test scripts in parallel to actual working code and updates screens and other system functions to fit the physical mode. The developer executes the iteration test scripts as they complete sections of code. The developer builds code, tests incrementally, and coordinates and communicates with the team through daily stand-up meetings regarding any issues holding up the development work.

This entire approach ensures that the developers are not working in silos. It avoids the traditional approach of throwing design documentation "over the fence" to developers to begin coding, only to later discover that major rework is required halfway through the development process.

Developers then test the code against the internal auto-unit-code and manual internal iteration test scripts. As they reach the end of the iteration, they run the code against the functional scripts developed by the Test Team. Discrepancies are identified and corrected. The developer retests to ensure all discrepancies are corrected and closed before the iteration ends. The developer then conducts a peer review of the code of the impacted function on the last day of the iteration. The developer then updates the code based on the review. When developer iteration testing and software code reviews are successfully completed for the iteration, the code is then promoted to the integration test stream. The code is released to the Test Team for system testing when the coding and developer iteration testing is completed for all user stories for the impacted function.

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During initial development iterations, the Test Team develops system test cases based on requirements specifications. During system testing, the Test Team executes system test cases to validate system results against requirements.

For the CHAMPS Medicaid Compliance Healthy Michigan project, CNSI plans to engage the test and development teams early on to build the regression test suite for critical functions. This will speed up testing and improve the overall quality of implementation. CNSI understands the importance and sensitivity of CHAMPS Medicaid Compliance Healthy Michigan project on an environment that is already in production. During system testing, regression tests will be performed on impacted functions based on changes to a previously tested baseline. The intent of regression testing is to demonstrate that CHAMPS continues to meet all approved requirements after changes have been introduced to a previously tested baseline.

As soon as regression testing is completed for a function, CNSI will deliver the code to the User Acceptance Test (UAT) environment. As we did in the CHAMPS Medicaid Compliance (CMC) Release ½ project, we plan to engage MDCH as early as possible and well before the beginning of the planned UAT phase. This ensures that enough time is allowed for thorough acceptance testing, which will also reduce the risk of schedule slippage for UAT completion. CNSI will deploy system- and regression-tested functions to the UAT environment as they are completed during Phase II.

As presented in our initial work plan and timeline (Figure 4), UAT will have a one month duration. Any delay in the completion of UAT will significantly impact the Healthy Michigan Program requirement compliance date. CNSI will work with MDCH during Phase II to plan an early start to Business-to-business (B2B) testing. B2B testing can be started half way through UAT. CNSI will plan to develop critical functions first to allow more time for UAT testing.

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Figure 5 presents a graphical overview of the processes that are part of the iVision 360 methodology.

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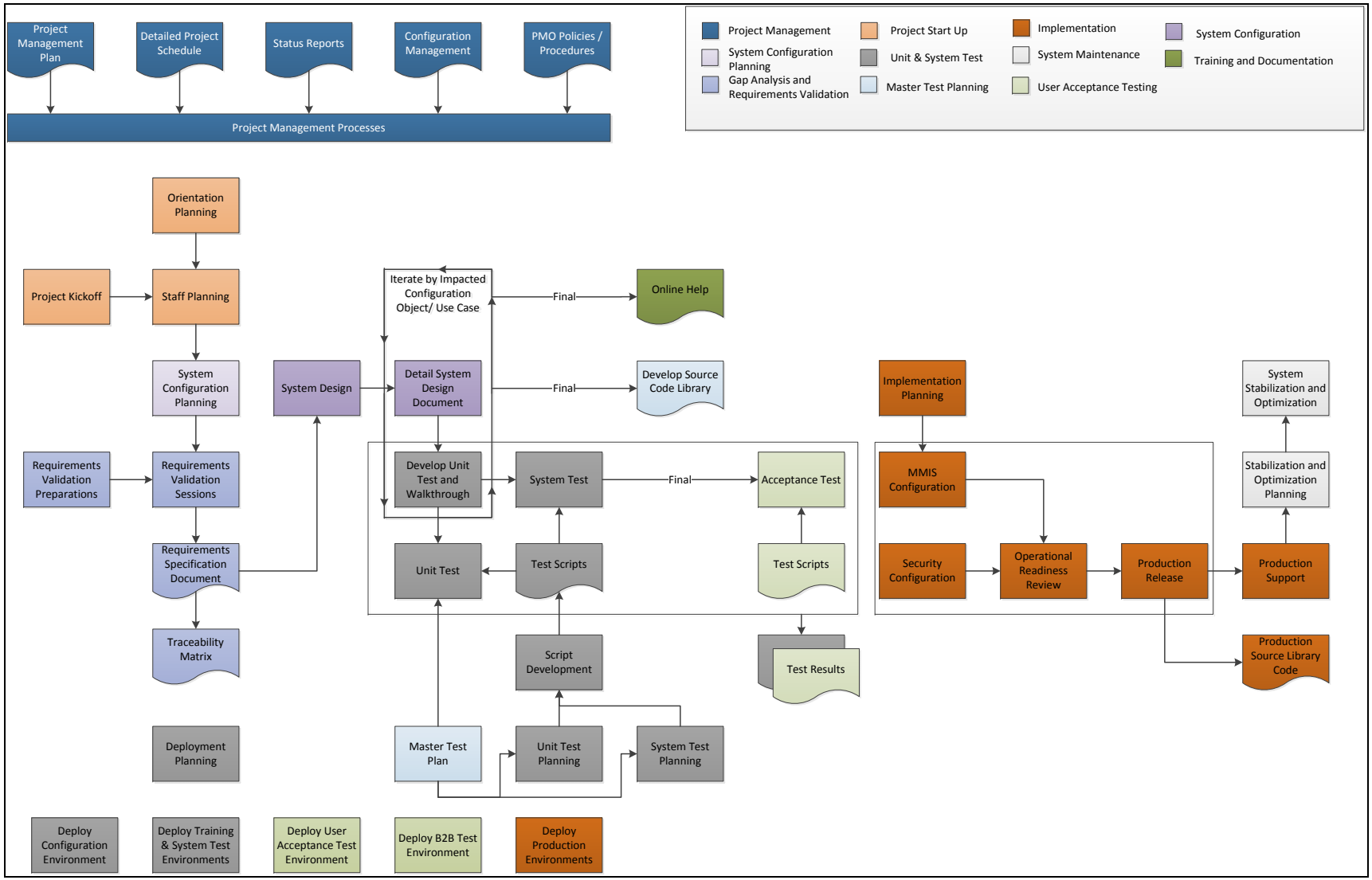

Figure 5. iVision360 Process Diagram

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2.4.2 Phased Approach Work Plan

CNSI proposes a four-phased approach to the implementation and roll out of the CHAMPS Medicaid Compliance Healthy Michigan project. CNSI chose this approach and established assumptions in its work plan since no detailed requirements have been documented.

The four phases are as follows:

- **Phase I:** Requirements Elicitation, Validation and Design
- **Phase II:** Coding and System Testing
- **Phase III:** UAT and Production Deployment
- **Phase IV:** Stabilization and Optimization

Figure 6 provides a high-level overview of the project phases with major activities and anticipated deliverables:

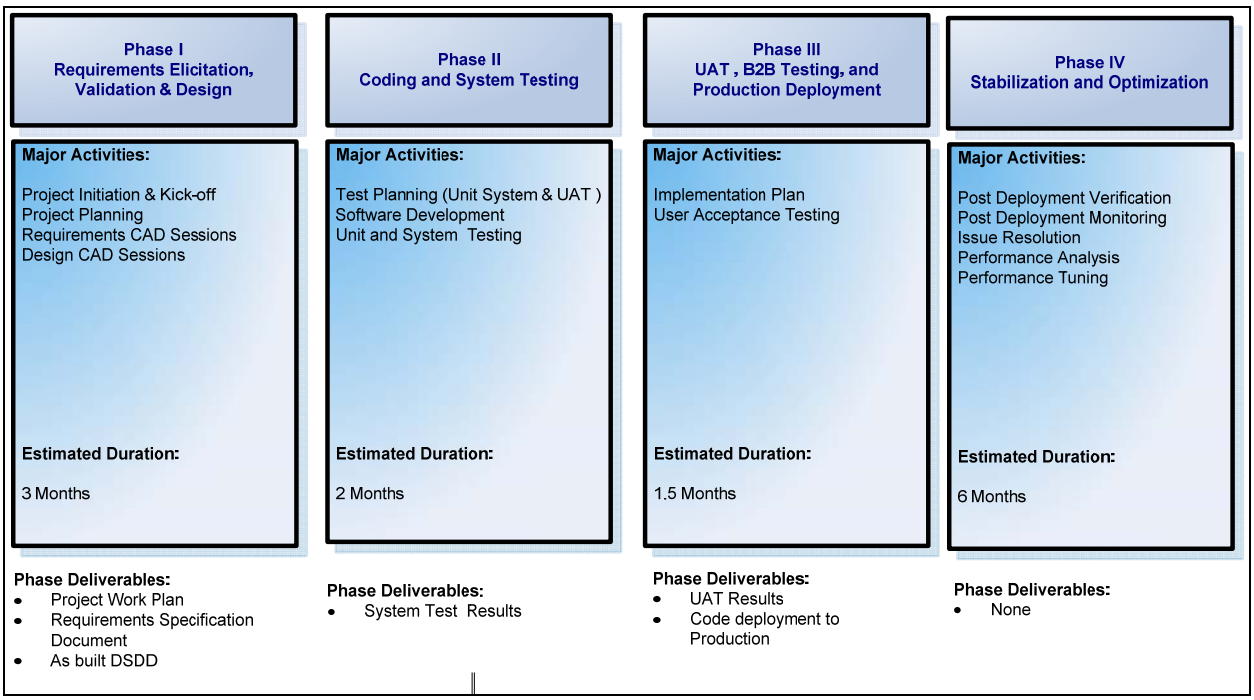

Figure 6. High-Level Project Phases and Activities

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The deliverables for each phase are presented in Table 4, along a brief description of each and an anticipated month of delivery for each deliverable:

Table 4. Deliverable Summary

Phase	Deliverable	Timeline
Phase I – Requirements Validation and Design	**Project Work Plan**	November 2013
	Requirements Specification Document	November 2013
	As-Built Detailed System Design Documents	January 2014
Phase II – Coding and System Testing Deliverables	**System Test Results Report**	February 2014
Phase III – UAT, B2B Testing, and Production Deployment	**UAT Test Results (State)**	April 2014
	Code Deployment to Production	March 2014
Phase IV – Stabilization and Optimization	**None**	

As presented in the initial work plan schedule (Figure 4), the tight implementation schedule will lead to an overlap between Phase I and Phase II. This will allow development to begin early. There will also be an overlap between Phase II and Phase III, allowing B2B testing to start early. A high-level overview of the overlap was presented in the previous paragraphs. The detail of these overlaps will be further elaborated and agreed upon in Phase I as the project plan and schedule are finalized.

The CHAMPS Medicaid Compliance Healthy Michigan project consists of all the activities required to elicit, validate, design, develop, test, implement and monitor changes in the following subsystems/processes in order to seamlessly integrate Healthy Michigan Program into CHAMPS and support the same seamless Healthy Michigan Program integration into Michigan's overall Medicaid enterprise.

Subsystems/processes to be addressed include:

- Interfaces
- Eligibility and Benefit Plans
- Managed Care

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- Claims
- Encounters
- HIPAA EDI transactions including 834, 837 and 271
- Data Warehouse
- Reports and Correspondence

In Table 5, we summarize the high-level activities to be completed as a part of this engagement. In this table, we also provide the deliverable to be produced in each phase of the effort. **Formal deliverables** are shown in **bold** text.

Table 5. High-Level Activities by Phase

Key Activity	Description	Phase
Project Initiation and Kick-off	Establish the project team structure, key stakeholders, and operating guidelines for team activity throughout the course of the project.	Phase 1
Project Planning	Establish project schedules.	Phase 1
Requirements CAD Sessions	Conduct CAD sessions to elicit and validate requirements across all subsystems.	Phase 1
Design CAD Sessions	Conduct CAD sessions to document detailed system design changes for all subsystems.	Phase 1
Phase 1 Deliverables **Project Work Plan (Schedule)** **Requirements Specification Document** **As-Built DSDD**		
Development	Software changes required to support the detailed functional design including: Screens Interfaces Functionality (driven by use cases) Data Models Reports Letters	Phase 2

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Key Activity	Description	Phase
Test Planning	Develop detailed System and E2E test cases and share them with the State UAT team.	Phase 2
Unit/System Testing	Internal CNSI testing of developed functionality at the component, subsystem and system level, including end-to-end regression testing.	Phase 2
Phase 2 Deliverables **System Test Results**		
Implementation Plan	Decision to identify the operational release during which the system changes will be deployed to production.	Phase 3
User Acceptance Testing	MDCH testing of all system changes using formal UAT test scripts.	Phase 3
Phase 3 Deliverables UAT/B2B Test Results (State) **Code Deployment to Production**		
Post Deployment Verification	Perform a sanity check of all system functions after code deployment to ensure all features function as designed.	Phase 4
Post Deployment Monitoring	Overall monitoring of CHAMPS system health and performance after code deployment.	Phase 4
Issue Resolution	Identification and plan-of-action to resolve issues should they arise after code deployment.	Phase 4
Performance Analysis	Measure and analyze post-deployment performance of the CHAMPS system in comparison to pre-deployment system performance.	Phase 4

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Key Activity	Description	Phase
Performance Tuning	Adjust system queries, database tables and interfaces as needed to improve system processing and throughput.	Phase 4
Phase 4 Deliverables None		

2.4.2.1 Phase I – Requirements Validation and Design

Activity 1 - Project Initiation

During this activity, CNSI will conduct the formal project kickoff and deliver team training and orientation. The major milestone associated with this activity is the Project Kickoff Meeting.

Activity 2 - Project Planning

During this activity, CNSI will develop the project work breakdown structure (WBS); and the baseline schedule.

The major milestone associated with this activity is delivery of the project work plan.

Activity 3 – Requirements CAD Sessions

During this activity, CNSI will host CAD sessions to elicit and validate functional requirements. Sessions will be organized and scheduled per CHAMPS subsystem and/or MITA business area. The CAD sessions will include MDCH and CNSI functional and technical SMEs. Using the MDCH ACA High-Level Business Requirements Document and the assumptions defined in this statement of work as a starting point, session participants will confirm the meaning of each functional requirement.

CNSI will compare the finalized requirements with current CHAMPS functionality to determine the impact of the new requirements across all CHAMPS subsystems including system aspects such as:

- Screens
- Interfaces
- Functionality (use cases)
- Data Models
- Reports

- Letters

CNSI will use the results of the impact assessment to plan and conduct design activities.

This will result in a final Requirements Specification Document which provides a clear, concise, and final definition of each functional requirement.

The major milestone associated with this activity is the delivery of the Functional Requirements Specification Document.

Activity 4 – Design CAD Sessions

During this activity CNSI will host CAD sessions to produce detailed functional design artifacts. Sessions will be organized and schedule per CHAMPS subsystem and/or MITA business area. The CAD sessions will include MDCH and CNSI functional and technical SMEs. Using the existing CHAMPS design and the Requirements Specification Document as a starting point, session participants will identify and document required design changes across all CHAMPS subsystems including system aspects such as:

- Screens
- Interfaces
- Functionality (use cases)
- Data Models
- Reports
- Letters

This will result in final revised design artifacts, such as use cases and data models, which will be the basis for development of changes to system functions. CNSI will submit the completed design artifacts to the appropriate MDCH subsystem team lead shortly after the completion of a CAD session. The MDCH team lead will provide formal approval of the design artifacts via signature on an approval form, similar to the existing CHAMPS enhancement approval process. This approval indicates that design is final and development can begin. CNSI will submit a final as-built DSDD for MDCH approval upon completion of all Phase I design sessions.

The major milestone associated with this activity is the delivery of the As-Built DSDD.

2.4.2.2 Phase II – Coding and System Testing

Activity 1 - Development

During this activity, CNSI codes the software changes required to support the updated detailed functional design. Development includes the coding changes as defined in the As-Built DSDD for all CHAMPS subsystems including system aspects such as:

- Screens
- Interfaces
- Functionality (use cases)
- Data Models
- Reports
- Letters

Development is performed in bi-weekly iterations. The major milestones associated with this activity include the completion of all development iterations.

Activity 2 – Test Planning

During this activity, CNSI collaborates with MDCH to produce detailed test cases and scripts for each phase of testing, including system, and UAT.

Milestones associated with this activity include:

- System Test cases and scripts are created

Activity 3 – Unit/System Testing

During this activity, CNSI tests the developed functionality at the component, subsystem, and system level, including end-to-end regression testing.

Milestones associated with this activity include:

- System Test Results are delivered
- Code is deployed to UAT
- Start UAT

2.4.2.3 Phase III – UAT and Production Deployment

Activity 1 – Implementation Plan

During this activity, CNSI collaborates with the State, reviews the operations release calendar and identifies the release during with the system changes for the Healthy Michigan Project can be deployed to production.

Activity 2 – User Acceptance Testing (UAT)

During this activity, CNSI deploys the final code to the UAT environment and provides support to MDCH staff who conduct UAT using formal test scripts.

Milestones associated with this activity include:

- UAT Test Results are published (State)
- Code is deployed to Production

2.4.2.4 Phase IV – Stabilization and Optimization

Activity 1 – Post-Deployment Verification

This task involves verifying the correct installation and operation for all system components. During this activity, CNSI performs a sanity check of all system functions after code deployment to ensure all features function as designed.

Purpose:

- Verify Screen Operation
- Verify Queues Operation
- Verify Interfaces Operation
- Verify DB2DB Jobs Operation
- Verify Data Warehouse Extract Operation
- Verify all Production Job Schedules:
- Interface Schedules
- DB2DB Job Schedules
- Data Warehouse Extract Schedules
- Queue Schedules
- Pay Cycle Schedules

Activity 2 – Post-Deployment Monitoring

This task involves monitoring the system in the months after the application upgrade has gone live.

Purpose:

- Monitor Key Operational Metrics:
- Claims Payment Rates
- Encounter Acceptance Rates
- Prompt Pay Rates
- Claims Payment Amounts
- Pay Cycle Statistics

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- Monitor Program Specific Metrics for programs impacted by Healthy Michigan Program requirements
- Monitor System Performance Metrics:
- Application Screen Performance
- Database Performance
- Application Queues Performance
- Interface Performance
- DB2DB Job Performance
- Data Warehouse Extract Performance
- Reports Performance

Activity 3 – Issue Resolution

This task involves evaluating issues reported in the 90-day period. Issues will be logged and processed according to the CHAMPS Operations Incident Management, Application Support, Change Management, and Release Management processes. Issues that require system changes will be planned for software releases based on priority and will be assigned to CHAMPS Operations releases in accordance with the approved schedule.

Purpose:

- Incident Management:
  - OTRS Ticket Entry
  - OTRS Ticket Triage
  - OTRS Ticket Analysis
  - OTRS Ticket Disposition Determination (Defect, Enhancement, RFC, or Closure)
- Application Support:
  - Iterative Development
  - System Testing
  - RFC Creation and Testing
- Change Management:
  - CQ Entry
  - CQ Analysis
  - CQ Planning

- Change Log Estimation and Approval
- Code Promotion
- RFC Deployment

- Release Management:
  - Release Planning
  - Release Assignment
  - Release Deployment

Activity 4 – Performance Analysis

This task is the process for analyzing the performance of CHAMPS after the Healthy Michigan Program changes have gone live. Various operational reports and monitoring tools will be used to assess the performance of the system and identify opportunities for improvement.

Purpose:

- Operational Reports:
  - Identify any processes performing below benchmarks.
- Monitoring Tools:
  - Identify any servers with metrics outside normal operating ranges.
  - Identify any slow running queries.
  - Identify heavily used web pages.
  - Identify heavily used transactions.

Activity 5 – Performance Tuning

After all processes, servers, and queries where performance issues are identified, the Application Support and Infrastructure Teams will construct a remediation plan. The remediation plan will identify the changes to be made, the timeline for the changes, and the deployment plan either through software release, RFC, or maintenance outage in the case of server changes.

Purpose:

- Application Support:
  - Perform process tuning in development environment.
  - Plan software changes for software releases per the CHAMPS Operations release schedule.
  - Tuning changes are released and deployed according to the CHAMPS Operations Change Management and Release Management processes.

- If Application Support Teams require infrastructure changes, they will request the changes through the CHAMPS Operations RFC process.

- Infrastructure Support:
  - Perform server tuning in lower environments.

Deploy configuration changes to Production during monthly planned maintenance outages. Emergency maintenance outages may be requested if performance issues are severe and business impact is high. In that case, the emergency outage will be planned based on CHAMPS Service Level Agreements in order to minimize business impacts.

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Section 3: General Assumptions

The following assumptions are taken into consideration for this statement of work:

Project Assumptions

1. All required participants, including MDCH and Department of Technology, Management & Budget (DTMB), Medicaid Compliance Program (MCP) and related contractor staff, are available and will participate in meetings and CAD sessions, as needed.
2. All systems, including Bridges, MAXSTAR and Medicaid Health Plans will be ready to support testing and production implementation as defined by the Project Work Plan.
3. No additional hardware is required for this project.
4. Functional requirements will be defined by no later than 10/31/2013. These requirements will be specific, measurable, attainable, time bound, and will be assigned to specific systems, (e.g. CHAMPS, Bridges, MAXSTAR, MAGI Eligibility, State Hub, etc.)
5. The scope of work for this project is limited to the *remaining* scope of work required to augment CHAMPS in order to support the Healthy Michigan Plan, as defined in Section 1.
6. There is no impact to any CHAMPS changes listed in Section 1 as *already designed and developed*.
7. The following items are outside the scope of work for this project:
    a. All beneficiary cost-share processing, including provision and management of the "MI Health Account" (health savings account), premium collection and co-payment tracking, will be handled by an external system/entity.
    b. Functionality to enable hospitals to reduce their charges for uninsured individuals with income under 250% FPL.
    c. Legislative and other reports for co-pay determination, uncompensated care, cost-saving innovation, HMO financial incentives & performance bonuses, and substance abuse metrics are a function of the DCH data warehouse.

CHAMPS Medicaid Compliance
"Healthy Michigan"

Statement of Work

Section 4: Proposed Project Cost

This section of our proposal presents our fixed price overall labor cost and hardware estimates for completing the CHAMPS Medicaid Compliance Healthy Michigan project. The cost was derived based on the expected effort required as presented in our initial work plan, composed of the four phases depicted in Figure 8. The total fixed price labor cost for the CHAMPS Medicaid Compliance Healthy Michigan project is $3,000,000.

The overall project labor cost is detailed within each phase, along with a presentation of the major activities and planned deliverables as depicted in Figure 8. The total cost for the labor effort required to complete the four phases defined for the project is based on our approved blended rate of $146.76.

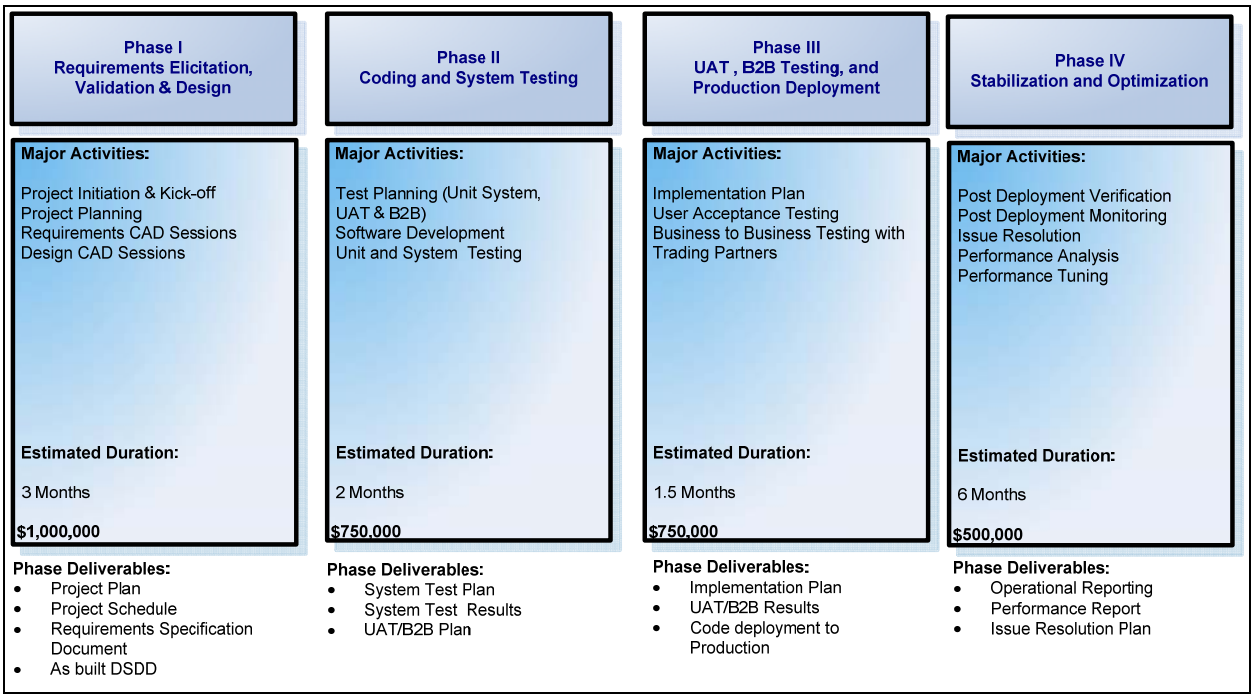

Figure 7. Project Deliverables and Cost by Phase

Beneficiary Monitoring Program Phase 2 and 3 Project
Statement of Work

Prepared For:

State of Michigan
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October 16, 2013

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Section 1: Introduction

CNSI is pleased to present this statement of work to enhance the Community Health Automated Medicaid Processing System (CHAMPS) to support the State of Michigan Department of Community Health's (MDCH) initiative to receive and record Beneficiary Monitoring Program (BMP) provider authorization records from Medicaid Health Plans (MHPs). The goal of this project is to support the ability for multiple BMP provider authorization records to be automatically assigned to a beneficiary; and to enable automated updates to those records. This project also supports the ability to associate one provider number to many managed care program codes.

CNSI proposes to complete the BMP Phase 2 and 3 Project under a fixed-cost agreement.

1.1 Regulatory and Business Drivers for Change

MDCH is extending the BMP tracking process to MHPs, including their provider network. The MHPs will submit their provider network BMP authorization records to the external Program Monitoring (PROM) system, which will aggregate the data for submission to CHAMPS via a new interface. In order to streamline the CHAMPS provider enrollment process for the MHP BMP providers, the Provider Enrollment business process wizard ownership step will be optional for the BMP MCO program code (BMP 0066).

1.2 CNSI Capabilities

CNSI's approach to enhance CHAMPS to support the BMP Phase 2 and 3 Project is based on its ongoing partnership with MDCH and the Department of Technology, Management & Budget (DTMB) and its extensive knowledge of CHAMPS design, implementation, and operation. As system developers and integrators, CNSI aligns its clients' business processes, and information systems to provide access to the right information at the right time, enabling the achievement of their desired business results and creating enterprise value. CNSI will employ its extensive technological experience in the industry and incorporate its flexible tools and methodologies to deliver quality results on time and within budget. CNSI completes jobs for clients by delivering on commitments with speed and purpose in accordance with the client's specifications and expectations.

CNSI will build upon its extensive knowledge gained from designing, developing, implementing, and operating CHAMPS for the State, as well as previous CHAMPS efforts, including the HIPAA 5010 compliance implementation, and the ongoing International Classification of Diseases, Tenth Edition (ICD-10), transition and remediation. In supporting the Medicare and Medicaid integration effort and integrating it with CHAMPS, CNSI will continue to collaborate with the State's business and technical personnel and provide an experienced team of Medicaid subject matter experts (SMEs) who have the technical, business, and project management expertise to support this endeavor.

CNSI's experience working on prior Medicaid health information technology (IT) initiatives has led to incorporating the following factors in developing this statement of work:

- **CNSI's capability to conduct complex analysis of Medicaid system requirements**

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CNSI's project teams have a wealth of experience with multiple Medicaid programs, which allows them to efficiently conduct the data-gathering and analysis activities for this initiative. Architects and SMEs who have worked with CHAMPS for a variety of Medicaid health IT initiatives are among the team members involved in this effort.

- **CNSI's sensitivity to the State of Michigan's needs and constraints**

  CNSI is uniquely qualified to remain sensitive to the State's needs and constraints in defining the project's approach. The team will employ an orderly, structured, professional approach that is sufficiently flexible to respond to changes in requirements that evolve from additional understanding. Overall, CNSI has practical "hands-on" experience of what does and does not work.

1.3 Proposed Project Organization

CNSI believes this statement of work represents the best possible combination of architecture, technology, support, and experience to complete this project. The proposed team members are each the best possible candidates of their respective disciplines. The underlying logic behind identifying each member of this group is that:

- They share the same philosophical approach for undertaking this project – **the customer comes first**.
- They understand the values that each member brings to successfully implementing the project.
- They are committed to understanding and incorporating the State's requirements.
- They understand the necessary advanced technologies, business needs, and operational issues.

CNSI's primary objective is the successful implementation and completion of the project. Its team is fully dedicated to the BMP Phase 2 and 3 Project and is confident in its ability to achieve that goal.

However, an effective project management plan cannot work with participation only by CNSI. As the customer, the State is the most important member of the project team. The customer must be actively engaged in the process at all levels. Implementation is only as good as the partnership established and maintained between all involved parties.

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Section 2: Project Management, Methodology, Tools, and Technical Approach

This section presents CNSI's project management and technical approaches, methodology, tools, and phased work plan for accomplishing all activities required for the BMP Phase 2 and 3 Project implementation. This section describes the scope of activities to be addressed throughout the project, from the initiation phase to final implementation, as well as the techniques and methodologies CNSI's project team will use.

Each of the following subsections will contain a high-level description of the four-phase approach for this project. For each phase, the major activities and anticipated deliverables are presented, followed by a high-level description of the major milestones and approximate timelines.

2.1 Project Management Approach

The project's successful implementation relies on the framework and environment provided by project and quality management. Figure 1 shows CNSI's project and quality management framework and how the related activities interact with project tasks.

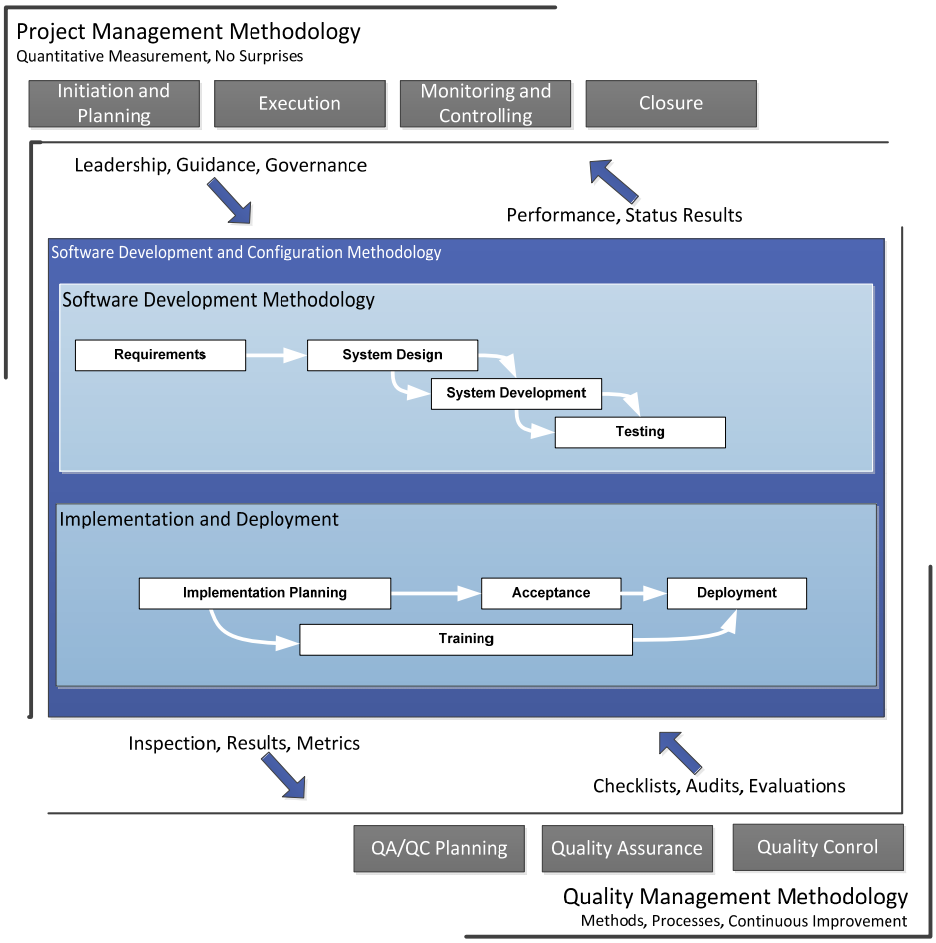

Figure 1. CNSI's Project Management and Quality Management Framework

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Although all projects are unique, they share common components and processes. The generally accepted process groups defined by the *Project Management Body of Knowledge* (*PMBOK*), as incorporated into the CNSI project management process, are:

- **Initiating:** This process group defines the project objectives and grants authority to proceed. For CNSI, the initiating processes are largely incorporated into the proposal development process, during which required partners are identified.
- **Planning:** This process group refines the project objectives and scope and plans the tasks, activities, and steps necessary to meet the project's objectives. The planning processes start during proposal development and proceed following contract award while CNSI works with the customer to establish and baseline the project management plan. The project management plan is modified and updated as necessary over the course of the project. It is the culmination of the planning processes for scope definition and management, time (scheduling), staffing (human resources), communications, and risk management.
- **Executing:** This process group puts the project's plans into motion. This is where the bulk of the work for the project is performed.
- **Monitoring and Controlling:** This process group measures the performance of the project's executing activities and reports these performance results to project managers and stakeholders. Output is used to refine, improve, and/or change project management (including plans and schedules) as necessary to meet the project's objectives.
- **Closing:** This process group documents the formal acceptance and approval of the project's product and brings all aspects of the project to a close.

CNSI is confident it has the correct methodology and project framework in place to successfully implement the BMP Phase 2 and 3 Project modifications. CNSI continually improves its project management processes using lessons learned from previous projects and through the proficiency and continuous education of its program and project managers, senior technical and engineering staff, and senior and corporate management. This ensures a number of advantages:

- The project management philosophy is firmly entrenched within the entire project team, including the State of Michigan and CNSI.
- Project management is a core competency.
- The project staff is focused on successfully implementing the project.
- Project management, quality management, and cost management processes are fully integrated and their infrastructure is in place.
- Effective project status reporting is established throughout the project life cycle.
- Project and software development methodologies are well documented.
- Project information is communicated continuously to the right people at the right time.
- The project is continuously monitored against performance.
- Excellence in quality and delivery are built in.

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- Deliverable review and approval processes are in place.

Through developing the project management plan, CNSI expects to collaborate with the State of Michigan project management team to further customize CNSI's project management system to successfully complete the project.

2.2 Project Methodology

CNSI's holistic approach for this project will use its proven methodology as the overarching framework and bring an experienced team of program managers, SMEs, technical experts, and change management resources to support this effort.

The project methodology is a framework that facilitates the integration of CNSI's extensive system experience, which is rooted in application implementations, methodologies, and delivery tools. This framework allows CNSI to deliver services to its clients consistently across its footprint and gather continued enhancements for its supporting methodology, thereby providing continued value for its clients.

CNSI's methodology is an integrated methodology that combines its best delivery assets. The methodology:

- Provides a scalable, integrated collection of assets.
- Provides a consistent level of detail and presentation.
- Supports tailoring to scale, which provides a unique, but consistent cost-effective delivery approach.

CNSI's methodology approach consists of the following:

- The **Manage** work approach provides a single, consistent approach to managing CNSI's engagements. Within the Manage Approach is the Quality Management activity, which verifies that deliverables and processes meet requirements. The Quality Management activity also supports continuous process improvement, as well as the methodology.
- The **Life Cycle** work approach addresses unique expertise while providing overall integration across the full implementation life cycle.

CNSI's methodology has the flexibility to be adapted to meet the State of Michigan's unique requirements while confirming that its experienced staff members follow established practices.

While no two engagements are the same, the State of Michigan expects CNSI to deliver in a consistent, systematic approach. The proposed project methodology incorporates CNSI's staff's delivery experience into a single, integrated approach. It provides the structure for integrating CNSI's capabilities while allowing individual project teams the flexibility to use client-mandated tools. The right assembly of technologies, techniques, and deliverable processes requires the specific experience and expertise found in CNSI's staff.

Investing time to create an effective plan with clear objectives is integral to effective project execution. CNSI's methodology provides a structured approach to the planning process. While this may appear to require more initial effort than desired, experience has shown that following these processes reduces the likelihood of planning mistakes and results in lower risk and a more cost-effective, rapid delivery.

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CNSI's methodology incorporates a consistent approach for identifying, tracking, and measuring the value derived from ongoing projects. CNSI's experience developing and delivering various client projects is incorporated into the project strategy and planning activities.

In undertaking this project, CNSI will employ its iVision360 system development life cycle (SDLC) methodology tailored for the BMP Phase 2 and 3 Project:

- **User is at the Center:** CNSI's primary motivation in developing iVision360 is to put the user at the center of the project life cycle. Successful projects have high interaction with end users and place the user at the center of the project. Every phase and activity of iVision360 focuses on interaction and collaboration with the user community. CNSI does this by implementing agile techniques and building working software in an iterative fashion with user validation at periodic intervals.
- **Common Goals:** Users actively participate in configuration sessions with an integrated team of developers, analysts, and testers. This method avoids the pitfalls of waterfall methods. iVision360 provides the team with a sense of purpose, a goal, and the drive to accomplish the end objective: software that meets the requirements.
- **Early and Often Testing:** iVision360 provides an opportunity to test early and often so formal system test phases and subsequent test phases are more likely to meet schedule expectations with a lower error-discovery rate.

By introducing the baseline management features of waterfall, CNSI minimizes the risk of scope creep that is sometimes associated with iterative methods. Moreover, implementing and integrating with project management processes will provide integrated change, issue, and risk management. Table 1 describes the key benefits of each of the industry-standard methodologies that are blended into iVision360.

Table 1. SDLC Methodology Comparison

Methodology	Key Benefits Blended into iVision360
Waterfall	Baseline approval of requirements Structured documents and customer approvals Formalized testing
Iterative/Agile	Frequent customer interaction Decomposing work into small meaningful features that are presented in working software Frequent course corrections Sense of real progress Early and frequent testing
Extreme Programming	Teams formed between developing organization and customer Sense of common vision and goal

iVision360 has been adapted for the purposes of this project. The customized version is presented in Section 2.5.1 iVision360 Iterative Design, Testing, and Documentation Approach.

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2.3 Project Management Tools

Tools, when properly applied within the methodology framework, will reduce the time to complete a project by providing predefined processes, templates, documents, and training materials. More importantly, use of the appropriate tools will help reduce risk and increase efficiency.

CNSI will continue to use the tools already proven effective during the previous undertakings to reduce the time to complete the project and mitigate risk. Table 2 lists the tools CNSI will utilize for the project.

Table 2. CNSI Project Tools

Tool	Purpose
ReqTrace®	CNSI's requirements database used during design and test phases
Microsoft Visio	Develop use case diagrams, technical architecture diagrams, and support process flows
Microsoft Office	Develop project deliverables as well as presentations and spreadsheet artifacts needed to support deliverables
As-One	Repository for deliverables, presentations, and artifacts

Microsoft Visio and Microsoft Office are industry-standard tools. The following subsections provide additional information about ReqTrace and As-One.

2.3.1 ReqTrace

CNSI will use its ReqTrace web application for requirements analysis and validation.

During project initiation and requirements planning, ReqTrace will be loaded with the functional, technical, and support requirements. ReqTrace is CNSI's requirements management tool of choice being used in MMIS projects. ReqTrace provides the ability to trace requirements to use cases, related test cases, and results. The application can store requirements-related attributes, including revisions, notes, and comments.

CNSI began using ReqTrace during the implementation of CHAMPS. The requirements validation processes used on the project, as well as the use of ReqTrace, resulted in the requirements validation phase being completed ahead of schedule.

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2.3.2 As-One

Believing that continuous collaboration and information-sharing are key factors to successful project execution, CNSI will use As-One, its web-based enterprise program management solution. Figure 2 illustrates how As-One is designed to support team collaboration, knowledge management, and process improvement. As-One will provide a convenient repository for all program data and will give the State of Michigan oversight personnel direct visibility into project performance.

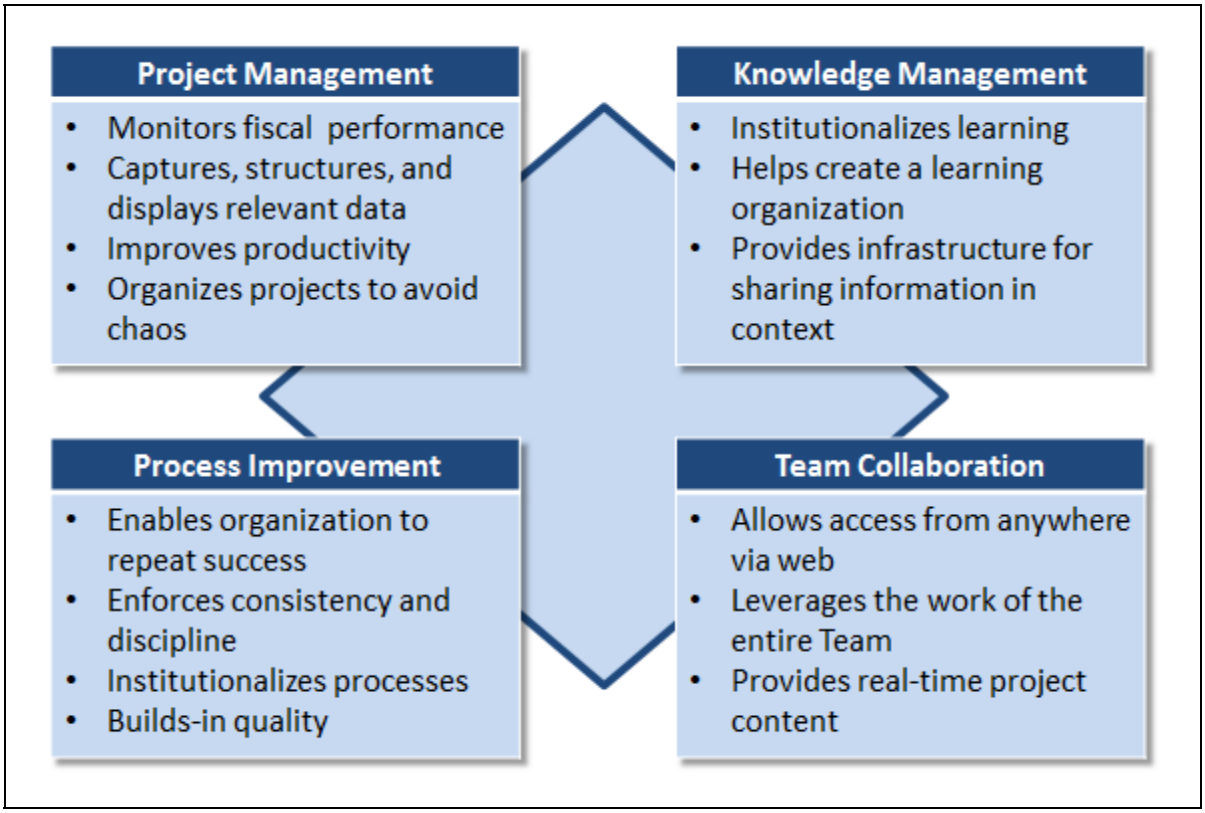

Figure 2. As-One Collaboration and Improvement

As-One is an "out-of-the-box" solution that supports CNSI's program management philosophy: experienced people, managed processes, and enabling technology.

As-One will allow CNSI users to share real-time data specific to the user's authority and association and is accessed via a standard web browser. CNSI's previous and ongoing projects with MDCH and DTMB use As-One. Training will be provided for team members new to the program.

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2.4 Solution

This section will review CNSI's proposed BMP Phase 2 and 3 Project, including technical and functional overviews.

2.4.1 Technical Overview

CNSI's solution will use existing CHAMPS Interface Repository Framework (ISR) to receive and load a new BMP provider authorization interface from the PROM system. CNSI's solution will leverage the existing connectivity between DTMB's Data Exchange Gateway (DEG) to receive the interface file. The new MHP BMP provider authorization records will be displayed in CHAMPS and included in the HIPAA 834 BMP enrollment roster. The end date for MHP BMP provider authorization record will be automatically updated any time there is a change the related provider business status end date in the Provider Enrollment subsystem.

2.4.2 Functionality

Functions in CHAMPS that will be modified as part of Team CNSI's solution are listed below:

- The following changes are proposed for BMP Phase 2:
  - A new interface will be created to receive the BMP Authorized providers information from the PROM system and load the records into CHAMPS.
  - Changes will made to reflect BMP Managed care providers on the screens.
  - Changes will be made to validate the BMP Authorized provider only when Pay Provider Box is checked from the screens.
  - Changes will be made to add/modify BMP Managed Care Authorized providers from the screens.
  - The "include 834 flag" will be removed from the screens. Instead, the flag will always default to 'Y'.
  - A "Link to PE Subsystem" check box will be added on the EE BMP screen to link the PE Subsystem with the BMP Authorized Provider End Date.
  - A new DB2DB job will be created to update authorized provider information for all associated members when there is a change in the business status.
- The following change is proposed for BMP Phase 3:
  - Support the ability to associate one provider number to many managed care program codes

2.5 Technical and Phased Approach Work Plan

CNSI has created an initial work plan and timeline for the BMP Phase 2 and 3 Project. This work plan describes the expected activities for the proposed phases and major activities. This information is presented in Figure 3 below. A detailed description of the major activities within each phase is presented in *Section 2.5.2 Phased Approach Work Plan*.

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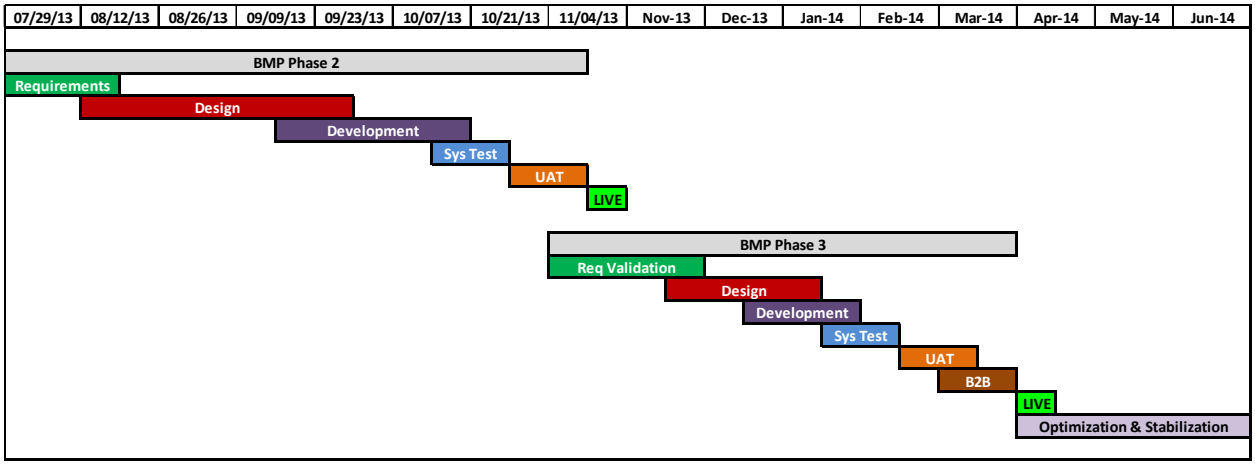

Figure 3. Initial Project Work Plan

CNSI structured this work plan to address the overall relationships of the phases and activities required to complete the project. It effectively uses the professional resources required to accomplish these phases and produce high-quality products in a cost-conscious manner.

The following subsections further describe how CNSI intends to accomplish the goals of the work plan by employing its iVision360 methodology in the proposed approach for the BMP Phase 2 and 3 Project.

2.5.1 iVision360 Iterative Design, Testing, and Documentation Approach

In this section, CNSI provides an outline of its iVision360 SDLC. The SDLC is a full-featured methodology that includes standard design and development processes. CNSI's SDLC processes have been adapted to address the specific needs of the project. This project will be divided into four phases.

CNSI will engage in iterative requirements analysis and design with State at the beginning of each release. The State will be able to review requirements analysis and design documents as soon as a logical set of iterations are completed. CNSI expects initial State signoff upon acceptance of the iteration's document scope. This will help reduce the time required for document review and approval. The documents reviewed at any time will have a smaller scope to help the State perform a thorough review. At the end of all iterations for a release, an overall document will be produced for a final delivery and acceptance to State.

The iterative/agile development and testing portion of the iVision360 methodology is visible in each release of design and coding. During this phase, technical design specifications for impacted functions and user stories are constructed in parallel by developers and the SMEs. As the impacted function's design is completed, the team lead will plan the related development iterations.

Developers will build internal design documentation prior to, and during, the iterations. The beginning of each iteration is reserved for startup activities, including finalizing the internal design documentation. The developer meets with the data modeling team on Day 1 of an iteration to conduct a walkthrough of any required data model changes. The data modeling team makes the required changes to the database schema and approves the physical model for coding. Developers also develop iteration test cases (for the tasks

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that may not be tested with automatic internal iteration test code), which are required to test each story completely.

Coding begins when the internal design and pre-coding work is completed for the iteration. The developer will write internal iteration test scripts in parallel to actual working code and update screens and other system functions to fit the physical mode. The developer will execute the iteration test scripts as they complete sections of code. The codes will be built and tested incrementally. The developer will coordinate daily stand-up meetings and communicate any development issues.

This development approach ensures developers do not work in silos. It also avoids the traditional approach of throwing design documentation "over the fence" to developers to begin coding, only to discover later that major rework is required halfway through the development process.

Developers eventually test the code against internal auto-unit-code and manual internal iteration test scripts. As they reach the end of the iteration, they will run the code against functional scripts developed by the test team. Discrepancies are identified and corrected, and the developer retests to ensure all discrepancies are corrected and closed before the iteration ends. The developer will conduct a peer review of the impacted function's code on the last day of the iteration and then update the code based on the review. When developer iteration testing and software code reviews are successfully completed for the iteration, the code will be promoted to the integration test stream. The code will be released to the test team for system testing when coding and developer iteration testing is completed for all of an impacted functions user stories.

During initial development iterations, the test team will develop system test cases based on requirements specification. During system testing, the test team will execute system test cases to validate system results against requirements.

CNSI plans to engage the test and development teams early on to build the regression test suite for critical functions. This will help to speed up testing and improve overall quality of implementation. During system testing, if required, regression tests will be performed on impacted functions based on changes to a previously tested baseline. The intent of regression testing is to demonstrate that the CHAMPS system continues to meet all approved requirements after changes have been introduced to a previously tested baseline.

As soon as system testing is completed for an activity, CNSI will deliver the code to the UAT environment. CNSI plans to engage the State as early as possible and well before the beginning of the planned UAT phase. This will ensure enough time is allowed for thorough UAT and reduce the risk of schedule slippage for UAT completion.

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Figure 4 presents a graphical overview of the processes that are part of the iVision360 methodology.

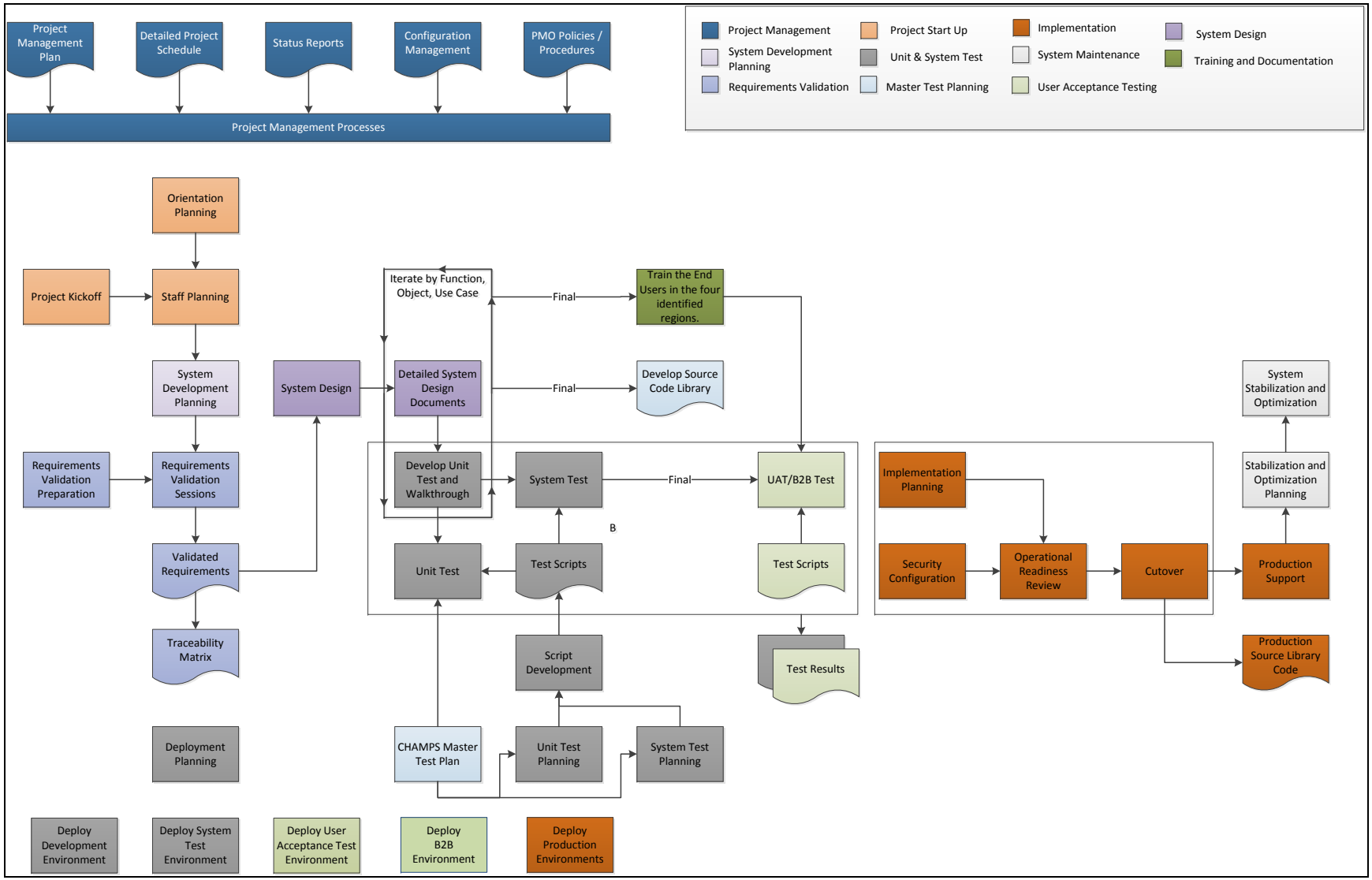

Figure 4. iVision360 Process Diagram

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2.5.2 Phased Approach Work Plan

CNSI proposes an overlapping, four-phase approach to the BMP Phase 2 and 3 Project, consisting of design, development, implementation, stabilization, and optimization activities.

The four phases are:

- **Phase I:** Initiation and Requirements
- **Phase II:** Design, Coding and System Testing
- **Phase III:** UAT and Production Deployment
- **Phase IV:** Stabilization and Optimization

Figure 5 provides a high-level overview of the four phases, their major activities, and expected timelines.

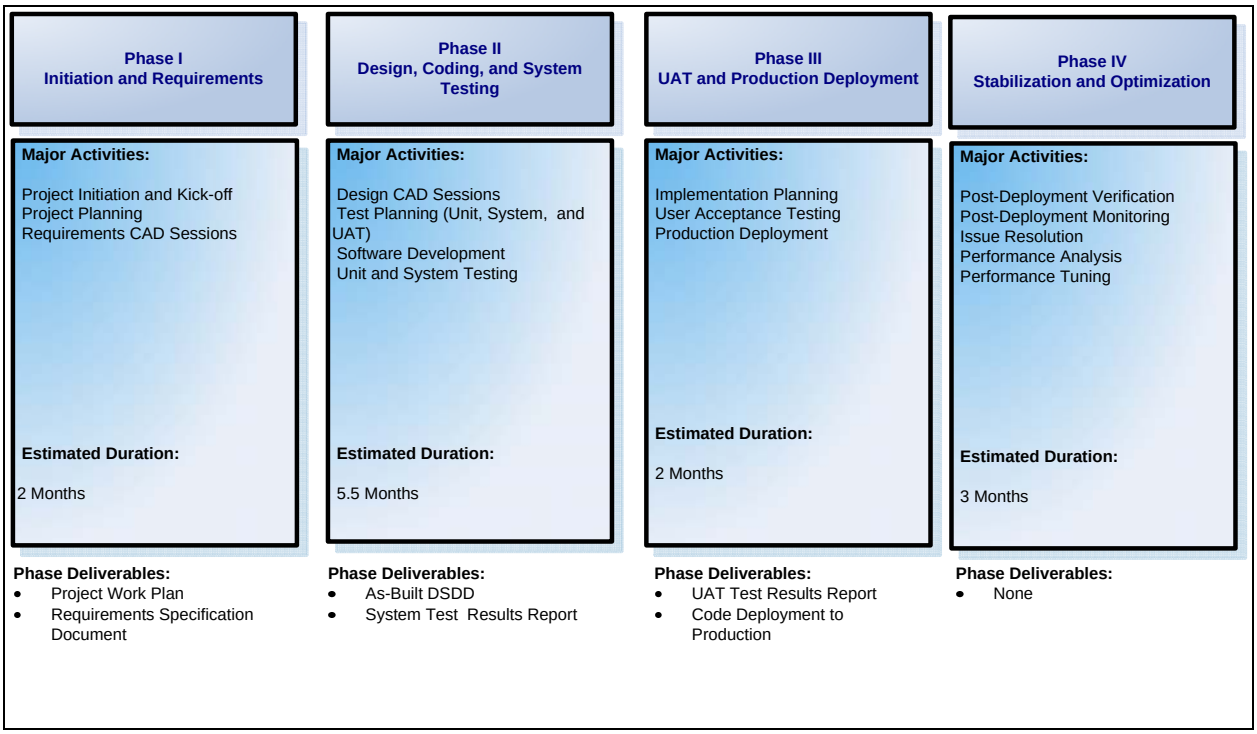

Figure 5. High-Level Project Phases and Activities

With every project, there are critical milestones to be met and work products and deliverables that must be developed and produced in order to provide the inputs necessary to perform the next phase.

Table 3 elaborates on the key high-level milestones of the proposed implementation plan, along with the expected deliverables.

Table 3. High-Level Activities and Milestones by Phase

Major Activity	Description	Phase

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Major Activity	Description	Phase
Project Initiation	Establish the project team structure, key stakeholders, and operating guidelines for team activity throughout the course of the project.	Phase I
Project Planning	Establish project plans and schedules	Phase I
Requirements CAD Sessions	Conduct CAD sessions to elicit and validate requirements for the Provider subsystem and technical architecture.	Phase I
Phase I Deliverables • **Project Work Plan (Schedule)** • **Requirements Specification Document**		
Design CAD Sessions	Conduct CAD sessions to document detailed system design changes for CHAMPS architecture.	Phase II
Test Planning	Create Test Cases for: Unit, System and UAT.	Phase II
Software Development	Software changes required to support the detailed functional design including: • Interfaces • Functionality (driven by use cases) • Reports • HIPAA EDI Transactions • Encounter Claims Business Rules	Phase II
Unit and System Testing	Internal CNSI testing of developed functionality at the component, subsystem and system level, including end-to-end regression testing.	Phase II
Phase II Deliverables • **As Built DSDD** • **System Test Results Report**		

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Major Activity	Description	Phase
Implementation Planning	Decide and align the deployment of the system changes with one or more Operations Releases	Phase III
UAT Testing	State testing of all system changes using formal UAT test scripts and testing with trading partners.	Phase III
Production Deployment	CNSI and the State of Michigan deploy the modifications in the CHAMPS production environment.	Phase III
Phase III Deliverables • **UAT Test Results Report (State Deliverable)** • **Code Deployment to Production**		
Post Deployment Verification	Perform a sanity check of all system functions after code deployment to ensure all features function as designed.	Phase IV
Post Deployment Monitoring	Overall monitoring of CHAMPS system health and performance after code deployment.	Phase IV
Issue Resolution	Identification and plan-of-action to resolve issues should they arise after code deployment.	Phase IV
Performance Analysis	Measure and analyze post-deployment performance of the CHAMPS system in comparison to pre-deployment system performance.	Phase IV
Performance Tuning	Adjust system queries, database tables and interfaces as needed to improve system processing and throughput.	Phase IV
Phase 4 Deliverables • None		

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2.5.2.1 Phase 1 – Initiation and Requirements

Activity 1: Project Initiation

During this activity, CNSI will collaborate with the State of Michigan to identify the key business and technical team members who will participate in the BMP Phase 2 and 3 Project. CNSI will conduct the formal project kickoff and deliver orientation for the project effort.

The major milestones associated with this activity are:

- Participating State team members are identified
- Project kickoff is delivered

Activity 2 - Project Planning

During this activity, CNSI will strategize the execution of BMP Phase 2 and 3 Project. CNSI will refer to the CHAMPS project management plan which outlines the standards and procedures for risk, issue, and action item management; CHAMPS' project governance plan to coordinate activities between the CNSI project team and the State; CHAMPS' communications plan; CHAMPS'deliverable management plan; project work breakdown structure (WBS); and the baseline schedule.

Activity 3 – Requirements CAD Sessions

The goals of the BMP Phase 2 and 3 Project have been defined at a high level within this statements of work. During this activity, CNSI will host CAD sessions to elicit and validate functional and technical requirements. The CAD sessions will include State and CNSI functional and technical SMEs. CNSI will compare the validated requirements with current CHAMPS functionality and technical architecture to determine the impact of the new requirements across all CHAMPS subsystems, including system aspects, such as:

- Functionality (Use Cases)
- Reports
- Interfaces
- HIPAA EDI Transactions
- Encounter Claims Business Rules

This will result in a final requirements specification document for the BMP Phase 2 and 3 Project which provides a clear, concise, and final definition of each requirement. The finalized requirements will be used during the Phase II design and development effort.

The major milestones associated with this activity are:

- Delivery of the functional requirements specification document

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2.5.2.2 Phase II – Design, Coding, and System Testing

Activity 1 – Design CAD Sessions

During this activity, CNSI will host CAD sessions to produce detailed design artifacts for the BMP Phase 2 and 3 Project. Sessions will be organized and scheduled per CHAMPS subsystem and technical architecture requirement. The CAD sessions will include State and CNSI functional and technical SMEs. Using the existing CHAMPS Detailed Design Specification Documents (DSDDs) design and the requirements specification document as a starting point, session participants will identify and document required design changes, including system aspects, such as:

- Functionality (Use Cases)
- Reports
- Interfaces
- HIPAA EDI Transactions
- Encounter Claims Business Rules

This will result in final revised design artifacts, such as use cases and data models, which will be the basis for the development of changes to system functions. CNSI will submit the completed design artifacts to the appropriate State decision maker shortly after the completion of a CAD session. The State decision maker will provide formal approval of the design artifacts via signature on an approval form, similar to the existing CHAMPS enhancement approval process. This approval indicates that the design is final and development can begin. CNSI will submit a final, as-built DSDD for State approval upon completion of all design sessions.

The major milestones associated with this activity is the delivery of the as-built DSDD.

Activity 2 - Development

During this activity, CNSI codes the software changes required to support the updated detailed functional and technical design for the BMP Phase 2 and 3 Project. Development is performed through a series of bi-weekly development iterations. As previously described, development includes the coding changes as defined in the as-built DSDD for all CHAMPS subsystems, including system aspects, such as:

- Functionality (Use Cases)
- Reports
- Interfaces
- HIPAA EDI Transactions
- Encounter Claims Business Rules

At the conclusion of each development iteration, the developed code is delivered to the CNSI System Test Team. The major milestone associated with this activity is the completion of all development iterations.

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Activity 3 – Test Planning

During this activity, CNSI produces detailed test cases for each phase of testing, including system and E2E testing. The test cases are reviewed and by the functional team. The final test cases are shared with the State to help them create UAT test cases

The major milestones associated with this activity include:

- System / E2E test cases are developed

Activity 4 – Unit and System Testing

During this activity, CNSI tests the developed functionality at the component, subsystem, and system level, including E2E regression testing.

The major milestones associated with this activity include:

- System test results report is delivered
- Code is deployed to UAT
- UAT begins

2.5.2.3 Phase III – UAT and Production Deployment

Activity 1 – Implementation Planning

During this activity, CNSI collaborates with the State, reviews the operations release calendar and identifies the release during with the system changes for the BMP Phase 2 and 3 Project can be deployed to production.

Activity 2 –UAT

During this activity, CNSI provides support to the State staff who will conduct UAT using formal, State-developed test scripts.

The major milestone associated with this activity is the UAT results report published by the State.

Activity 3 – Production Deployment

During this activity, CNSI, the State, all the data exchange partners, and the State's data warehouse vendor collaborate to execute the implementation plan for the BMP Phase 2 and 3 Project. CNSI deploys the final code to the production environment and it is available for use by the State of Michigan site-visit inspection teams.

The major milestones associated with this activity include:

- Code is deployed to Production
- Stabilization and Optimization Phase (Phase IV) begins

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2.5.2.4 Phase IV – Stabilization and Optimization

Activity 1 – Post-Deployment Verification

This task involves verifying the correct installation and operation for all system components. During this activity, CNSI performs a sanity check of all system functions after code deployment to ensure all features function as designed.

Purpose:

- Verify Queues Operation
- Verify Interfaces Operation
- Verify Data Warehouse Extract Operation
- Verify all Production Job Schedules:
- Interface Schedules
- Data Warehouse Extract Schedules
- Queue Schedules
- Pay Cycle Schedules

Activity 2 – Post-Deployment Monitoring

This task involves monitoring the system in the months after the application upgrade has gone live.

Purpose:

- Monitor Key Operational Metrics:
- Claims Payment Rates
- Encounter Acceptance Rates
- Prompt Pay Rates
- Claims Payment Amounts
- Pay Cycle Statistics
- Monitor System Performance Metrics:
- Database Performance
- Application Queues Performance
- Interface Performance
- Data Warehouse Extract Performance
- Reports Performance

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Activity 3 – Issue Resolution

This task involves evaluating issues reported in the 90-day period. Issues will be logged and processed according to the CHAMPS operations incident management, application support, change management, and release management processes. Issues that require system changes will be planned for software releases based on priority and will be assigned to CHAMPS operations releases in accordance with the approved schedule.

Purpose:

- Incident Management:
  - OTRS Ticket Entry
  - OTRS Ticket Triage
  - OTRS Ticket Analysis
  - OTRS Ticket Disposition Determination (Defect, Enhancement, Request for Change (RFC), or Closure)
- Application Support:
  - Iterative Development
  - System Testing
  - RFC Creation and Testing
- Change Management:
  - CQ Entry
  - CQ Analysis
  - CQ Planning
    - Change Log Estimation and Approval
    - Code Promotion
    - RFC Deployment
- Release Management:
  - Release Planning
  - Release Assignment
  - Release Deployment

Activity 4 – Performance Analysis

This task is the process for analyzing the performance of CHAMPS after the BMP Phase 2 and 3 Project's changes have gone live. Various operational reports and monitoring tools will be used to assess the performance of the system and identify opportunities for improvement.

Purpose:

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- Operational Reports:
  - Identify any processes performing below benchmarks.
- Monitoring Tools:
  - Identify any servers with metrics outside normal operating ranges.
  - Identify any slow running queries.
  - Identify heavily used web pages.
  - Identify heavily used transactions.

Activity 5 – Performance Tuning

After all processes, servers, and queries where performance issues are identified, the application support and infrastructure teams will construct a remediation plan. The remediation plan will identify the changes to be made, the timeline for the changes, and the deployment plan either through software release, RFC, or maintenance outage in the case of server changes.

Purpose:

- Application Support:
  - Perform process tuning in development environment.
  - Plan software changes for software releases per the CHAMPS operations release schedule.
  - Tuning changes are released and deployed according to the CHAMPS operations change management and release management processes.
  - If application support teams require infrastructure changes, they will request the changes through the CHAMPS operations RFC process.
- Infrastructure Support:
  - Perform server tuning in lower environments.

Configuration changes will be deployed to Production during monthly planned maintenance outages. Emergency maintenance outages may be requested if performance issues are severe and business impact is high. In that case, the emergency outage will be planned based on CHAMPS service-level agreements in order to minimize business impacts.

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Section 3: General Assumptions

This statement of work is presented based on the following assumptions:

1. All required participants, including MDCH , DTMB, and data exchange partners, including Optum and the MHPs are available and will participate in CAD sessions and testing activities where needed.
2. DTMB is responsible for changes required for new data exchange partners to make use of the DEG. DTMB will provide the necessary services in accordance with the project timeline.
3. The Optum Data Warehouse organization is responsible for making changes to the State's data warehouse to accept any new data elements resulting from the BMP Phase 2 and 3 Project.
4. MDCH staff will perform all required online CHAMPS configuration changes, such as provider enrollment and managed care plan & contract entries.
5. The solution developed for the BMP Phase 2 and 3 Project will meet all applicable State technical and security standards.
6. The solution developed for the BMP Phase 2 and 3 Project will not require any update to the CHAMPS operations or disaster recovery documentation.
7. The solution developed for the BMP Phase 2 and 3 Project will not require new hardware or changes to the State's infrastructure.

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Section 4: Pricing

This section presents CNSI's fixed-price, overall labor cost for completing the BMP Phase 2 and 3 Project. The cost was derived based on the expected effort required, as presented in our initial work plan, composed of the four phases depicted in Figure 56. The total fixed-price labor cost for the BMP Phase 2 and 3 Project is $2,500,000.

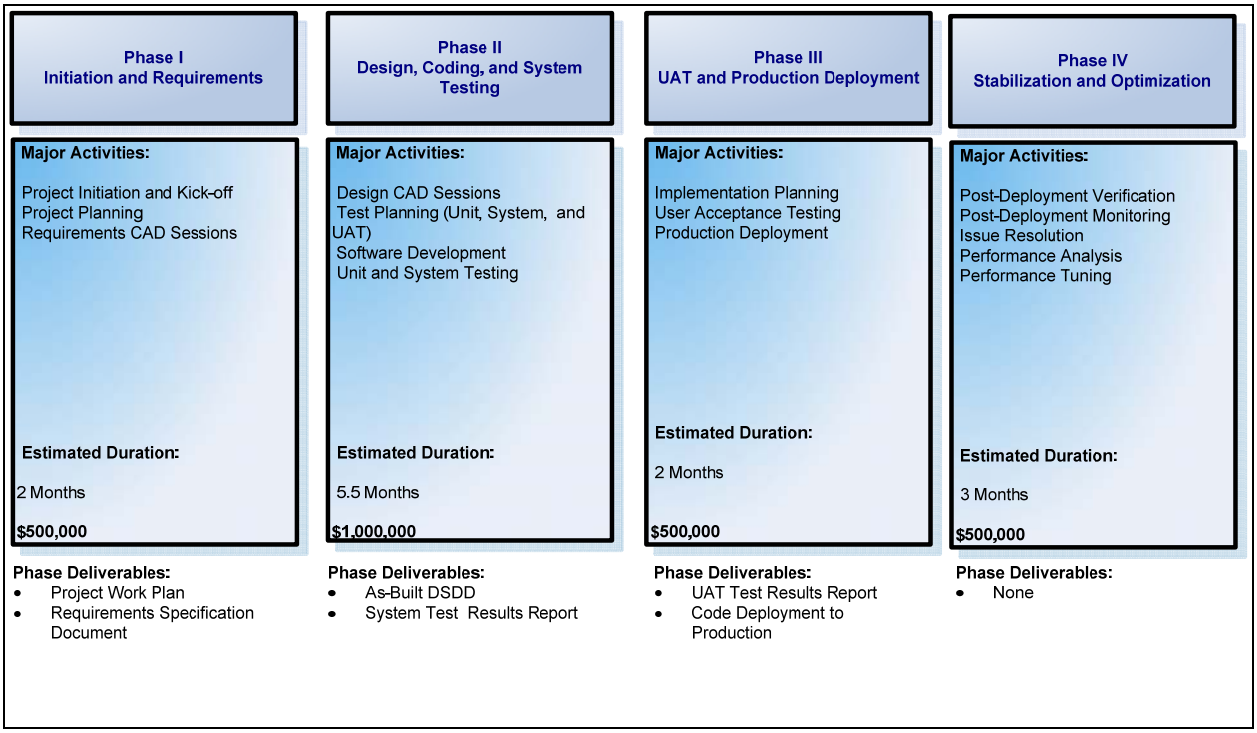

Figure 6. High-Level Project Phases and Activities

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CHAMPS Impact Due to ERA/EFT CORE Operating Rules Statement of Work

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Section 1: Introduction

CNSI is pleased to present this statement of work to enhance the Community Health Automated Medicaid Processing System (CHAMPS) to support the Committee on Operating Rules for Information Exchange® (CORE®) electronic funds transfer (EFT) and electronic remittance advice (ERA) healthcare operating rules for the State of Michigan Department of Community Health (MDCH). CNSI proposes to complete the ERA/EFT CORE implementation under a fixed-cost agreement.

1.1 Regulatory and Business Drivers for Change

The Administrative Simplification provisions of the Affordable Care Act (ACA) of 2010, builds on the Health Insurance Portability and Accountability Act (HIPAA) of 1996, with several new, expanded, and revised provisions. This includes requirements for operating rules, which are the necessary business rules and guidelines for the electronic exchange of information. These are not defined by a standard or implementation specification.

These operating rules build on the existing standards to make electronic transactions more predictable and consistent, regardless of the technology used, by providing guidelines for interoperability. Among others, the guidelines more clearly define the rights and responsibilities of all parties, transaction security, transmission formats, response times, exception processing, and error resolution, to reduce the overall cost and administrative challenges.

Adoption of the healthcare operating rules is mandated by January 1, 2014, and the identification of a healthcare EFT standard was required by January 1, 2012. Financial institutions should take immediate action to ensure they are ready to provide the remittance information in the Payment Information Field of the Cash Concentration and Disbursement Plus One Addenda Record (CCD+) if requested by the receiver.

The five key issues addressed by the new rules are:

- ***CORE EFT Enrollment Data Rule*:** Establishes a maximum EFT Enrollment Data Element Set that all health plans must adopt for EFT enrollment, and establishes required master templates for paper and electronic enrollment.
- ***CORE ERA Enrollment Data Rule*:** Defines a maximum ERA Enrollment Data Element Set that all health plans must use for ERA enrollment, and creates master templates for use with paper and electronic enrollment.
- ***CORE Uniform Use of CARCs and RARCs (835) Rule*:** Establishes a maximum set of CARCs and RARCs code sets for use with four specific business scenarios.
- ***CORE EFT and ERA Reassociation (CCD+/835) Rule*:** Creates reassociation trace number which allows providers to "reassociate" funds sent separately from the ERA with the remittance information in the v501 835.
- ***CORE EFT and ERA Reassociation Rule:*** Addresses two primary issues:
    - **Elapsed time between the origination of the ERA and the EFT**. Providers report a lengthy duration of time between the receipt of the ERA and the availability of funds for use in their

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bank accounts via EFT. The delay in receipt between the ERA and the EFT by more than two or three days creates major problems for Providers with significant reassociation and reconciliation management issues. The EFT and ERA reassociation (CCD+/835) rule establishes a maximum of three days elapsed time between sending the ERA and the CCD+ transaction. This rule also requires that the health plan ensure that the CCD+ effective entry date is a valid banking day and that the corresponding v5010 835 BPR 16 date is the same valid banking day.

- **Identification and delivery of the TRN Reassociation Trace Number.** The EFT and ERA reassociation rule has identified three fields within the CCD+ that are necessary for providers to facilitate reassociation. They have named those fields the *CORE-required Minimum CCD+ Reassociation Data Elements.* The rule requires that health plans tell providers to request the *CORE-required Minimum CCD+ Reassociation Data Elements* when they talk to their financial institutions.

The Electronic Payments Association's (NACHA's) CCD+ transaction set has been recommended as the healthcare industry EFT standard. The Payment Related Information field of the CCD+ must contain the reassociation trace number. NACHA operating rules require the financial institution to provide remittance information in the Payment Related Information field if the receiver requests it.

MDCH health plans must be ready to deliver this information to support healthcare customers. The issues listed above impact CHAMPS HIPAA transactions, provider enrollment, financials, claims, benefit administration, web services, contracts management, and interface systems. This effort includes the integration with the State's treasury system as part of the implementation.

1.2 CNSI Capabilities

CNSI's approach to enhance CHAMPS to support the ERA/EFT CORE implementation effort is based on its ongoing partnership with MDCH and the Department of Technology, Management & Budget (DTMB), and its extensive knowledge of CHAMPS design, implementation, and operation. As system developers and integrators, CNSI aligns its clients' business processes and information systems to provide access to the right information at the right time, enabling the achievement of their desired business results and creating enterprise value. CNSI will employ its extensive technological experience in the industry and incorporate its flexible tools and methodologies to deliver quality results on time and within budget. CNSI completes jobs for clients by delivering on commitments with speed and purpose in accordance with the client's specifications and expectations.

CNSI will build upon its extensive knowledge gained from designing, developing, implementing, and operating CHAMPS for the State, as well as previous CHAMPS efforts, including the Phase I Core Operating Rules, HIPAA 5010 compliance implementation, and the ongoing International Classification of Diseases, Tenth Edition (ICD-10), transition and remediation. In implementing the ERA/EFT CORE for CHAMPS, CNSI will continue to collaborate with the State's business and technical personnel and provide an experienced team of Medicaid subject matter experts (SMEs) who have the technical, business, and project management expertise to support this endeavor.

CNSI's experience working on prior Medicaid health information technology (IT) initiatives has led to incorporating the following factors in developing this statement of work:

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- **CNSI's comprehensive knowledge and experience with ACA Core Operating Rules**

  CNSI has a thorough knowledge of the Core Operating Rule changes required by the ACA and has met all compliance timelines for implementing CHAMPS enhancements for all Phase I requirements. This established foundation will be leveraged by the ERA/EFT CORE Project Team to ensure a successful deployment.

- **CNSI's capability to conduct complex analysis of Medicaid system requirements**

  CNSI's project teams have a wealth of experience with multiple Medicaid programs, which allows them to efficiently conduct the data-gathering and analysis activities for this initiative. Architects and SMEs who have worked with CHAMPS for a variety of Medicaid health IT initiatives are among the team members involved in this effort.

- **CNSI's sensitivity to the State of Michigan's needs and constraints**

  CNSI is uniquely qualified to remain sensitive to the State's needs and constraints in defining the project's approach. The team will employ an orderly, structured, professional approach that is sufficiently flexible to respond to changes in requirements that evolve from additional understanding. Overall, CNSI has practical "hands-on" experience of what does and does not work.

1.3 Proposed Project Organization

CNSI believes this statement of work represents the best possible combination of architecture, technology, support, and experience to complete this project. The proposed team members are each the best possible candidates of their respective disciplines. The underlying logic behind identifying each member of this group is that:

- They share the same philosophical approach for undertaking this project – **the customer comes first**.
- They understand the values that each member brings to successfully implementing the project.
- They are committed to understanding and incorporating the State's requirements.
- They understand the necessary advanced technologies, business needs, and operational issues.

CNSI's primary objective is the successful implementation and completion of the project. Its team is fully dedicated to the ERA/EFT CORE implementation and is confident in its ability to achieve that goal.

However, an effective project management plan cannot work with participation only by CNSI. As the customer, the State is the most important member of the project team. The customer must be actively engaged in the process at all levels. Implementation is only as good as the partnership established and maintained between all involved parties.

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Section 2: Project Management, Methodology, Tools, and Technical Approach

This section presents CNSI's project management and technical approaches, methodology, tools, and phased work plan for accomplishing all activities required for the ERA/EFT CORE implementation. This section describes the scope of activities to be addressed throughout the project, from the initiation phase to final implementation, as well as the techniques and methodologies CNSI's project team will use.

Each of the following subsections will contain a high-level description of the four phase approach for this project. For each phase, the major activities and anticipated deliverables are presented, followed by a high-level description of the major milestones and approximate timelines.

2.1 Project Management Approach

The project's successful implementation relies on the framework and environment provided by project and quality management. Figure 1 shows CNSI's project and quality management framework and how the related activities interact with project tasks.

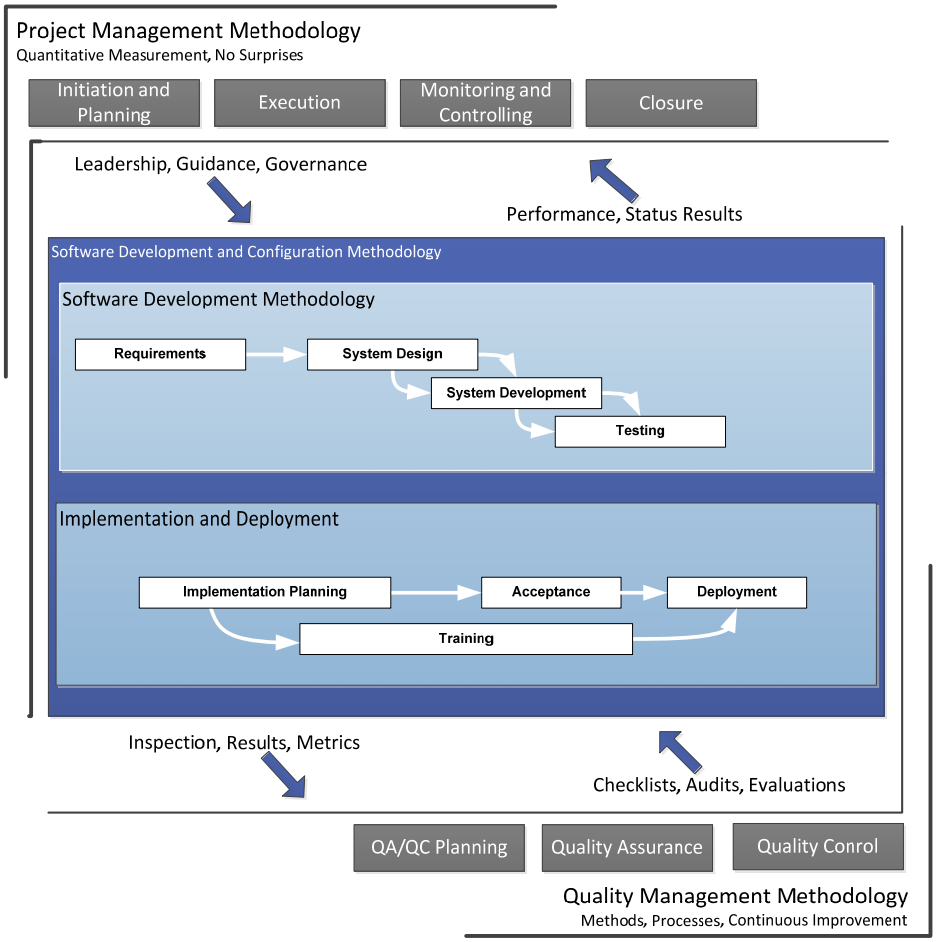

Figure 1. CNSI's Project Management and Quality Management Framework

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Although all projects are unique, they share common components and processes. The generally accepted process groups defined by the *Project Management Body of Knowledge* (*PMBOK*), as incorporated into the CNSI project management process, are:

- **Initiating:** This process group defines the project objectives and grants authority to proceed. For CNSI, the initiating processes are largely incorporated into the proposal development process, during which required partners are identified.
- **Planning:** This process group refines the project objectives and scope and plans the tasks, activities, and steps necessary to meet the project's objectives. The planning processes start during proposal development and proceed following contract award while CNSI works with the customer to establish and baseline the project management plan. The project management plan is modified and updated as necessary over the course of the project. It is the culmination of the planning processes for scope definition and management, time (scheduling), staffing (human resources), communications, and risk management.
- **Executing:** This process group puts the project's plans into motion. This is where the bulk of the work for the project is performed.
- **Monitoring and Controlling:** This process group measures the performance of the project's executing activities and reports these performance results to project managers and stakeholders. Output is used to refine, improve, and/or change project management (including plans and schedules) as necessary to meet the project's objectives.
- **Closing:** This process group documents the formal acceptance and approval of the project's product and brings all aspects of the project to a close.

CNSI is confident it has the correct methodology and project framework in place to successfully implement the CORE ERA/EFT CHAMPS modifications. CNSI continually improves its project management processes using lessons learned from previous projects and through the proficiency and continuous education of its program and project managers, senior technical and engineering staff, and senior and corporate management. This ensures a number of advantages:

- The project management philosophy is firmly entrenched within the entire project team, including MDCH and CNSI.
- Project management is a core competency.
- The project staff is focused on successfully implementing the project.
- Project management, quality management, and cost management processes are fully integrated and their infrastructure is in place.
- Effective project status reporting is established throughout the project life cycle.
- Project and software development methodologies are well documented.
- Project information is communicated continuously to the right people at the right time.
- The project is continuously monitored against performance.
- Excellence in quality and delivery are built in.

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- Deliverable review and approval processes are in place.

Through developing the project management plan, CNSI expects to collaborate with the MDCH project management team to further customize CNSI's project management system to successfully complete the project.

2.2 Project Methodology

CNSI's holistic approach for this project will use its proven methodology as the overarching framework and bring an experienced team of program managers, SMEs, technical experts, and change management resources to support this effort.

The project methodology is a framework that facilitates the integration of CNSI's extensive system experience, which is rooted in application implementations, methodologies, and delivery tools. This framework allows CNSI to deliver services to its clients consistently across its footprint and gather continued enhancements for its supporting methodology, thereby providing continued value for its clients.

CNSI's methodology is an integrated methodology that combines its best delivery assets. The methodology:

- Provides a scalable, integrated collection of assets.
- Provides a consistent level of detail and presentation.
- Supports tailoring to scale, which provides a unique, but consistent cost-effective delivery approach.

CNSI's methodology approach consists of the following:

- The **Manage** work approach provides a single, consistent approach to managing CNSI's engagements. Within the Manage Approach is the Quality Management activity, which verifies that deliverables and processes meet requirements. The Quality Management activity also supports continuous process improvement, as well as the methodology.
- The **Life Cycle** work approach addresses unique expertise while providing overall integration across the full implementation life cycle.

CNSI's methodology has the flexibility to be adapted to meet MDCH's unique requirements while confirming that its experienced staff members follow established practices.

While no two engagements are the same, MDCH expects CNSI to deliver in a consistent, systematic approach. The proposed project methodology incorporates CNSI's staff's delivery experience into a single, integrated approach. It provides the structure for integrating CNSI's capabilities while allowing individual project teams the flexibility to use client-mandated tools. The right assembly of technologies, techniques, and deliverable processes requires the specific experience and expertise found in CNSI's staff.

Investing time to create an effective plan with clear objectives is integral to effective project execution. CNSI's methodology provides a structured approach to the planning process. While this may appear to require more initial effort than desired, experience has shown that following these processes reduces the likelihood of planning mistakes and results in lower risk and a more cost-effective, rapid delivery.

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CNSI's methodology incorporates a consistent approach for identifying, tracking, and measuring the value derived from ongoing projects. CNSI's experience developing and delivering various client projects is incorporated into the project strategy and planning activities.

In undertaking this project, CNSI will employ its iVision360 system development life-cycle (SDLC) methodology tailored for the ERA/EFT CORE implementation:

- **User is at the Center:** CNSI's primary motivation in developing iVision360 is to put the user at the center of the project life-cycle. Successful projects have high interaction with end users and place the user at the center of the project. Every phase and activity of iVision360 focuses on interaction and collaboration with the user community. CNSI does this by implementing agile techniques and building working software in an iterative fashion with user validation at periodic intervals.
- **Common Goals:** Users actively participate in configuration sessions with an integrated team of developers, analysts, and testers. This method avoids the pitfalls of waterfall methods. iVision360 provides the team with a sense of purpose, a goal, and the drive to accomplish the end objective: software that meets the requirements.
- **Early and Often Testing:** iVision360 provides an opportunity to test early and often so formal system test phases and subsequent test phases are more likely to meet schedule expectations with a lower error-discovery rate.

By introducing the baseline management features of waterfall, CNSI minimizes the risk of scope creep that is sometimes associated with iterative methods. Moreover, implementing and integrating with project management processes will provide integrated change, issue, and risk management. Table 1 describes the key benefits of each of the industry-standard methodologies that are blended into iVision360.

Table 1. SDLC Methodology Comparison

Methodology	Key Benefits Blended into iVision360
Waterfall	Baseline approval of requirements Structured documents and customer approvals Formalized testing
Iterative/Agile	Frequent customer interaction Decomposing work into small meaningful features that are presented in working software Frequent course corrections Sense of real progress Early and frequent testing
Extreme Programming	Teams formed between developing organization and customer Sense of common vision and goal

iVision360 has been adapted for the purposes of this project. The customized version is presented in *Section 2.5.1 iVision360 Iterative Design, Testing, and Documentation Approach.*

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2.3 Project Management Tools

Tools, when properly applied within the methodology framework, will reduce the time to complete a project by providing predefined processes, templates, documents, and training materials. More importantly, use of the appropriate tools will help reduce risk and increase efficiency.

CNSI will continue to use the tools already proven effective during the previous undertakings to reduce the time to complete the project and mitigate risk. Table 2 lists the tools CNSI will utilize for the project.

Table 2. CNSI Project Tools

Tool	Purpose
ReqTrace®	CNSI's requirements database used during design and test phases
Microsoft Visio	Develop use case diagrams, technical architecture diagrams, and support process flows
Microsoft Office	Develop project deliverables as well as presentations and spreadsheet artifacts needed to support deliverables
As-One	Repository for deliverables, presentations, and artifacts

Microsoft Visio and Microsoft Office are industry-standard tools. The following subsections provide additional information about ReqTrace and As-One.

2.3.1 ReqTrace

CNSI will use its ReqTrace web application for requirements analysis and validation.

During project initiation and requirements planning, ReqTrace will be loaded with the functional, technical, and support requirements. ReqTrace is CNSI's requirements management tool of choice being used in MMIS projects. ReqTrace provides the ability to trace requirements to use cases, related test cases, and results. The application can store requirements-related attributes, including revisions, notes, and comments.

CNSI began using ReqTrace during the implementation of CHAMPS. The requirements validation processes used on the project, as well as the use of ReqTrace, resulted in the requirements validation phase being completed ahead of schedule.

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2.3.2 As-One

Believing that continuous collaboration and information-sharing are key factors to successful project execution, CNSI will use As-One, its web-based enterprise program management solution. Figure 2 illustrates how As-One is designed to support team collaboration, knowledge management, and process improvement. As-One will provide a convenient repository for all program data and will give MDCH oversight personnel direct visibility into project performance.

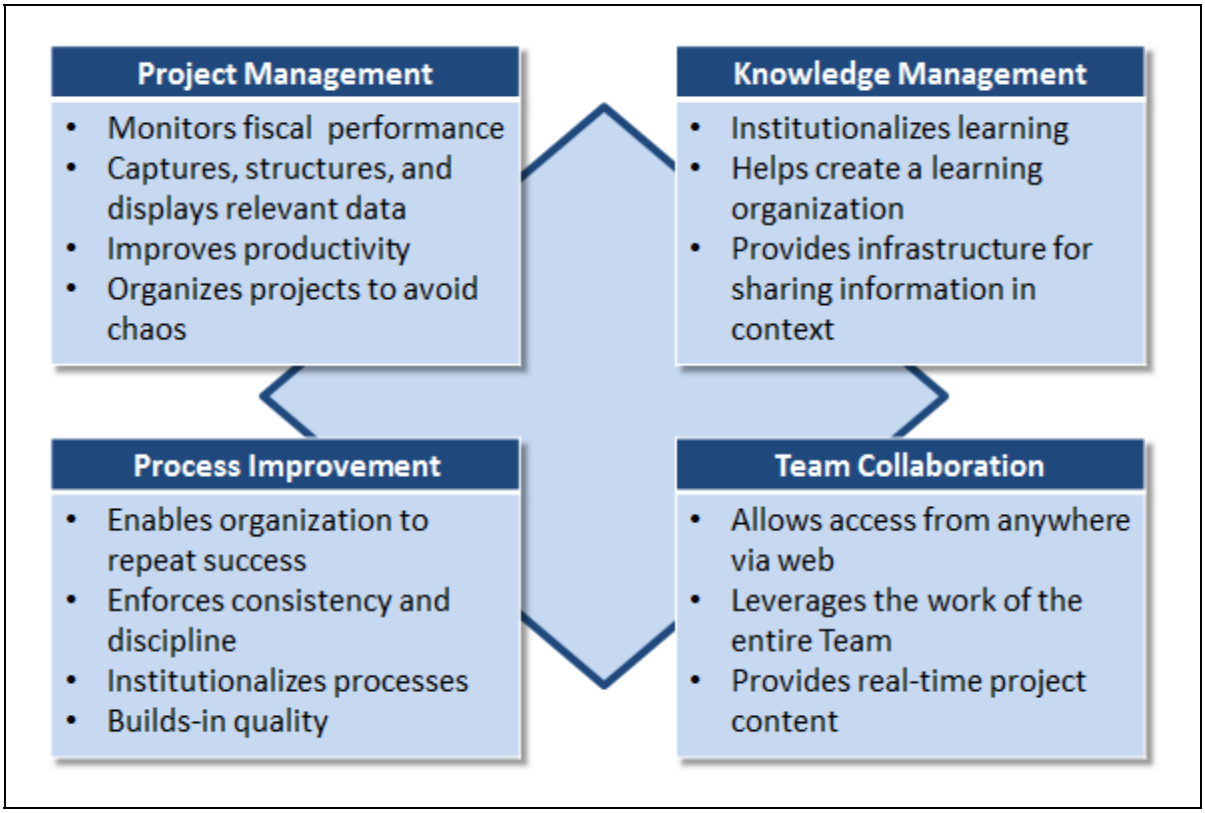

Figure 2. As-One Collaboration and Improvement

As-One is an "out-of-the-box" solution that supports CNSI's program management philosophy: experienced people, managed processes, and enabling technology.

As-One will allow CNSI users to share real-time data specific to the user's authority and association and is accessed via a standard web browser. CNSI's previous and ongoing projects with MDCH and DTMB use As-One. Training will be provided for team members new to the program.

2.4 Solution

This section will review CNSI's proposed CHAMPS Impact due to the ERA/EFT CORE Operating Rules project, including technical and functional overviews. The business requirements and technical solution will be documented later as a part of the project phases.

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2.4.1 Technical Overview

CNSI will leverage the CORE connectivity rules infrastructure developed during CORE Phase I and Phase II implementation to transmit 835 files to the providers. CNSI will modify Edifecs CORE XEConnect and OR Profiles to accommodate transmission of 835 transactions. CNSI will modify existing CHAMPS provider enrollment screens to accommodate the ERA enrollment using the data elements specified as part of CORE ERA Enrollment rule. CHAMPS ISR framework will be used to transmit interface files between CHAMPS and MAIN.

2.4.2 Functionality

Business process areas in CHAMPS will be modified to provide the following capabilities:

- Benefits Administration:
  - Modified to implement the combination of CARC and RARC as a CAQH CORE 360: Uniform Use of CARCs and RARCs (835) Rule.
- Claims and Payment Processing:
  - Claims processing functionality will be modified to implement CAQH CORE 360: Uniform Use of CARCs and RARCs (835) Rule.
  - Payment processing will be modified to implement the 835 portion of the CAQH CORE 370: EFT & ERA Reassociation (CCD+/835) Rule.
- Interfaces:
  - Interface Services Repository framework will be used to transfer any communication between CHAMPS and MAIN to accommodate the data content that needs to be transmitted to MAIN to support MAIN's implementation of CAQH CORE 370: EFT & ERA Reassociation (CCD+/835) Rule.
- EDI/HIPAA transactions:
  - EDI infrastructure will be modified to implement CAQH CORE 350: Health Care Claim Payment/Advise (835) Infrastructure Rule.
  - 835 processing will be modified to implement 835 portion of the CAQH CORE 370: EFT & ERA Reassociation (CCD+/835) Rule.
- Provider Enrollment:
  - Modify the screens to implement CAQH COE 382: ERA Enrollment Data Rule.

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2.5 Technical and Phased Approach Work Plan

CNSI has created an initial work plan and timeline for the ERA/EFT CORE implementation. This work plan describes the expected activities for the proposed phases and major activities. The ERA/EFT Core Project is expected to be tested and implemented in multiple operational releases. The overall timeline presented

Figure 3. A detailed description of the major activities within each phase is presented in *Section 2.5.2 Phased Approach Work Plan*.

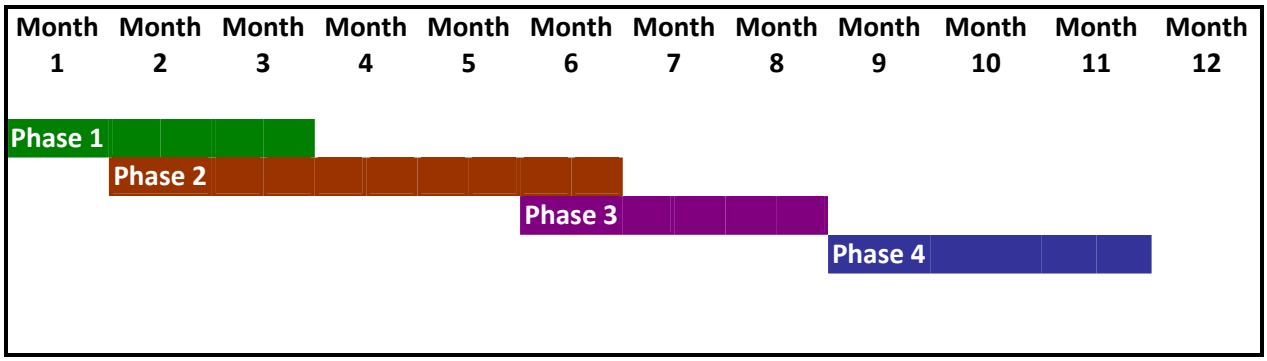

Figure 3. Initial Project Work Plan

CNSI structured this work plan to address the overall relationships of the phases and activities required to complete the project. It effectively uses the professional resources required to accomplish these phases and produce high-quality products in a cost-conscious manner. CNSI will work with MDCH to align the project schedule with other scheduled operations releases.

The following subsections further describe how CNSI intends to accomplish the goals of the work plan by employing its iVision360 methodology in the proposed approach for the ERA/EFT CORE implementation.

2.5.1 iVision360 Iterative Design, Testing, and Documentation Approach

In this section, CNSI provides an outline of its iVision360 SDLC. The SDLC is a full-featured methodology that includes standard design and development processes. CNSI's SDLC processes have been adapted to address the specific needs of the project. This project will be divided into four phases.

CNSI will engage in iterative requirements analysis and design with the State at the beginning of each release. The State will be able to review requirements analysis and design documents as soon as a logical set of iterations is completed. CNSI expects initial State signoff upon acceptance of the document scope for the iterations. This will help reduce the time required for document review and approval. Narrowing the document scope will assist the State in performing a thorough review. Once iterations are completed for a release, an overall document will be produced for a final delivery and acceptance to State.

The iterative/agile development and testing portion of the iVision360 methodology is visible in each release of design and coding. During this phase, technical design specifications for impacted functions and user stories are constructed in parallel by developers and SMEs. As the impacted function's design is completed, the team lead will plan the related development iterations.

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Developers will build internal design documentation prior to, and during, the iterations. The beginning of each iteration is reserved for startup activities, including finalizing the internal design documentation. The developer meets with the data modeling team on the first day of an iteration to conduct a walkthrough of any required data model changes. The data modeling team makes the required changes to the database schema and approves the physical model for coding. Developers also develop iteration test cases for the tasks that may not be tested with automatic internal iteration test code, which are required to test each story completely.

Coding begins when the internal design and pre-coding work is completed for the iteration. The developer will write internal iteration test scripts in parallel to actual working code, and update screens and other system functions to fit the physical mode. The developer will execute the iteration test scripts as they complete sections of code. The codes will be built and tested incrementally. The developer will coordinate daily stand-up meetings and communicate any development issues.

This development approach ensures developers do not work in silos. It also avoids the traditional approach of throwing design documentation “over the fence” to developers to begin coding, only to discover later that major rework is required halfway through the development process.

Developers eventually test the code against internal auto-unit-code and manual internal iteration test scripts. As they reach the end of the iteration, they will run the code against functional scripts developed by the test team. Discrepancies are identified and corrected, and the developer retests to ensure all discrepancies are corrected and closed before the iteration ends. The developer will conduct a peer review of the impacted function’s code on the last day of the iteration and then update the code based on the review. When developer iteration testing and software code reviews are successfully completed for the iteration, the code will be promoted to the integration test team. The code will be released to the test team for system testing when coding and developer iteration testing is completed for all of an impacted function’s user stories.

During initial development iterations, the test team will develop system test cases based on requirements specification. During system testing, the test team will execute system test cases to validate system results against requirements.

CNSI plans to engage the test and development teams early on to build the regression test suite for critical functions. This will help to speed up testing and improve the overall quality of implementation. If necessary, regression tests will be performed on impacted functions, based on changes to a previously tested baseline, during system testing. The intent of regression testing is to demonstrate that CHAMPS continues to meet all approved requirements after changes have been introduced to a previously tested baseline.

As soon as system testing is completed for an activity, CNSI will deliver the code to the UAT environment. CNSI plans to engage the State as early as possible, and well before the beginning of the planned UAT phase. This will ensure that enough time is allowed for thorough UAT and will reduce the risk of schedule slippage for UAT completion.

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Figure 4 presents a graphical overview of the processes that are part of the iVision360 methodology.

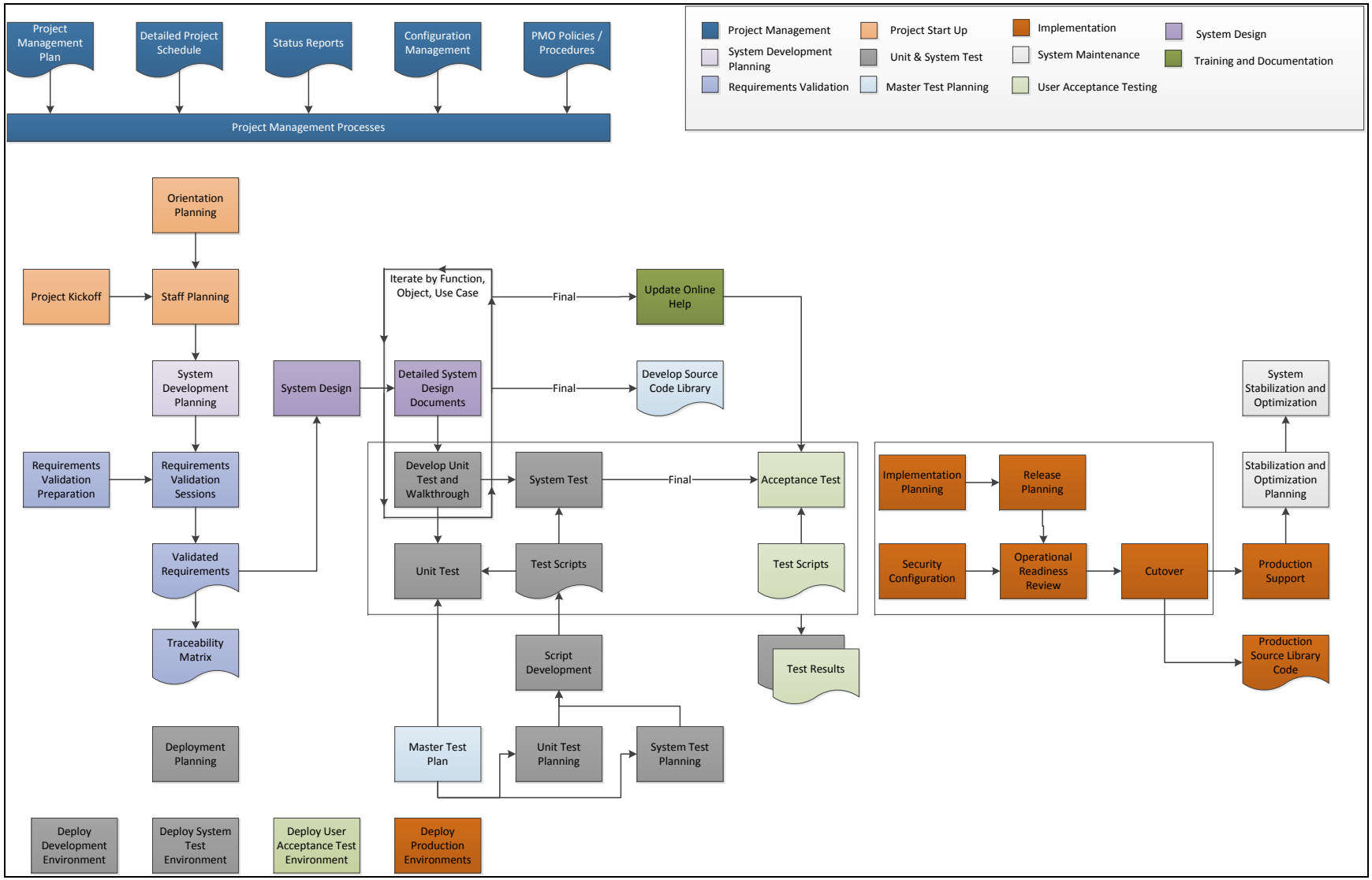

Figure 4. iVision 360 Process Diagram

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2.5.2 Phased Approach Work Plan

CNSI proposes an over-lapping four-phased approach to the implementation and rollout of the CHAMPS ERA/EFT CORE Operating Rules project. Due the mandate of completing the project by January 1, 2014, the four phases will be overlapped in order to accelerate the completion and approval of tasks. The four phases are as follows:

- **Phase I:** Requirements Validation and Design
- **Phase II:** Coding and System Testing
- **Phase III:** UAT, B2B Testing, and Production Deployment
- **Phase IV:** Stabilization and Optimization

Figure 5 provides a high-level overview of the project phases with major activities and anticipated deliverables:

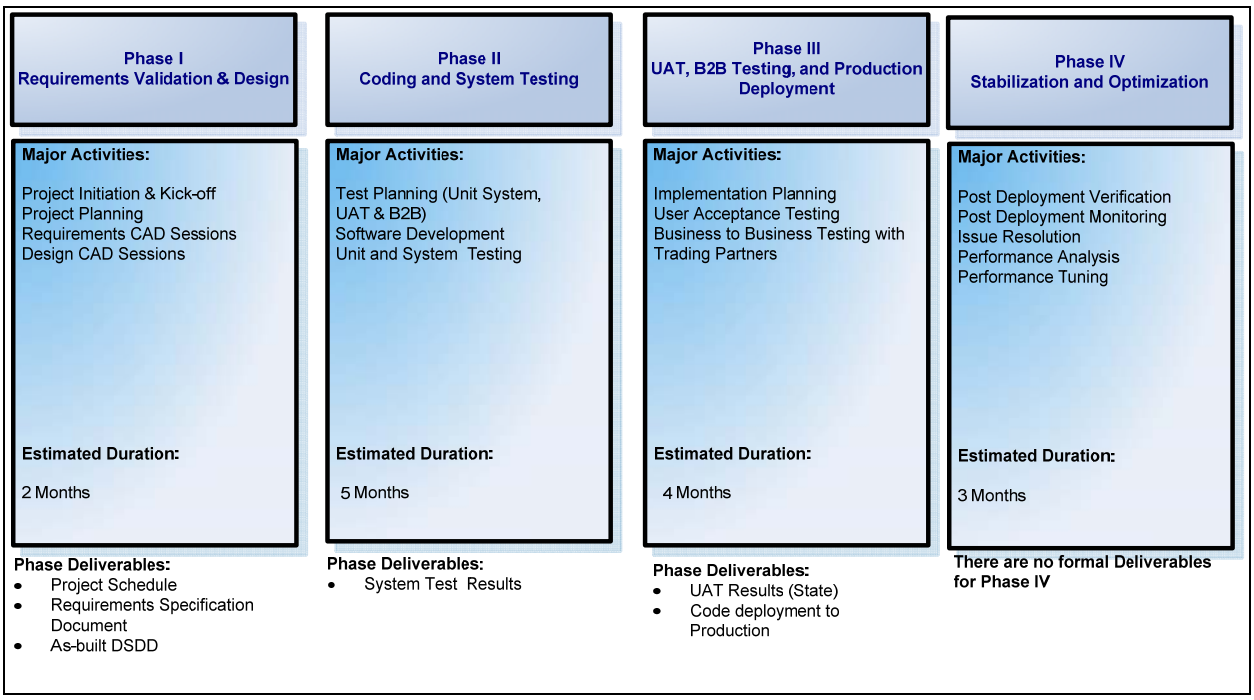

Figure 5. High-Level Project Phases and Activities

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With every project, there are critical milestones to be met and work products and deliverables that must be developed and produced in order to provide the inputs necessary to perform the next phase. Table 3 elaborates on the key high-level milestones of the proposed implementation plan, along with the expected deliverables.

In Table 3, we summarize the high-level activities to be completed as a part of this engagement. In this table, we also provide the deliverable to be produced in each phase of the effort. **Formal deliverables** are shown in **bold** text.

Table 3. High-Level Activities by Phase

Key Activity	Description	Phase
Project Initiation and Kick-off	Establish the project team structure, key stakeholders, for the project.	Phase I
Project Planning	Establish project schedules.	Phase I
Requirements CAD Sessions	Conduct CAD sessions to validate requirements across all subsystems.	Phase I
Design CAD Sessions	Conduct CAD sessions to document detailed system design changes for all subsystems.	Phase I
Phase I Deliverables **Project Work Plan (Schedule)** **Requirements Specification Document** **As-Built DSDD**		
Development	Software changes required to support the detailed functional design including: Screens Interfaces Functionality (driven by use cases) Data Models Reports	Phase II
Test Planning	Develop detailed test cases and scripts for: Unit, System and UAT.	Phase II
Unit/System Testing	Internal CNSI testing of developed functionality at the component, subsystem and system level, including end-to-end regression	Phase II

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Key Activity	Description	Phase
	testing.	
Phase II Deliverables **System Test Results**		
Implementation Planning	Decision to identify the operational release during which the system changes will be deployed to production.	Phase III
User Acceptance Testing	MDCH testing of all system changes using formal UAT test scripts.	Phase III
Phase III Deliverables **UAT/B2B Test Results (State)** **Code Deployment to Production**		
Post Deployment Verification	Perform a sanity check of all system functions after code deployment to ensure all features function as designed.	Phase IV
Post Deployment Monitoring	Overall monitoring of CHAMPS system health and performance after code deployment.	Phase IV
Issue Resolution	Identification and plan-of-action to resolve issues should they arise after code deployment.	Phase IV
Performance Analysis	Measure and analyze post-deployment performance of the CHAMPS system in comparison to pre-deployment system performance.	Phase IV
Performance Tuning	Adjust system queries, database tables and interfaces as needed to improve system processing and throughput.	Phase IV
There are no formal Deliverables for Phase IV		

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2.4.2.1 Phase I – Requirements Validation and Design

Activity 1 - Project Initiation

During this activity, CNSI will conduct the formal project kickoff and deliver team training and orientation.

The major milestone associated with this activity is the Project Kickoff Meeting.

Activity 2 - Project Planning

During this activity, CNSI will develop the project work breakdown structure (WBS), and baseline schedule.

- The major milestones associated with this activity is the delivery of the Project Work Plan.

Activity 3 – Requirements CAD Sessions

During this activity, CNSI will host CAD sessions to validate functional requirements. Sessions will be organized and scheduled per CHAMPS subsystem and/or MITA business area. The CAD sessions will include MDCH and CNSI functional and technical SMEs. Using the MDCH ACA High-Level Business Requirements Document and the assumptions defined in this statement of work as a starting point, session participants will confirm the meaning of each functional requirement.

CNSI will compare the finalized requirements with current CHAMPS functionality to determine the impact of the new requirements across all CHAMPS subsystems including system aspects such as:

- Screens
- Interfaces
- Functionality (use cases)
- Data Models
- Reports

CNSI will use the results of the impact assessment to plan and conduct design activities.

This will result in a final Requirements Specification Document which provides a clear, concise, and final definition of each functional requirement.

The major milestone associated with this activity is the delivery of the Functional Requirements Specification Document.

Activity 4 – Design CAD Sessions

During this activity CNSI will host CAD sessions to produce detailed functional design artifacts. Sessions will be organized and schedule per CHAMPS subsystem and/or MITA business area. The CAD sessions will include MDCH and CNSI functional and technical SMEs. Using the existing CHAMPS design and the Requirements Specification Document as a starting point, session participants will identify and document required design changes across all CHAMPS subsystems including system aspects such as:

- Screens

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- Interfaces
- Functionality (use cases)
- Data Models
- Reports

This will result in final revised design artifacts, such as use cases and data models, which will be the basis for development of changes to system functions. CNSI will submit the completed design artifacts to the appropriate MDCH subsystem team lead shortly after the completion of a CAD session. The MDCH team lead will provide formal approval of the design artifacts via signature on an approval form, similar to the existing CHAMPS enhancement approval process. This approval indicates that design is final and development can begin. CNSI will submit a final as-built DSDD for MDCH approval upon completion of all Phase I design sessions.

The major milestone associated with this activity is the delivery of the as-built DSDD.

2.4.2.2 Phase II – Coding and System Testing

Activity 1 - Development

During this activity, CNSI codes the software changes required to support the updated detailed functional design. Development includes the coding changes as defined in the as-built DSDD for all CHAMPS subsystems including system aspects such as:

- Screens
- Interfaces
- Functionality (use cases)
- Data Models
- Reports

Development is performed in bi-weekly iterations.

The major milestone associated with this activity is the completion of all development iterations.

Activity 2 – Test Planning

During this activity, CNSI collaborates with MDCH to produce detailed test cases and scripts for each phase of testing, including system, and UAT.

Milestones associated with this activity include:

- System Test cases and scripts are developed

Activity 3 – Implementation Planning

During this activity, CNSI collaborates with MDCH to coordinate implementation planning with the operational releases. It is expected that the implementation will align with multiple scheduled operational releases.

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The major milestone associated with this activity is the identification of the alignment of implementation with the operational release schedule.

Activity 4 – Unit/System Testing

During this activity, CNSI tests the developed functionality at the component, subsystem, and system level, including end-to-end regression testing.

Milestones associated with this activity include:

- System Test Results are delivered
- Code is deployed to UAT
- UAT begins

2.4.2.3 Phase III – UAT, B2B Testing, and Production Deployment

Activity 1 – User Acceptance Testing (UAT)

During this activity, CNSI deploys the final code to the UAT environment and provides support to MDCH staff who conduct UAT using formal test scripts. The UAT will be coordinated with the testing for multiple operational releases.

The major milestone associated with this activity is that the UAT Results are published by the State.

Milestones associated with this activity include:

- UAT Test Results are published (State)
- Code is deployed to Production

2.4.2.4 Phase IV – Stabilization and Optimization

Activity 1 – Post-Deployment Verification

This activity involves verifying the correct installation and operation for all system components. During this activity, CNSI performs a sanity check of all system functions after code deployment to ensure all features function as designed.

Purpose:

- Verify Screen Operation
- Verify Queues Operation
- Verify Interfaces Operation
- Verify Data Warehouse Extract Operation
- Verify all Production Job Schedules:
    - Interface Schedules
    - Data Warehouse Extract Schedules

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- Queue Schedules
- Pay Cycle Schedules

Activity 2 – Post-Deployment Monitoring

This activity involves monitoring the system in the months after the application upgrade has gone live.

Purpose:

- Monitor Key Operational Metrics:
  - Claims Payment Rates
  - Encounter Acceptance Rates
  - Prompt Pay Rates
  - Claims Payment Amounts
  - Pay Cycle Statistics
  - Monitor Program Specific Metrics for programs impacted by ERA/EFT CORE requirements
- Monitor System Performance Metrics:
  - Application Screen Performance
  - Database Performance
  - Application Queues Performance
  - Interface Performance
  - Data Warehouse Extract Performance
  - Reports Performance

Activity 3 – Issue Resolution

This activity involves evaluating issues reported in the 90-day period. Issues will be logged and processed according to the CHAMPS Operations Incident Management, Application Support, Change Management, and Release Management processes. Issues that require system changes will be planned for software releases based on priority and will be assigned to CHAMPS Operations releases in accordance with the approved schedule.

Purpose:

- Incident Management:
  - OTRS(Open-source Ticket Request System) Ticket Entry
  - OTRS Ticket Triage
  - OTRS Ticket Analysis
  - OTRS Ticket Disposition Determination (Defect, Enhancement, RFC(Request for change), or Closure)

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- Application Support:
  - Iterative Development
  - System Testing
  - RFC Creation and Testing
- Change Management:
  - CQ(Clear Quest) Entry
  - CQ Analysis
  - CQ Planning
    - Change Log Estimation and Approval
    - Code Promotion
    - RFC Deployment
- Release Management:
  - Release Planning
  - Release Assignment
  - Release Deployment

Activity 4 – Performance Analysis

This activity is the process for analyzing the performance of CHAMPS after the ERA/EFT CORE processing changes have gone live. Various operational reports and monitoring tools will be used to assess the performance of the system and identify opportunities for improvement.

Purpose:

- Operational Reports:
  - Identify any processes performing below benchmarks
- Monitoring Tools:
  - Identify any servers with metrics outside normal operating ranges
  - Identify any slow running queries
  - Identify heavily used web pages
  - Identify heavily used transactions

Activity 5 – Performance Tuning

After all processes, servers, and queries where performance issues are identified, the Application Support and Infrastructure Teams will construct a remediation plan. The remediation plan will identify the changes to be made, the timeline for the changes, and the deployment plan either through software release, RFC, or maintenance outage in the case of server changes.

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Purpose:

- Application Support:
  - Perform process tuning in development environment.
  - Plan software changes for software releases per the CHAMPS Operations release schedule.
  - Tuning changes are released and deployed according to the CHAMPS Operations Change Management and Release Management processes.
  - If Application Support Teams require infrastructure changes, they will request the changes through the CHAMPS Operations RFC process.
- Infrastructure Support:
  - Perform server tuning in lower environments.

Deploy configuration changes to production during monthly planned maintenance outages. Emergency maintenance outages may be requested if performance issues are severe and business impact is high. In that case, the emergency outage will be planned based on CHAMPS service level agreements in order to minimize business impacts.

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Section 3: General Assumptions

This statement of work is presented based on the following assumptions:

Project Assumptions

1. All required participants, including MDCH, the State Treasury Department, and DTMB, are available and will participate in meetings and CAD sessions, as needed.
2. All systems, including all affected systems that interface with CHAMPS, will be ready to support testing as defined by the project work plan.
3. All required hardware, including equipment to support a dedicated integration testing environment, will be available within 30 days of the project start date.
4. The functional business requirements currently defined as the CORE EFT and ERA Rules will be used as the basis for the requirements validation activity. Should these requirements prove to be incomplete or inaccurate, change management may be necessary to extend the timeline for this effort.
5. The implementation of the CORE EFT and ERA Rules will align with the agreed operational release calendar
6. The Optum Data Warehouse organization is responsible for making changes to the State's data warehouse to accept any new data elements resulting from the CORE EFT and ERA Rules.
7. The solution for the project will not require any update to the CHAMPS operations or disaster recovery documentation.
8. The solution developed for the project will not require new hardware or changes to the State's infrastructure.

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Section 4: Pricing

This section presents CNSI's fixed-price, overall labor cost for completing the CORE ERA/EFT implementation. The cost was derived based on the expected effort required, as presented in our initial work plan, composed of the four phases depicted in Figure 56. The fixed-price labor cost for the CORE ERA/EFT implementation is $ 2,500,000. The Core Operating Rules EDEFICS tool license cost is $ 750,000. The total cost for this project is $ 3,250,000.

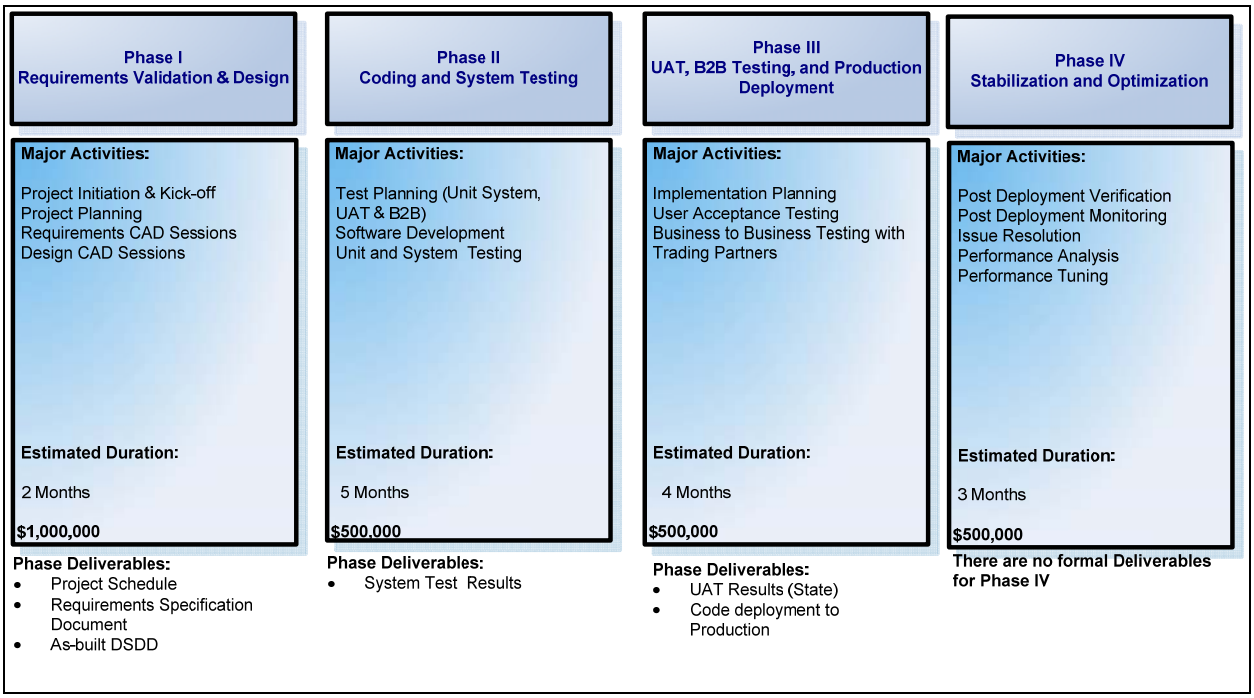

Figure 6. High-Level Project Phases and cost

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Adoption of New 2012 CMS1500 and ADA Forms Statement of Work

Prepared For:

State of Michigan
Department of Community Health
400 South Pine Street
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June 24, 2013

This document contains proprietary information intended to be provided to key management staff of the State of Michigan. It should not be released to third parties or used for other purposes without the express written consent of CNSI.

Provider Enrollment Screening – Site Visit Tracking Project Statement of Work

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Section 1: Introduction

CNSI is pleased to present this statement of work to enhance the Community Health Automated Medicaid Processing System (CHAMPS) to support unannounced site visit requirements for the enrollment of high-risk providers for the Michigan Department of Community Health (MDCH). CNSI proposes to complete the Provider Enrollment Screening – Site Visit Tracking Project under a fixed-cost agreement.

The Provider Enrollment Screening – Site Visit Tracking Project will replace MDCH's present manual and paper process with online CHAMPS screens that can be accessed and completed using browser applications on mobile devices such as PC tablets, iPads, and Android tablets. The MDCH representative performing the site-visit will be able to capture and upload photographs of the site visited.

1.1 Regulatory and Business Drivers for Change

Under the provisions of the federal regulations at 42 CFR 455 Subpart E 455.432, Medicaid providers must meet all standards associated with the provider screening provision of the act. This is applicable to both currently enrolled providers and new providers undergoing the enrollment process. This statement of work is specific to the unannounced site visit provision of the Affordable Care Act (ACA).

For high- and moderate-risk providers—such as home health agencies, durable medical equipment suppliers, and end-stage renal disease facilities—an unannounced site visit must be conducted prior to enrollment and periodically following successful enrollment[1]. At present, after a site visit has been conducted, the Provider Enrollment Unit sets an indicator in CHAMPS to show that the site visit has been performed. The indicator has an associated end date to allow for periodic rescreening.

The site visit process currently used by MDCH uses a paper form and does not allow the reviewer to capture photographs of the facility. It is necessary to transfer the paper form to the State's document management system (FileNet) and retrieve the paper image in the event a site visit results in an appeal initiated by the provider. Appeals may occur when the provider's application is denied or their enrollment is terminated as a result of the site visit.

The process presently used is in need of modernization and streamlining. Mobile technology has advanced to the point that online, real-time, capture of site visit activities during inspections is easy and effective. Extending CHAMPS capabilities to render screens using mobile technology will allow MDCH to modernize and streamline their processes to comply with the new regulations. The resulting data capture will allow the details of the site visit to be retrieved and updated when future periodic screenings occur.

1.2 CNSI Capabilities

CNSI's approach to enhance CHAMPS to support the Provider Enrollment Screening – Site Visit Tracking Project effort is based on its ongoing partnership with MDCH and the Department of Technology, Management & Budget (DTMB) and its extensive knowledge of CHAMPS design, implementation, and operation. As system developers and integrators, CNSI aligns its clients' business processes and information systems to provide access to the right information at the right time, enabling

[1] 42 CFR 424 - § 424.518 Screening levels for Medicare providers and suppliers

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the achievement of their desired business results and creating enterprise value. CNSI will employ its extensive technological experience in the industry and incorporate its flexible tools and methodologies to deliver quality results on time and within budget. CNSI completes jobs for clients by delivering on commitments with speed and purpose in accordance with the client's specifications and expectations.

CNSI will build upon its extensive knowledge gained from designing, developing, implementing, and operating CHAMPS for the State, as well as previous CHAMPS efforts, including the HIPAA 5010 compliance implementation, and the ongoing International Classification of Diseases, Tenth Edition (ICD-10), transition and remediation. For this effort, CNSI will implement the site-visit tracking features and integrate them with CHAMPS. CNSI's experienced team of Medicaid subject matter experts (SMEs), who have the technical, business, and project management expertise to support this endeavor, will collaborate with the State's business and technical personnel to develop a flexible and innovative solution.

CNSI's experience working on prior Medicaid health information technology (IT) initiatives has led to incorporating the following factors in developing this statement of work:

- **CNSI's ability to introduce technical innovation to the State's Medicaid operation**

  CNSI has introduced mobile technology and direct consumer engagement to the Medicaid program through the myHealthButton pilot project that introduced consumer engagement mobile phone applications to support better beneficiary health outcomes. CNSI also introduced the innovative HealthBeat application that monitors CHAMPS activity and displays it graphically 24 hours a day, 7 days a week. Examples of HealthBeat metrics include claim and encounter auto-adjudication rates and the number of benefit inquiries processed per hour throughout the day. The collaboration between MDCH and CNSI continues to lead the nation in modernizing state Medicaid technology.

- **CNSI's capability to conduct complex analysis of Medicaid system requirements**

  CNSI's project teams have a wealth of experience with multiple Medicaid programs, which allows them to efficiently conduct the data-gathering and analysis activities for this initiative. Architects and SMEs who have worked with CHAMPS for a variety of Medicaid health IT initiatives are among the team members involved in this effort.

- **CNSI's sensitivity to the State of Michigan's needs and constraints**

  CNSI is uniquely qualified to remain sensitive to the State's needs and constraints in defining the project's approach. The team will employ an orderly, structured, professional approach that is sufficiently flexible to respond to changes in requirements that evolve from additional understanding. Overall, CNSI has practical "hands-on" experience of what does and does not work.

1.3 Proposed Project Organization

CNSI believes this statement of work represents the best possible combination of architecture, technology, support, and experience to complete this project. The proposed team members are each the best possible candidates of their respective disciplines. The underlying logic behind identifying each member of this group is that:

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- They share the same philosophical approach for undertaking this project – **the customer comes first**.
- They understand the values that each member brings to successfully implementing the project.
- They are committed to understanding and incorporating the State's requirements.
- They understand the necessary advanced technologies, business needs, and operational issues.

CNSI's primary objective is the successful implementation and completion of the project. Its team is fully dedicated to the Provider Enrollment Screening – Site Visit Tracking Project and is confident in its ability to achieve that goal.

However, an effective project management plan cannot work with participation only by CNSI. As the customer, the State is the most important member of the project team. The customer must be actively engaged in the process at all levels. Implementation is only as good as the partnership established and maintained between all involved parties.

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Section 2: Project Management, Methodology, Tools, and Technical Approach

This section presents CNSI's project management and technical approaches, methodology, tools, and phased work plan for accomplishing all activities required for the Provider Enrollment Screening – Site Visit Tracking Project implementation. This section describes the scope of activities to be addressed throughout the project, from the initiation phase to final implementation, as well as the techniques and methodologies CNSI's project team will use.

Each of the following subsections will contain a high-level description of the 4-phase approach for this project. For each phase, the major activities and anticipated deliverables are presented, followed by a high-level description of the major milestones and approximate timelines.

2.1 Project Management Approach

The project's successful implementation relies on the framework and environment provided by project and quality management. Figure 1 shows CNSI's project and quality management framework and how the related activities interact with project tasks.

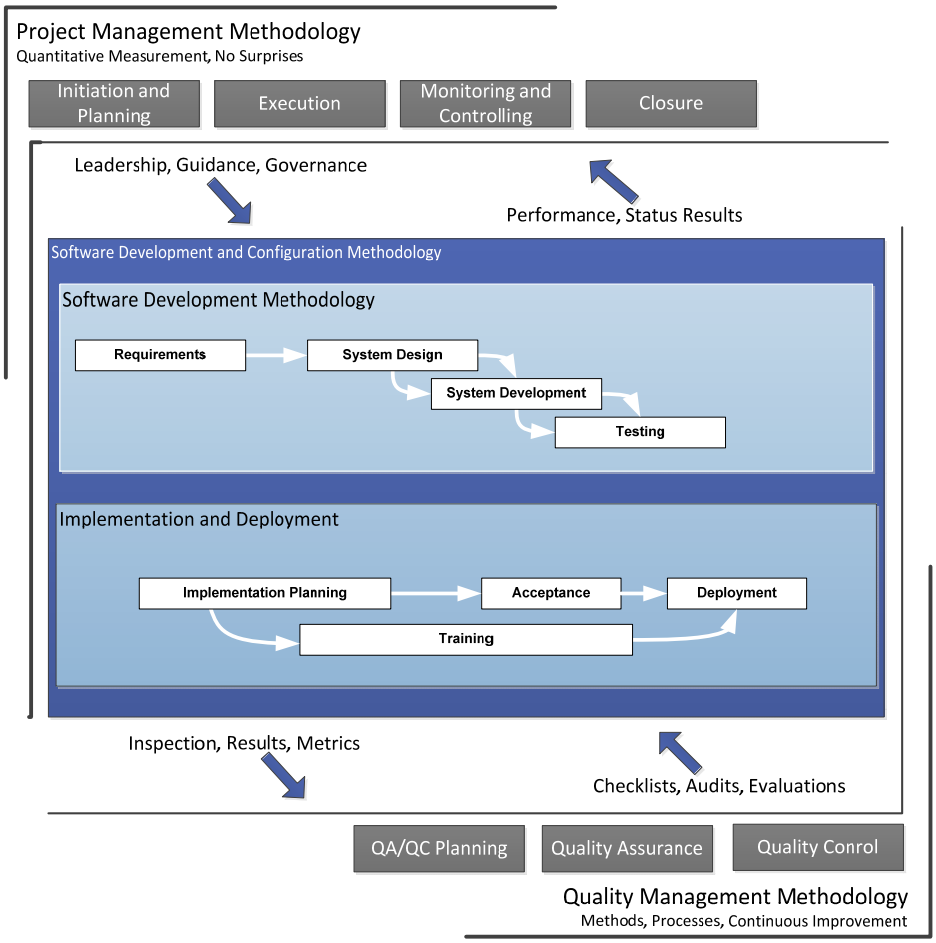

Figure 1. CNSI's Project Management and Quality Management Framework

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Although all projects are unique, they share common components and processes. The generally accepted process groups defined by the *Project Management Body of Knowledge* (*PMBOK*), as incorporated into the CNSI project management process, are:

- **Initiating:** This process group defines the project objectives and grants authority to proceed. For CNSI, the initiating processes are largely incorporated into the proposal development process, during which required partners are identified.
- **Planning:** This process group refines the project objectives and scope and plans the tasks, activities, and steps necessary to meet the project's objectives. The planning processes start during proposal development and proceed following contract award while CNSI works with the customer to establish and baseline the project management plan. The project management plan is modified and updated as necessary over the course of the project. It is the culmination of the planning processes for scope definition and management, time (scheduling), staffing (human resources), communications, and risk management.
- **Executing:** This process group puts the project's plans into motion. This is where the bulk of the work for the project is performed.
- **Monitoring and Controlling:** This process group measures the performance of the project's executing activities and reports these performance results to project managers and stakeholders. Output is used to refine, improve, and/or change project management (including plans and schedules) as necessary to meet the project's objectives.
- **Closing:** This process group documents the formal acceptance and approval of the project's product and brings all aspects of the project to a close.

CNSI is confident it has the correct methodology and project framework in place to successfully implement the Provider Enrollment Screening – Site Visit Tracking Project modifications. CNSI continually improves its project management processes using lessons learned from previous projects and through the proficiency and continuous education of its program and project managers, senior technical and engineering staff, and senior and corporate management. This ensures a number of advantages:

- The project management philosophy is firmly entrenched within the entire project team, including MDCH and CNSI.
- Project management is a core competency.
- The project staff is focused on successfully implementing the project.
- Project management, quality management, and cost management processes are fully integrated and their infrastructure is in place.
- Effective project status reporting is established throughout the project life cycle.
- Project and software development methodologies are well documented.
- Project information is communicated continuously to the right people at the right time.
- The project is continuously monitored against performance.
- Excellence in quality and delivery are built in.

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- Deliverable review and approval processes are in place.

Through developing the project management plan, CNSI expects to collaborate with the MDCH project management team to further customize CNSI's project management system to successfully complete the project.

2.2 Project Methodology

CNSI's holistic approach for this project will use its proven methodology as the overarching framework and bring an experienced team of program managers, SMEs, technical experts, and change management resources to support this effort.

The project methodology is a framework that facilitates the integration of CNSI's extensive system experience, which is rooted in application implementations, methodologies, and delivery tools. This framework allows CNSI to deliver services to its clients consistently across its footprint and gather continued enhancements for its supporting methodology, thereby providing continued value for its clients.

CNSI's methodology is an integrated methodology that combines its best delivery assets. The methodology:

- Provides a scalable, integrated collection of assets.
- Provides a consistent level of detail and presentation.
- Supports tailoring to scale, which provides a unique, but consistent cost-effective delivery approach.

CNSI's methodology approach consists of the following:

- The **Manage** work approach provides a single, consistent approach to managing CNSI's engagements. Within the Manage Approach is the Quality Management activity, which verifies that deliverables and processes meet requirements. The Quality Management activity also supports continuous process improvement, as well as the methodology.
- The **Life Cycle** work approach addresses unique expertise while providing overall integration across the full implementation life cycle.

CNSI's methodology has the flexibility to be adapted to meet MDCH's unique requirements while confirming that its experienced staff members follow established practices.

While no two engagements are the same, MDCH expects CNSI to deliver in a consistent, systematic approach. The proposed project methodology incorporates CNSI's staff's delivery experience into a single, integrated approach. It provides the structure for integrating CNSI's capabilities while allowing individual project teams the flexibility to use client-mandated tools. The right assembly of technologies, techniques, and deliverable processes requires the specific experience and expertise found in CNSI's staff.

Investing time to create an effective plan with clear objectives is integral to effective project execution. CNSI's methodology provides a structured approach to the planning process. While this may appear to require more initial effort than desired, experience has shown that following these processes reduces the likelihood of planning mistakes and results in lower risk and a more cost-effective, rapid delivery.

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CNSI's methodology incorporates a consistent approach for identifying, tracking, and measuring the value derived from ongoing projects. CNSI's experience developing and delivering various client projects is incorporated into the project strategy and planning activities.

In undertaking this project, CNSI will employ its iVision360 system development life cycle (SDLC) methodology tailored for the Provider Enrollment Screening – Site Visit Tracking Project.

- **User is at the Center:** CNSI's primary motivation in developing iVision360 is to put the user at the center of the project life cycle. Successful projects have high interaction with end users and place the user at the center of the project. Every phase and activity of iVision360 focuses on interaction and collaboration with the user community. CNSI does this by implementing agile techniques and building working software in an iterative fashion with user validation at periodic intervals.
- **Common Goals:** Users actively participate in configuration sessions with an integrated team of developers, analysts, and testers. This method avoids the pitfalls of waterfall methods. iVision360 provides the team with a sense of purpose, a goal, and the drive to accomplish the end objective: software that meets the requirements.
- **Early and Often Testing:** iVision360 provides an opportunity to test early and often so formal system test phases and subsequent test phases are more likely to meet schedule expectations with a lower error-discovery rate.

By introducing the baseline management features of waterfall, CNSI minimizes the risk of scope creep that is sometimes associated with iterative methods. Moreover, implementing and integrating with project management processes will provide integrated change, issue, and risk management. Table 1 describes the key benefits of each of the industry-standard methodologies that are blended into iVision360.

Table 1. SDLC Methodology Comparison

Methodology	Key Benefits Blended into iVision360
Waterfall	Baseline approval of requirements Structured documents and customer approvals Formalized testing
Iterative/Agile	Frequent customer interaction Decomposing work into small meaningful features that are presented in working software Frequent course corrections Sense of real progress Early and frequent testing
Extreme Programming	Teams formed between developing organization and customer Sense of common vision and goal

iVision360 has been adapted for the purposes of this project. The customized version is presented in *Section 2.5.1 iVision360 Iterative Design, Testing, and Documentation Approach.*

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2.3 Project Management Tools

Tools, when properly applied within the methodology framework, will reduce the time to complete a project by providing predefined processes, templates, documents, and training materials. More importantly, use of the appropriate tools will help reduce risk and increase efficiency.

CNSI will continue to use the tools already proven effective during the previous undertakings to reduce the time to complete the project and mitigate risk. Table 2 lists the tools CNSI will utilize for the project.

Table 2. CNSI Project Tools

Tool	Purpose
ReqTrace®	CNSI's requirements database used during design and test phases
Microsoft Visio	Develop use case diagrams, technical architecture diagrams, and support process flows
Microsoft Office	Develop project deliverables as well as presentations and spreadsheet artifacts needed to support deliverables
As-One	Repository for deliverables, presentations, and artifacts

Microsoft Visio and Microsoft Office are industry-standard tools. The following subsections provide additional information about ReqTrace and As-One.

2.3.1 ReqTrace

CNSI will use its ReqTrace web application for requirements analysis and validation.

During project initiation and requirements planning, ReqTrace will be loaded with the functional, technical, and support requirements. ReqTrace is CNSI's requirements management tool of choice being used in MMIS projects. ReqTrace provides the ability to trace requirements to use cases, related test cases, and results. The application can store requirements-related attributes, including revisions, notes, and comments.

CNSI began using ReqTrace during the implementation of CHAMPS. The requirements validation processes used on the project, as well as the use of ReqTrace, resulted in the requirements validation phase being completed ahead of schedule.

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2.3.2 As-One

Believing that continuous collaboration and information-sharing are key factors to successful project execution, CNSI will use As-One, its web-based enterprise program management solution. Figure 2 illustrates how As-One is designed to support team collaboration, knowledge management, and process improvement. As-One will provide a convenient repository for all program data and will give MDCH oversight personnel direct visibility into project performance.

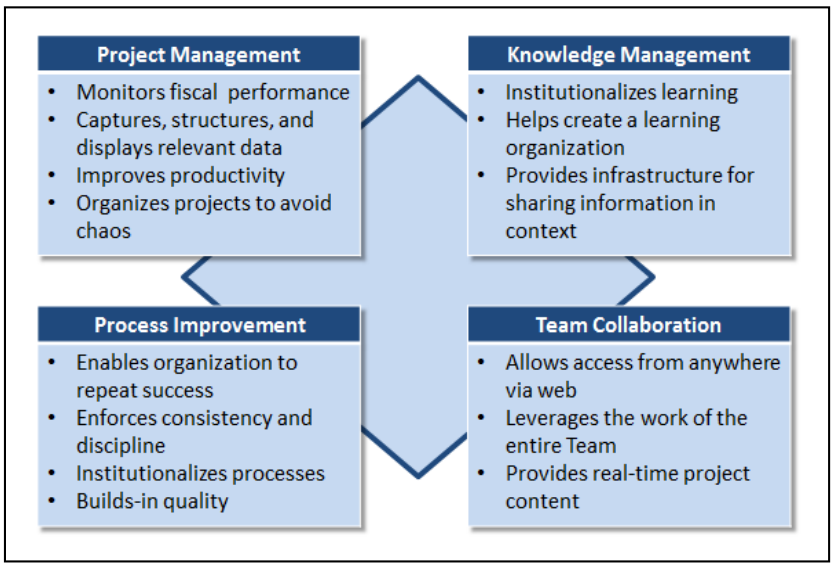

Figure 2. As-One Collaboration and Improvement

As-One is an "out-of-the-box" solution that supports CNSI's program management philosophy: experienced people, managed processes, and enabling technology.

As-One will allow CNSI users to share real-time data specific to the user's authority and association and is accessed via a standard web browser. CNSI's previous and ongoing projects with the State of Michigan use As-One. Training will be provided for team members new to the program.

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2.4 Solution

This section will review CNSI's proposed Provider Enrollment Screening – Site Visit Tracking endeavor including technical and functional overviews. Full business and technical requirements will be elicited and documented as a part of the first phase of the project.

2.4.1 Technical Overview

CNSI will modify CHAMPS to correctly display on mobile devices. This will require an adaptive layout that:

- Allows CHAMPS to be displayed on multiple types of mobile devices.
- Re-sizes correctly for the specific device.
- Renders correctly in both landscape and portrait display modes.

The system will still require a browser to access the application through the mobile device. Access through Single Sign-On and State VPN will still be required when using the application.

These capabilities will be delivered through CHAMPS list and dialog pages consistent with the current user interface and technical framework for CHAMPS.

2.4.2 Functionality

At a high level, CHAMPS will be modified to provide the following capabilities to MDCH:

- Ability to enter site-visit data in real-time into CHAMPS through mobile devices. Detailed data to be captured includes:
    - Date and time of visit.
    - Person performing the inspection.
    - Site contact name and email address (who did we talk to at the facility).
    - Indicator stating that the facility is or is not in alignment with the information submitted in the provider's enrollment request (or rescreening).
    - Date of next review (to be computed based on date of enrollment).
    - Comments on the site visit.
    - Attachments captured at the site-visit such as photos of the facility that can support the comments provided by the inspector.
- Ability to require site visits as a precondition for enrollment for designated high- and medium - risk providers.
- Ability to capture site-visit information optionally for providers not included in the high-risk group.
- Ability to capture, upload, retrieve, and view photographs of the site.

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- Ability to produce tickler report for designated medium and high-risk providers who required a periodic-re-inspection.

In addition, a one-time report will be produced listing all enrolled medium and high risk provider who are eligible for unannounced site visits including the current status of the CHAMPS site-visit indicator.

2.5 Technical and Phased Approach Work Plan

CNSI has created an initial work plan and timeline for the Provider Enrollment Screening – Site Visit Tracking Project. This work plan describes the expected activities for the proposed phases and major activities. This information is presented in Figure 3 below. A detailed description of the major activities within each phase is presented in *Section 2.5.2 Phased Approach Work Plan*.

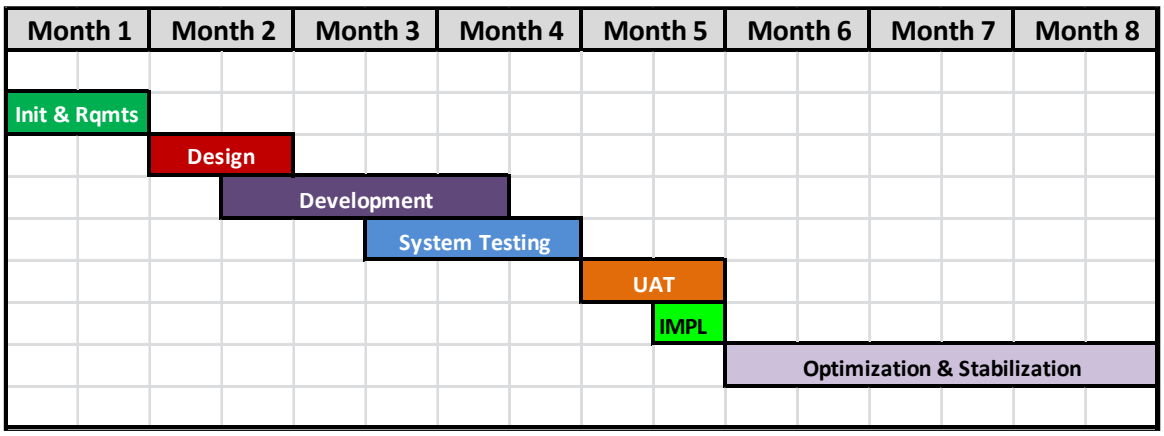

Figure 3. Initial Project Work Plan

CNSI structured this work plan to address the overall relationships of the phases and activities required to complete the project. It effectively uses the professional resources required to accomplish these phases and produce high-quality products in a cost-conscious manner.

The following subsections further describe how CNSI intends to accomplish the goals of the work plan by employing its iVision360 methodology in the proposed approach for the Provider Enrollment Screening – Site Visit Tracking Project.

2.5.1 iVision360 Iterative Design, Testing, and Documentation Approach

In this section, CNSI provides an outline of its iVision360 SDLC. The SDLC is a full-featured methodology that includes standard design and development processes. CNSI's SDLC processes have been adapted to address the specific needs of the project. This project will be divided into 4 phases and will be incorporated into a standard operational release for production deployment.

CNSI will engage in iterative requirements analysis and design with State at the beginning of each release. The State will be able to review requirements analysis and design documents as soon as a logical set of iterations are completed. CNSI expects initial State signoff upon acceptance of the iteration's document scope. This will help reduce the time required for document review and approval. The documents reviewed at any time will have a smaller scope to help the State perform a thorough review. At

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the end of all iterations for a release, an overall document will be produced for a final delivery and acceptance to State.

The iterative/agile development and testing portion of the iVision360 methodology is visible in each release of design and coding. During this phase, technical design specifications for impacted functions and user stories are constructed in parallel by developers and the SMEs. As the impacted function's design is completed, the team lead will plan the related development iterations.

Developers will build internal design documentation prior to, and during, the iterations. The beginning of each iteration is reserved for startup activities, including finalizing the internal design documentation. The developer meets with the data modeling team on Day 1 of an iteration to conduct a walkthrough of any required data model changes. The data modeling team makes the required changes to the database schema and approves the physical model for coding. Developers also develop iteration test cases (for the tasks that may not be tested with automatic internal iteration test code), which are required to test each story completely.

Coding begins when the internal design and pre-coding work is completed for the iteration. The developer will write internal iteration test scripts in parallel to actual working code and update screens and other system functions to fit the physical mode. The developer will execute the iteration test scripts as they complete sections of code. The codes will be built and tested incrementally. The developer will coordinate daily stand-up meetings and communicate any development issues.

This development approach ensures developers do not work in silos. It also avoids the traditional approach of throwing design documentation "over the fence" to developers to begin coding, only to discover later that major rework is required halfway through the development process.

Developers eventually test the code against internal auto-unit-code and manual internal iteration test scripts. As they reach the end of the iteration, they will run the code against functional scripts developed by the test team. Discrepancies are identified and corrected, and the developer retests to ensure all discrepancies are corrected and closed before the iteration ends. The developer will conduct a peer review of the impacted function's code on the last day of the iteration and then update the code based on the review. When developer iteration testing and software code reviews are successfully completed for the iteration, the code will be promoted to the integration test stream. The code will be released to the test team for system testing when coding and developer iteration testing is completed for all of an impacted functions user stories.

During initial development iterations, the test team will develop system test cases based on requirements specification. During system testing, the test team will execute system test cases to validate system results against requirements.

CNSI plans to engage the test and development teams early on to build the regression test suite for critical functions. This will help to speed up testing and improve overall quality of implementation. During system testing, if required, regression tests will be performed on impacted functions based on changes to a previously tested baseline. The intent of regression testing is to demonstrate that the CHAMPS system continues to meet all approved requirements after changes have been introduced to a previously tested baseline.

For the Provider Enrollment Screening – Site Visit Tracking Project, CNSI will integrate the new features through the standard CHAMPS operational release process. As soon as system testing is

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completed for an activity, CNSI will deliver the code to the UAT environment for the targeted release. A standard four-week UAT period will be used for this effort.

Figure 4 presents a graphical overview of the processes that are part of the iVision360 methodology.

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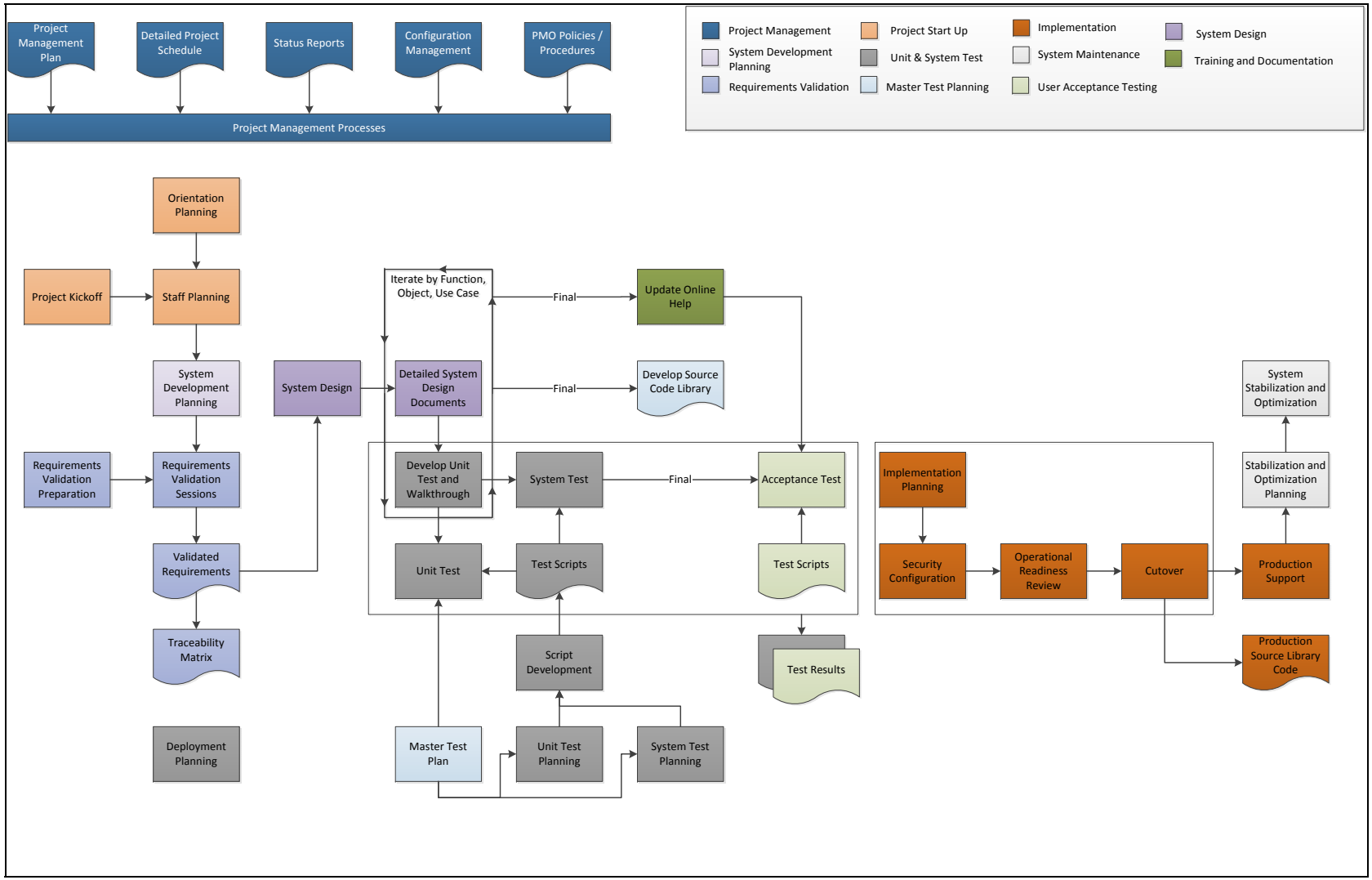

Figure 4. iVision360 Process Diagram

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2.5.2 Phased Approach Work Plan

CNSI proposes an overlapping, four-phase approach to the Provider Enrollment Screening – Site Visit Tracking Project consisting of requirements elicitation and validation, design, development, implementation, stabilization, and optimization activities.

The four phases are:

- **Phase I:** Initiation and Requirements
- **Phase II:** Design, Coding and System Testing
- **Phase III:** UAT and Production Deployment
- **Phase IV:** Stabilization and Optimization

Figure 5 provides a high-level overview of the four phases, their major activities, and expected timelines.

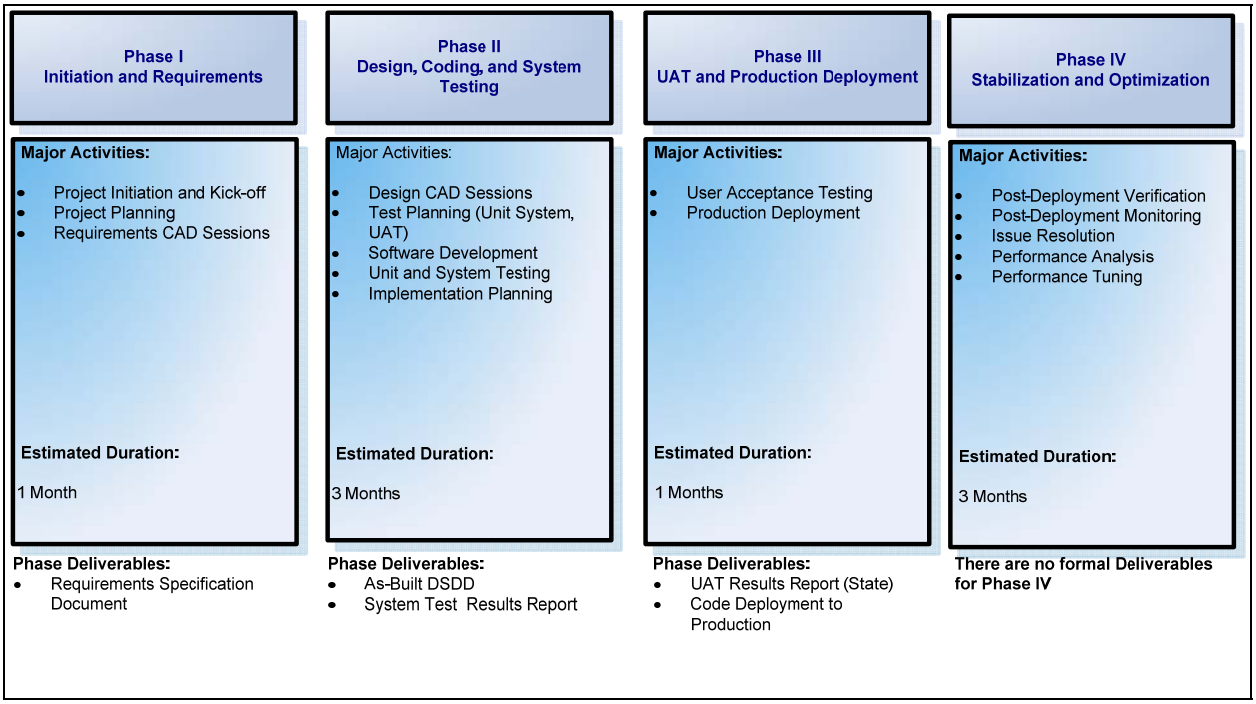

Figure 5. High-Level Project Phases and Activities

With every project, there are critical milestones to be met and work products and deliverables that must be developed and produced in order to provide the inputs necessary to perform the next phase. Table 3 elaborates on the key high-level milestones of the proposed implementation plan, along with the expected deliverables.

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Table 3. High-Level Activities and Milestones by Phase

Major Activity	Description	Phase
Project Initiation	Establish the project team structure, key stakeholders, and operating guidelines for team activity throughout the course of the project.	Phase I
Project Planning	Establish project schedules.	Phase I
Requirements CAD Sessions	Conduct CAD sessions to elicit and validate requirements for the Provider Enrollment subsystem and technical architecture.	Phase I
Mobile Device Planning and Acquisition	Identify the mobile tools to be used for site visit inspections and initiate purchase.	Phase I
Phase I Deliverables • **Project Work Plan** • **Requirements Specification Document**		
Design CAD Sessions	Conduct CAD sessions to document detailed system design changes for Provider Enrollment and CHAMPS architecture.	Phase II
Test Planning	Develop detailed test cases / scripts for each phase of testing: Unit, System and UAT.	Phase II
Software Development	Software changes required to support the detailed functional design including: • Screens • Functionality (driven by use cases) • Data Models • Reports • Rendering CHAMPS on Mobile Devices • Interfaces	Phase II
Unit and System Testing	Internal CNSI testing of developed functionality at the component, subsystem, and system level, including end-to-end (E2E) regression testing.	Phase II
Implementation Planning	Coordinate production installation of the system changes.	Phase II
Phase II Deliverables • **As-Built DSDD**		

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Major Activity	Description	Phase
• **System Test Results**		
UAT	MDCH testing of all system changes using formal UAT test scripts and devices to be deployed for site visits.	Phase III
Production Deployment	CNSI and the State of Michigan deploy the modifications in the MDCH production CHAMPS environment.	Phase III
Phase III Deliverables • **UAT Results Report (State Deliverable)** • **Code Deployment to Production**		
Post-Deployment Verification	Perform a sanity check of all system functions after code deployment to ensure all features function as designed.	Phase IV
Post-Deployment Monitoring	Overall monitoring of CHAMPS system health and performance after code deployment.	Phase IV
Issue Resolution	Identification and plan-of-action to resolve issues should they arise after code deployment.	Phase IV
Performance Analysis	Measure and analyze post-deployment performance of the CHAMPS system in comparison to pre-deployment system performance.	Phase IV
Performance Tuning	Adjust system queries, database tables, and interfaces as needed to improve system processing and throughput.	Phase IV
There are no formal Deliverables for Phase IV		

2.5.2.1 Phase 1 – Initiation and Requirements

Activity 1: Project Initiation

During this activity, CNSI will collaborate with the State of Michigan to identify the key business and technical team members who will participate in the Provider Enrollment Screening – Site Visit Tracking Project. CNSI will conduct the formal project kickoff and deliver orientation for the project effort.

The major milestones associated with this activity are:

- Participating team members from the State of Michigan are identified
- Project kickoff meeting is conducted and project kickoff is completed

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Activity 2 - Project Planning

During this activity, CNSI will develop the project work breakdown structure (WBS); and the baseline schedule.

The major milestone associated with this activity is the delivery of the project work plan.

Activity 3 – Requirements CAD Sessions

The goals of the Provider Enrollment Screening – Site Visit Tracking Project have been defined at a high-level within this statement of work. During this activity, CNSI will host CAD sessions to elicit and validate detailed functional and technical requirements. The CAD sessions will include the State of Michigan and CNSI functional and technical SMEs. CNSI will compare the validated requirements with current CHAMPS functionality and technical architecture to determine the impact of the new requirements across all CHAMPS subsystems, including system aspects such as:

- Rendering CHAMPS on mobile devices
- New and modified screens
- Functionality (use cases)
- Data models
- Reports
- Interfaces

This will result in a requirements specification document which provides a clear, concise, and final definition of each requirement necessary to support real-time data entry of site visit details using mobile devices. The approved requirements will be used during the design and development activities in Phase II.

The major milestones associated with this activity are:

- Functional requirements specification document is delivered.
- Approved requirements have been loaded into ReqTrace.

Activity 4 – Mobile Device Planning and Acquisition

During this activity, CNSI will collaborate with the State of Michigan to identify the preferred mobile devices to be used by the inspection team during the site visits. Once the mobile devices are finalized, purchase orders will be issued to acquire the devices in time for the latter stages of system testing prior to UAT.

The milestone associated with this activity is the issuance of the purchase order for the devices with associated mobile contracts for 4G wireless communication. This is a State task.

2.5.2.2 Phase II – Design, Coding, and System Testing

Activity 1 – Design CAD Sessions

During this activity, CNSI will host CAD sessions to produce detailed design artifacts. Sessions will be organized and scheduled per requirements for the affected CHAMPS subsystem and the solution's

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technical architecture. CAD sessions will include State of Michigan and CNSI functional and technical SMEs. Using the existing CHAMPS design and the requirements specification document as a starting point, session participants will identify and document required design changes including system aspects such as:

- Rendering CHAMPS on mobile devices
- Screens
- Functionality (use cases)
- Data Models
- Reports
- Interfaces

This will result in final, revised design artifacts, including use cases and data models, which will be the basis for the development of changes to system functions. CNSI will submit the completed design artifacts to the appropriate State of Michigan decision-maker shortly after the completion of a CAD session. The State of Michigan decision-maker will formally approve the design artifacts via signature on an approval form, similar to the existing CHAMPS enhancement approval process. This approval indicates that design is final and development can begin. CNSI will submit a final, as-built DSDD for MDCH approval upon completion of all design sessions.

The major milestone associated with this activity is delivery of the as-built DSDD.

Activity 2 - Development

During this activity, CNSI codes the software changes required to support the updated detailed functional and technical design. Development is performed through a series of bi-weekly development iterations as previously described. Development includes the coding changes as defined in the as-built DSDDs for CHAMPS, including system aspects, such as:

- Rendering CHAMPS on mobile devices
- Screens
- Functionality (use cases)
- Data Models
- Reports
- Interfaces

As the conclusion of each development iteration, the developed code is delivered to the CNSI Test Team. The major milestone associated with this activity is the completion of all development iterations.

Activity 3 – Test Planning

During this activity, CNSI collaborates with the State of Michigan to prepare test scenarios and scripts for each phase of testing, including system testing and UAT. The system test scenarios and scripts are prepared by the CNSI Test Lead. UAT test scenarios and scripts are prepared by the State of Michigan.

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For the Provider Enrollment Screening – Site Visit Tracking Project, there is no interaction with any external business partners. Therefore, business-to-business (B2B) testing will not be required.

Milestones associated with this activity include:

- System test preparation is completed
- UAT preparation is completed (State)

Activity 4 – Implementation Planning

During this activity, CNSI collaborates with the State to coordinate the timing of the production installation of the system changes. The Provider Enrollment Screening – Site Visit Tracking Project will be incorporated into the regular CHAMPS release operational release implementation schedule. Implementation planning activities will focus on targeting the operational release that will include this initiative and integrating the new features into the release.

The major milestone associated with this activity is identification of the operational releases where the software will be deployed.

Activity 5 – Unit/System Testing

During this activity, CNSI tests the developed functionality at the component, subsystem, and system level, including E2E regression testing. System testing will be aligned with the selected operational releases where the code will be deployed. For the Provider Enrollment Screening – Site Visit Tracking Project, testing will include rendering CHAMPS on the selected mobile platforms and testing the capability to enter site visit data using the browser capability of the mobile device.

Milestones associated with this activity include:

- System test results report is delivered
- Code is deployed to UAT environment
- UAT begins

2.4.2.3 Phase III – UAT and Production Deployment

Activity 1 – User Acceptance Testing (UAT)

During this activity, CNSI provides support to MDCH staff who will conduct UAT using formal, State-developed test scripts. UAT testing will be aligned with the selected operational releases where the code will be deployed. For the Provider Enrollment Screening – Site Visit Tracking Project, the mobile devices will be deployed to the State Test Team to conduct related mobile testing.

The major milestone associated with this activity is the publishing of the UAT Results Report by the State.

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Activity 2 – Production Deployment

During this activity, CNSI and the State of Michigan and its data warehouse vendor collaborate to execute the implementation plan. The finalized code will be merged into the selected regular operational release. CNSI deploys the release to the production environment where it is available for use by the MDCH site visit inspection teams.

The major milestones associated with this activity include:

- Code is deployed to production
- Stabilization and optimization begins

2.4.2.4 Phase IV – Stabilization and Optimization

Activity 1 – Post-Deployment Verification

This task involves verifying the correct installation and operation for all system components. During this activity, CNSI performs a sanity check of all system functions after code deployment to ensure all features function as designed.

Purpose:

- Verify Screen Operation
- Verify Interfaces Operation
- Verify Data Warehouse Extract Operation
- Verify all Production Job Schedules:
    - Interface Schedules
    - Data Warehouse Extract Schedules

Activity 2 – Post-Deployment Monitoring

This task involves monitoring the system in the months after the application upgrade has gone live.

Purpose:

- Monitor System Performance Metrics:
    - Application Screen Performance
    - Database Performance
    - Interface Performance
    - Data Warehouse Extract Performance
    - Reports Performance

Activity 3 – Issue Resolution

This task involves evaluating issues reported in the 90-day period. Issues will be logged and processed according to the CHAMPS operations incident management, application support, change management,

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and release management processes. Issues that require system changes will be planned for software releases based on priority and will be assigned to CHAMPS operations releases in accordance with the approved schedule.

Purpose:

- Incident Management:
  - OTRS Ticket Entry
  - OTRS Ticket Triage
  - OTRS Ticket Analysis
  - OTRS Ticket Disposition Determination (Defect, Enhancement, Request for Change (RFC), or Closure)
- Application Support:
  - Iterative Development
  - System Testing
  - RFC Creation and Testing
- Change Management:
  - CQ Entry
  - CQ Analysis
  - CQ Planning:
    - Change Log Estimation and Approval
    - Code Promotion
    - RFC Deployment
- Release Management:
  - Release Planning
  - Release Assignment
  - Release Deployment

Activity 4 – Performance Analysis

This task is the process for analyzing the performance of CHAMPS after the Provider Enrollment Screening – Site Visit Tracking changes have gone live. Various operational reports and monitoring tools will be used to assess the performance of the system and identify opportunities for improvement.

Purpose:

- Operational Reports:
  - Identify any processes performing below benchmarks.

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- Monitoring Tools:
  - Identify any servers with metrics outside normal operating ranges.
  - Identify any slow running queries.
  - Identify heavily used web pages.
  - Identify heavily used transactions.

Activity 5 – Performance Tuning

After all processes, servers, and queries where performance issues are identified, the Application Support and Infrastructure Teams will construct a remediation plan. The remediation plan will identify the changes to be made, the timeline for the changes, and the deployment plan either through software release, RFC, or maintenance outage in the case of server changes.

Purpose:

- Application Support:
  - Perform process tuning in the development environment.
  - Plan software changes for software releases per the CHAMPS operations release schedule.
  - Tuning changes are released and deployed according to the CHAMPS operations change management and release management processes.
  - If the Application Support Team requires infrastructure changes, they will request the changes through the CHAMPS operations RFC process.
- Infrastructure Support: Perform server tuning in lower environments.

Deploy configuration changes to production during monthly, planned maintenance outages. Emergency maintenance outages may be requested if performance issues are severe and business-impact is high. In that case, the emergency outage will be planned based on CHAMPS service-level agreements in order to minimize business impacts.

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Section 3: General Assumptions

This statement of work is presented based on the following assumptions:

1. The Optum Data Warehouse organization is responsible for making changes to the State's data warehouse to accept any new data elements resulting from the site visit process.
2. The Provider Enrollment Screening – Site Visit Tracking Project does not involve exchange of data with any organization or system outside of the State of Michigan's environment. Therefore, no B2B testing will be required.
3. The solution developed for Provider Enrollment Screening – Site Visit Tracking Project will meet all applicable State of Michigan technical and security standards.
4. The solution developed for Provider Enrollment Screening – Site Visit Tracking Project will not require any update to the CHAMPS operations or disaster recovery documentation.
5. The solution developed for Provider Enrollment Screening – Site Visit Tracking Project will not require new hardware or any changes to the State's infrastructure with the exception of the mobile devices.
6. DTMB is responsible for purchasing and ensuring delivery of the selected mobile devices at least two weeks prior to the completion of the system test activity.
7. The State of Michigan's Single Sign-On screens have already been modified to render correctly on mobile devices.

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Section 4: Pricing

This section presents CNSI's fixed-price, overall labor cost for completing the Provider Enrollment Screening – Site Visit Tracking Project. The cost was derived based on the expected effort required, as presented in our initial work plan, composed of the four phases depicted in Figure 56. The total fixed-price labor cost for the Provider Enrollment Screening – Site Visit Tracking Project is $450,000.00. Additionally, it will be necessary to acquire three 4G-equipped mobile devices with an expected total cost of $2,400 to be acquired by DTMB.

The total cost including three mobile devices is $452,400.

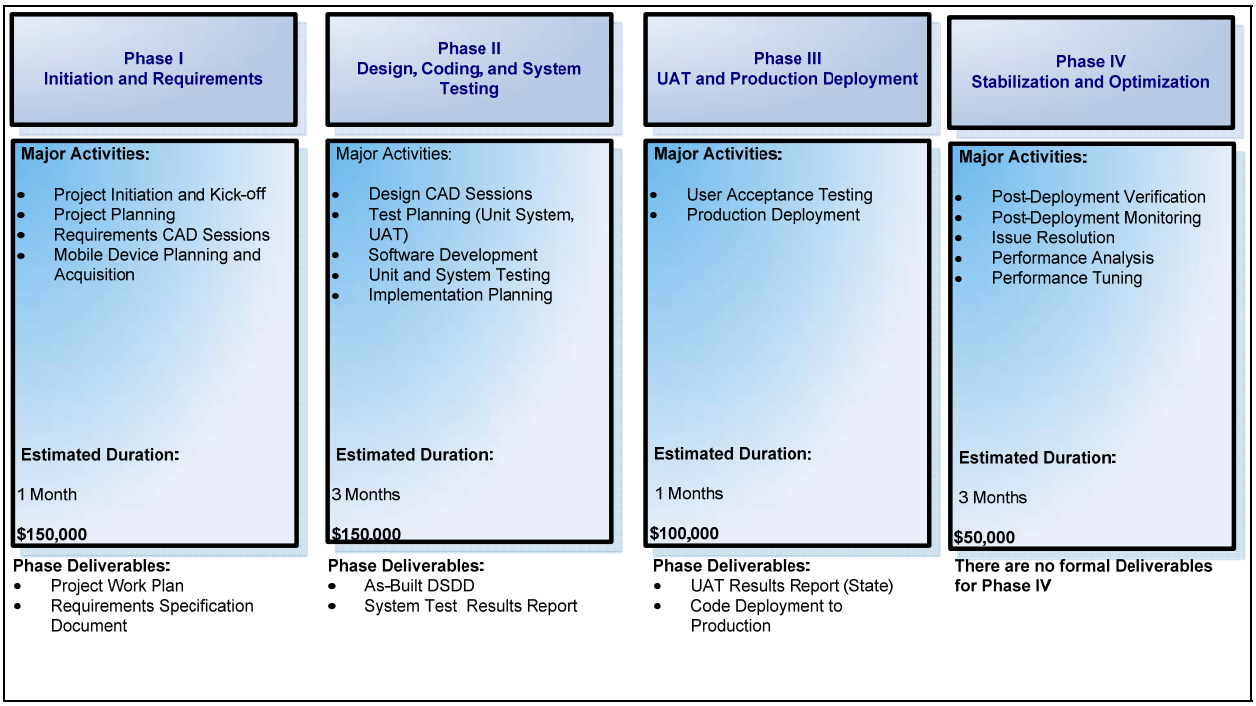

Figure 6. High-Level Project Phases and Cost

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Section 1: Introduction

CNSI is pleased to present this statement of work to enhance the Community Health Automated Medicaid Processing System (CHAMPS) to support the adjudication of new Centers for Medicare & Medicaid Services (CMS) 1500 and American Dental Association (ADA) paper claim forms for the State of Michigan. CNSI proposes to complete the CMS 1500 and ADA Forms Project under a fixed-cost agreement.

1.1 Regulatory and Business Drivers for Change

The State currently uses a document-imaging and data-capture solution (referred to in this statement of work as the Document Management System (DMS)) to convert its Medicaid medical paper claim forms into electronic claim records. All digital images of paper claims and associated support documentation are archived into the IBM® FileNet P8 repository. These digital paper claims records are exported to CHAMPS for adjudication. The current DMS went into production in 2007 and was interfaced with the legacy Medicaid management information system (MMIS) to support the processing of paper Medicaid claims. In 2008, the management and support of the DMS was transitioned from HTC to the State.

When the initial version of CHAMPS' claim processing went to production in 2009, the DMS interface was changed from interfacing with the legacy MMIS to interfacing with CHAMPS. This initial interface supported the processing of paper claims using the 2006 version of CMS Form 1500 for medical claims and American Dental Association (ADA) Forms for dental claims. The incorporation of the 2006 version of these forms was also a change from the legacy interface which used earlier versions of the CMS 1500 and ADA forms.

Recently, the CMS 1500 and ADA paper claim forms were revised to align with changes to electronic healthcare claims driven by the Affordable Care Act (ACA). These changes to the paper claim forms make it necessary for the State to enhance the DMS to support the new paper claim forms and include International Classification of Diseases, Tenth Edition (ICD-10)-related data elements in the paper claims process.

When the 2012 CMS 1500 and ADA forms and the ICD-10 codes are incorporated in the DMS, CHAMPS will no longer be able to process paper claims from providers until it is also enhanced to process the 2012 CMS 1500 and ADA forms with the ICD-10 codes. If the DMS is enhanced to utilize the 2012 CMS 1500 and ADA forms, and CHAMPS is not, providers will not be able to submit paper claims to CHAMPS. If neither DMS nor CHAMPS are modified to process the 2012 CMS 1500 and ADA forms, then paper claims with ICD-10 codes will not be accepted by CHAMPS, as the current DMS CHAMPS interface does not support the use of ICD-10 codes.

This statement of work is to enhance CHAMPS to process paper claims submitted with the new CMS 1500 and ADA forms using ICD-10 codes.

Once CHAMPS has been enhanced to process the 2012 CMS 1500 and ADA forms, CHAMPS will not accept the data elements from 2006 versions of the CMS 1500 and ADA forms, which are changed on the 2012 version of the CMS 1500 and ADA forms. As a result, once the upgrade to the 2012 version of the forms occurs, the ability to load and adjudicate paper claims submitted on the 2006 forms will no longer be available.

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The activities described in this statement of work will be based on business rules provided by the State and discussions between CNSI and the State on how those rules will be accommodated in CHAMPS.

1.2 CNSI Capabilities

CNSI's approach to enhance CHAMPS to support the CMS 1500 and ADA Forms Project is based on its ongoing partnership with the State and its extensive knowledge of CHAMPS design, implementation, and operation. As system developers and integrators, CNSI aligns its clients' business processes and information systems to provide access to the right information at the right time, enabling the achievement of their desired business results and creating enterprise value. CNSI will employ its extensive technological experience in the industry and incorporate its flexible tools and methodologies to deliver quality results on time and within budget. CNSI completes jobs for clients by delivering on commitments with speed and purpose in accordance with the client's specifications and expectations.

CNSI will build upon its extensive knowledge gained from designing, developing, implementing, and operating CHAMPS for the State, as well as previous CHAMPS efforts, including the HIPAA 5010 compliance implementation, and the ongoing ICD-10 transition and remediation. In enhancing CHAMPS to process the new CMS 1500 and ADA forms with ICD-10 codes, CNSI will continue to collaborate with the State's business and technical personnel and provide an experienced team of Medicaid subject matter experts (SMEs) who have the technical, business, and project management expertise to support this endeavor.

CNSI's experience working on prior Medicaid health information technology (IT) initiatives has led to incorporating the following factors in developing this statement of work:

- **CNSI's experience working with HTC Global, Inc. on imaging systems for MMIS solutions**

  CNSI will build on its experience incorporating the 2006 versions of the CMS 1500 and ADA forms processing into CHAMPS and the implementation of the Document Management Portal (DMP) and its integration with CHAMPS. In addition to CHAMPS, CNSI partnered with HTC, who assists the State in supporting the current DMS, to deploy imaging solutions that are integrated with the MMIS in other States.

- **CNSI's capability to conduct complex analysis of Medicaid system requirements**

  CNSI's project teams have a wealth of experience with multiple Medicaid programs, which allows them to efficiently conduct the data-gathering and analysis activities for this initiative. Architects and SMEs who have worked with CHAMPS for a variety of Medicaid health IT initiatives are among the team members involved in this effort.

- **CNSI's sensitivity to the State of Michigan's needs and constraints**

  CNSI is uniquely qualified to remain sensitive to the State's needs and constraints in defining the project's approach. The team will employ an orderly, structured, professional approach that is sufficiently flexible to respond to changes in requirements that evolve from additional understanding. Overall, CNSI has practical "hands-on" experience of what does and does not.

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1.3 Proposed Project Organization

CNSI believes this statement of work represents the best possible combination of architecture, technology, support, and experience to complete this project. The proposed team members are each the best possible candidates of their respective disciplines. The underlying logic behind identifying each member of this group is that:

- They share the same philosophical approach for undertaking this project – **the customer comes first**.
- They understand the values that each member brings to successfully implementing the project.
- They are committed to understanding and incorporating the State's requirements.
- They understand the necessary advanced technologies, business needs, and operational issues.

CNSI's primary objective is the successful implementation and completion of the project. Its team is fully dedicated to the CMS 1500 and ADA Forms Project and is confident in its ability to achieve that goal.

However, an effective project cannot work with participation only by CNSI. As the customer, the State is the most important member of the project team. As the customer, the State must be actively engaged in the process at all levels. Implementation is only as good as the partnership established and maintained between all involved parties.

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Section 2: Project Management, Methodology, Tools, and Technical Approach

This section presents CNSI's project management and technical approaches, methodology, tools, and phased work plan for accomplishing all activities required for the CMS 1500 and ADA Forms Project implementation. This section describes the scope of activities to be addressed throughout the project, from the initiation phase to final implementation, as well as the techniques and methodologies CNSI's project team will use.

Each of the following subsections will contain a high-level description of the four-phase approach for this project. For each phase, the major activities and anticipated deliverables are presented, followed by a high-level description of the major milestones and approximate timelines.

2.1 Project Management Approach

The project's successful implementation relies on the framework and environment provided by project and quality management. Figure 1 shows CNSI's project and quality management framework and how the related activities interact with project tasks.

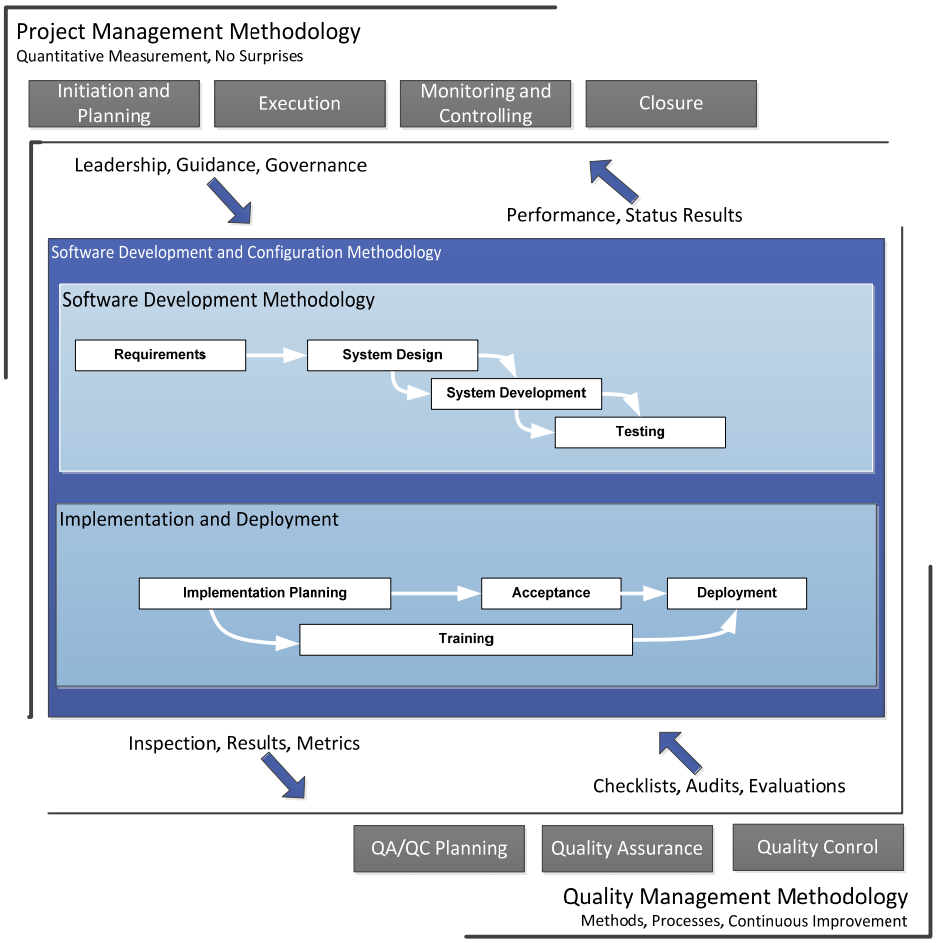

Figure 1. CNSI's Project Management and Quality Management Framework

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Although all projects are unique, they share common components and processes. The generally accepted process groups defined by the *Project Management Body of Knowledge* (*PMBOK*), as incorporated into the CNSI project management process, are:

- **Initiating:** This process group defines the project objectives and grants authority to proceed. For CNSI, the initiating processes are largely incorporated into the proposal development process, during which required partners are identified.
- **Planning:** This process group refines the project objectives and scope and plans the tasks, activities, and steps necessary to meet the project's objectives. The planning processes start during proposal development and proceed following contract award while CNSI works with the customer to establish and baseline the project management plan. The project management plan is modified and updated as necessary over the course of the project. It is the culmination of the planning processes for scope definition and management, time (scheduling), staffing (human resources), communications, and risk management.
- **Executing:** This process group puts the project's plans into motion. This is where the bulk of the work for the project is performed.
- **Monitoring and Controlling:** This process group measures the performance of the project's executing activities and reports these performance results to project managers and stakeholders. Output is used to refine, improve, and/or change project management (including plans and schedules) as necessary to meet the project's objectives.
- **Closing:** This process group documents the formal acceptance and approval of the project's product and brings all aspects of the project to a close.

CNSI is confident it has the correct methodology and project framework in place to successfully implement the CMS 1500 and ADA Forms project modifications. CNSI continually improves its project management processes using lessons learned from previous projects and through the proficiency and continuous education of its program and project managers, senior technical and engineering staff, and senior and corporate management. This ensures a number of advantages:

- The project management philosophy is firmly entrenched within the entire project team, including the State and CNSI.
- Project management is a core competency.
- The project staff is focused on successfully implementing the project.
- Project management, quality management, and cost management processes are fully integrated and their infrastructure is in place.
- Effective project status reporting is established throughout the project life cycle.
- Project and software development methodologies are well documented.
- Project information is communicated continuously to the right people at the right time.
- The project is continuously monitored against performance.
- Excellence in quality and delivery are built in.

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- Deliverable review and approval processes are in place.

Through developing the project management plan, CNSI expects to collaborate with the State project management team to further customize CNSI's project management system to successfully complete the project.

2.2 Project Methodology

CNSI's holistic approach for this project will use its proven methodology as the overarching framework and bring an experienced team of program managers, SMEs, technical experts, and change management resources to support this effort.

The project methodology is a framework that facilitates the integration of CNSI's extensive system experience, which is rooted in application implementations, methodologies, and delivery tools. This framework allows CNSI to deliver services to its clients consistently across its footprint and gather continued enhancements for its supporting methodology, thereby providing continued value for its clients.

CNSI's methodology is an integrated methodology that combines its best delivery assets. The methodology:

- Provides a scalable, integrated collection of assets.
- Provides a consistent level of detail and presentation.
- Supports tailoring to scale, which provides a unique, but consistent cost-effective delivery approach.

CNSI's methodology approach consists of the following:

- The **Manage** work approach provides a single, consistent approach to managing CNSI's engagements. Within the Manage Approach is the Quality Management activity, which verifies that deliverables and processes meet requirements. The Quality Management activity also supports continuous process improvement, as well as the methodology.
- The **Life Cycle** work approach addresses unique expertise while providing overall integration across the full implementation life cycle.

CNSI's methodology has the flexibility to be adapted to meet the State's unique requirements while confirming that its experienced staff members follow established practices.

While no two engagements are the same, the State expects CNSI to deliver in a consistent, systematic approach. The proposed project methodology incorporates CNSI's staff's delivery experience into a single, integrated approach. It provides the structure for integrating CNSI's capabilities while allowing individual project teams the flexibility to use client-mandated tools. The right assembly of technologies, techniques, and deliverable processes requires the specific experience and expertise found in CNSI's staff.

Investing time to create an effective plan with clear objectives is integral to effective project execution. CNSI's methodology provides a structured approach to the planning process. While this may appear to require more initial effort than desired, experience has shown that following these processes reduces the likelihood of planning mistakes and results in lower risk and a more cost-effective, rapid delivery.

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CNSI's methodology incorporates a consistent approach for identifying, tracking, and measuring the value derived from ongoing projects. CNSI's experience developing and delivering various client projects is incorporated into the project strategy and planning activities.

In undertaking this project, CNSI will employ its iVision360 system development life cycle (SDLC) methodology tailored for the CMS 1500 and ADA Forms Project:

- **User is at the Center:** CNSI's primary motivation in developing iVision360 is to put the user at the center of the project life cycle. Successful projects have high interaction with end users and place the user at the center of the project. Every phase and activity of iVision360 focuses on interaction and collaboration with the user community. CNSI does this by implementing agile techniques and building working software in an iterative fashion with user validation at periodic intervals.
- **Common Goals:** Users actively participate in configuration sessions with an integrated team of developers, analysts, and testers. This method avoids the pitfalls of waterfall methods. iVision360 provides the team with a sense of purpose, a goal, and the drive to accomplish the end objective: software that meets the requirements.
- **Early and Often Testing:** iVision360 provides an opportunity to test early and often so formal system test phases and subsequent test phases are more likely to meet schedule expectations with a lower error-discovery rate.

By introducing the baseline management features of waterfall, CNSI minimizes the risk of scope creep that is sometimes associated with iterative methods. Moreover, implementing and integrating with project management processes will provide integrated change, issue, and risk management. Table 1 describes the key benefits of each of the industry-standard methodologies that are blended into iVision360.

Table 1. SDLC Methodology Comparison

Methodology	Key Benefits Blended into iVision360
Waterfall	Baseline approval of requirements Structured documents and customer approvals Formalized testing
Iterative/Agile	Frequent customer interaction Decomposing work into small meaningful features that are presented in working software Frequent course corrections Sense of real progress Early and frequent testing
Extreme Programming	Teams formed between developing organization and customer Sense of common vision and goal

iVision360 has been adapted for the purposes of this project. The customized version is presented in *Section 2.5.1 iVision360 Iterative Design, Testing, and Documentation Approach.*

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2.3 Project Management Tools

Tools, when properly applied within the methodology framework, will reduce the time to complete a project by providing predefined processes, templates, documents, and training materials. More importantly, use of the appropriate tools will help reduce risk and increase efficiency.

CNSI will continue to use the tools already proven effective during the previous undertakings to reduce the time to complete the project and mitigate risk. Table 2 lists the tools CNSI will utilize for the project.

Table 2. CNSI Project Tools

Tool	Purpose
ReqTrace®	CNSI's requirements database used during design and test phases
Microsoft Visio	Develop use case diagrams, technical architecture diagrams, and support process flows
Microsoft Office	Develop project deliverables as well as presentations and spreadsheet artifacts needed to support deliverables
As-One	Repository for deliverables, presentations, and artifacts

Microsoft Visio and Microsoft Office are industry-standard tools. The following subsections provide additional information about ReqTrace and As-One.

2.3.1 ReqTrace

CNSI will use its ReqTrace web application for requirements analysis and validation.

During project initiation and requirements planning, ReqTrace will be loaded with the functional, technical, and support requirements. ReqTrace is CNSI's requirements management tool of choice being used in MMIS projects. ReqTrace provides the ability to trace requirements to use cases, related test cases, and results. The application can store requirements-related attributes, including revisions, notes, and comments.

CNSI began using ReqTrace during the implementation of CHAMPS. The requirements validation processes used on the project, as well as the use of ReqTrace, resulted in the requirements validation phase being completed ahead of schedule.

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2.3.2 As-One

Believing that continuous collaboration and information-sharing are key factors to successful project execution, CNSI will use As-One, its web-based enterprise program management solution. Figure 2 illustrates how As-One is designed to support team collaboration, knowledge management, and process improvement. As-One will provide a convenient repository for all program data and will give the State personnel direct visibility into project performance.

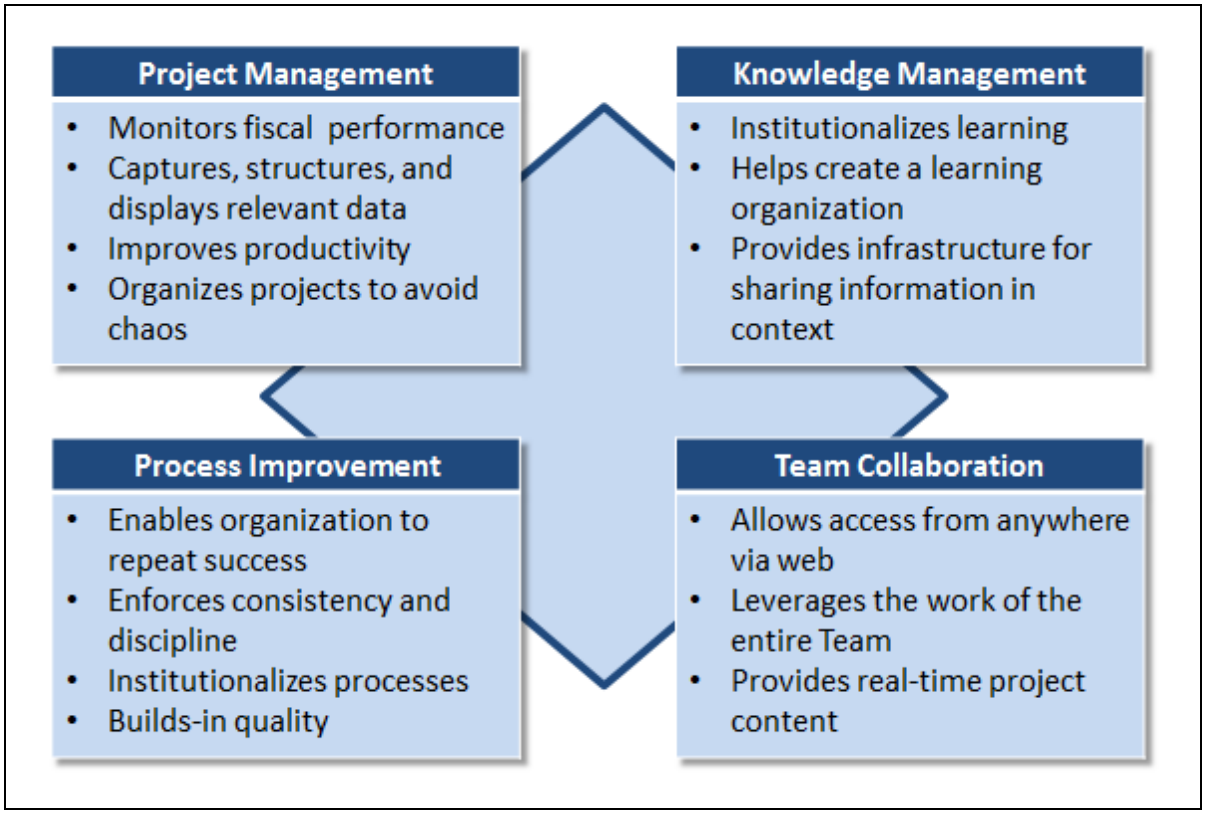

Figure 2. As-One Collaboration and Improvement

As-One is an "out-of-the-box" solution that supports CNSI's program management philosophy: experienced people, managed processes, and enabling technology.

As-One will allow CNSI users to share real-time data specific to the user's authority and association and is accessed via a standard web browser. CNSI's previous and ongoing projects with the State use As-One. Training will be provided for team members new to the program.

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2.4 Solution

This section will review CNSI's proposed CMS 1500 and ADA Forms Project solution, including technical and functional overviews. Full business and technical requirements will be elicited and documented as a part of the first phase of the project.

As mentioned previously in *Section 1.1 Regulatory and Business Drivers for Change*, this statement of work addresses the CHAMPS modifications necessary to accept a revised XML file from the DMS. The revised file will contain the claim data elements from the CMS 1500 and ADA forms and the ICD-10 contents. The content of the file will be determined by the business rules provided by the State for processing the new CMS 1500 and ADA forms with ICD-10 codes.

2.4.1 Technical Overview

CNSI will modify the existing load software for loading the XML paper claims file from DMS to CHAMPS. These modifications will be based on the mapping of the changed data fields in the paper claims interface to the fields currently being loaded to into CHAMPS and modifying the software to load the changed fields. Once these fields are identified and the State has provided the rules for processing them, necessary changes to the data model, screens, and adjudication rules will be made within CHAMPS to support the storage of the data elements and the processing of the claims submitted on the 2012 CMS 1500 and ADA forms.

2.4.2 Functionality

At a minimum, the incorporation of the processing of the new CMS 100 and ADA forms, will continue current CHAMPS functionality for processing the 2006 version of these forms. CNSI envisions that the only new functionality required will be to allow the processing of paper claims submitted using the 2012 CMS 1500 and ADA forms using ICD-10 codes. CNSI believes that retrieval of information associated with this new functionality will not change. CNSI recognizes it may be necessary to modify screens to display data that has changed because of the incorporation of the 2012 versions of the CMS 1500 and ADA forms changes to fields on the 20102 version of the CMS 1500 and ADA forms. CNSI does not feel there are other functional changes beyond the capability to process the new CMS 1500 and ADA claims forms per the State provided business rules.

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2.5 Technical and Phased Approach Work Plan

CNSI has created an initial work plan and timeline for the CMS 1500 and ADA Form Project. This work plan describes the expected activities for the proposed phases and major activities. This information is presented in Figure 3 below. A detailed description of the major activities within each phase is presented in *Section 2.5.2 Phased Approach Work Plan*.

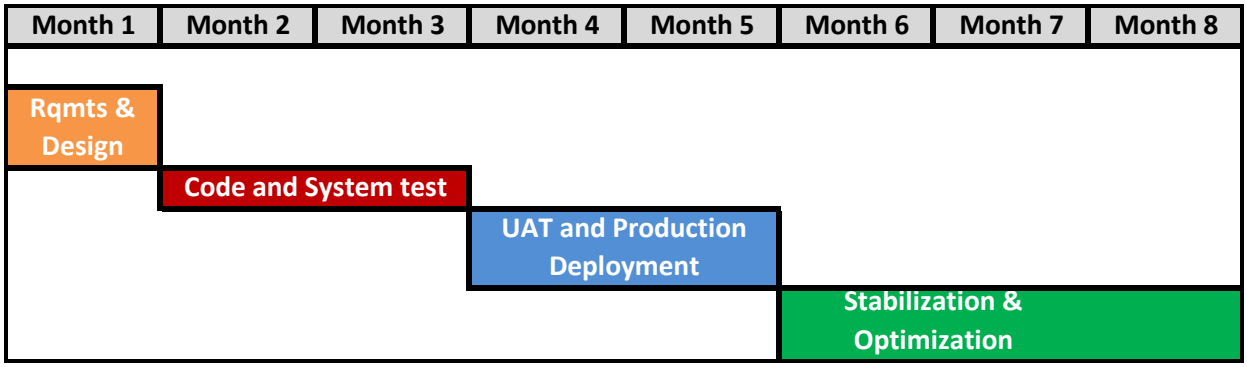

Figure 3. Initial Project Work Plan

CNSI structured this work plan to address the overall relationships of the phases and activities required to complete the project. It effectively uses the professional resources required to accomplish these phases and produce high-quality products in a cost-conscious manner.

The following subsections further describe how CNSI intends to accomplish the goals of the work plan by employing its iVision360 methodology in the proposed approach for the CMS 1500 and ADA Form Project.

2.5.1 iVision360 Iterative Design, Testing, and Documentation Approach

In this section, CNSI provides an outline of its iVision360 SDLC. The SDLC is a full-featured methodology that includes standard design and development processes. CNSI's SDLC processes have been adapted to address the specific needs of the project. This project will be divided into four phases.

CNSI will engage in iterative gap analysis and design with the State at the beginning of Phase I.

The iterative/agile development and testing portion of the iVision360 methodology is visible in each release of design and coding. During this phase, technical design specifications for impacted functions and user stories are constructed in parallel by developers and the SMEs. As the impacted function's design is completed, the team lead will plan the related development iterations.

Developers will build internal design documentation prior to, and during, the iterations. The beginning of each iteration is reserved for startup activities, including finalizing the internal design documentation. The developer meets with the data modeling team on Day 1 of an iteration to conduct a walkthrough of any required data model changes. The data modeling team makes the required changes to the database schema and approves the physical model for coding. Developers also develop iteration test cases (for the tasks that may not be tested with automatic internal iteration test code), which are required to test each story completely.

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Coding begins when the internal design and pre-coding work is completed for the iteration. The developer will write internal iteration test scripts in parallel to actual working code and update screens and other system functions to fit the physical mode. The developer will execute the iteration test scripts as they complete sections of code. The codes will be built and tested incrementally. The developer will coordinate daily stand-up meetings and communicate any development issues.

This development approach ensures developers do not work in silos. It also avoids the traditional approach of throwing design documentation "over the fence" to developers to begin coding, only to discover later that major rework is required halfway through the development process.

Developers eventually test the code against internal auto-unit-code and manual internal iteration test scripts. As they reach the end of the iteration, they will run the code against functional scripts developed by the test team. Discrepancies are identified and corrected, and the developer retests to ensure all discrepancies are corrected and closed before the iteration ends. The developer will conduct a peer review of the impacted function's code on the last day of the iteration and then update the code based on the review. When developer iteration testing and software code reviews are successfully completed for the iteration, the code will be promoted to the integration test stream. The code will be released to the test team for system testing for the CHAMPS operational release that will contain the 2012 CMS 1500 and ADA forms functionality when coding and developer iteration testing is completed for all of an impacted functions user stories.

During initial development iterations, the test team will develop system test cases based on requirements specification. During system testing, the test team will execute system test cases to validate system results against requirements.

CNSI plans to engage the test and development teams early on to build the regression test suite for critical functions. This will help to speed up testing and improve overall quality of implementation. During system testing, if required, regression tests will be performed on impacted functions based on changes to a previously tested baseline. The intent of regression testing is to demonstrate that the CHAMPS system continues to meet all approved requirements after changes have been introduced to a previously tested baseline.

As soon as system testing for the operational release is completed, CNSI will deliver the code to the UAT environment. As part of the operational release process, CNSI will engage the State as early as possible and well before the beginning of the planned UAT phase. This will ensure enough time is allowed for thorough UAT and reduce the risk of schedule slippage for UAT completion.

Figure 4 presents a graphical overview of the processes that are part of the iVision360 methodology.

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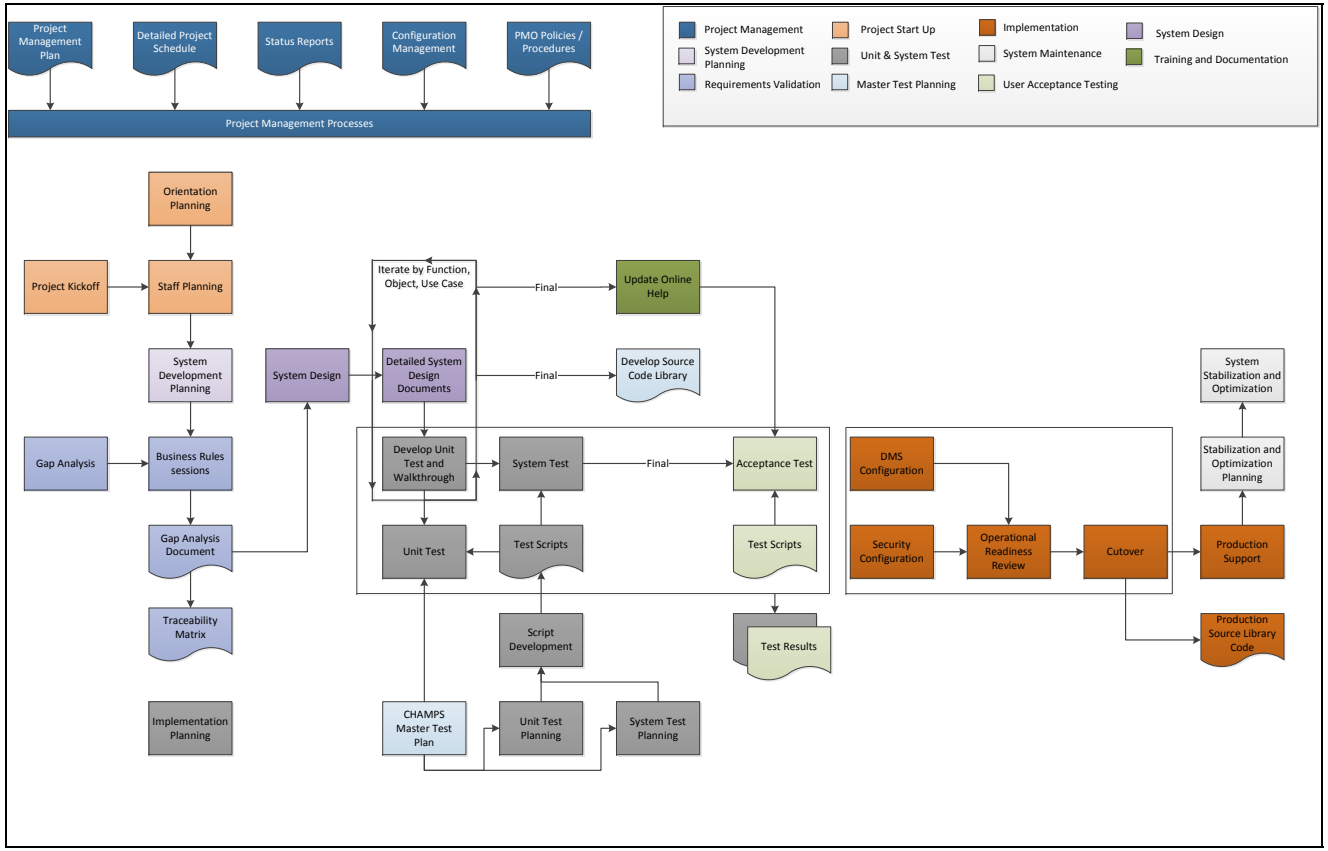

Figure 4. iVision360 Process Diagram

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2.5.2 Phased Approach Work Plan

CNSI proposes a four-phase approach to the CMS 1500 and ADA Form Project. The four phases are:

- **Phase 1 –** Gap Analysis and Design
- **Phase 2 –** Coding and System Testing
- **Phase 3 –** UAT and Production Deployment
- **Phase 4 –** Stabilization and Optimization

Figure 5 provides a high-level overview of the four phases, their major activities, and expected timelines.

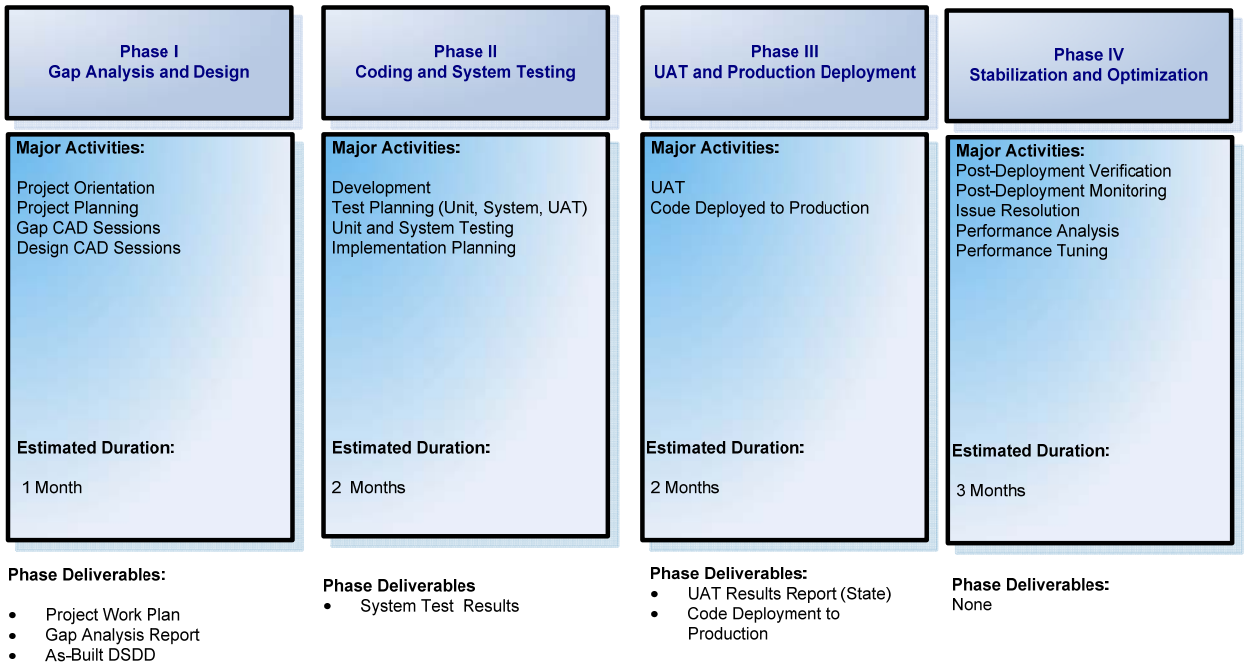

Figure 5. High-Level Project Phases and Activities

With every project, there are critical milestones to be met and work products and deliverables that must be developed and produced in order to provide the inputs necessary to perform the next phase.

Table 3 elaborates on the key high-level milestones of the CMS 1500 and ADA Form Project, along with the expected deliverables.

Table 3. High-Level Activities and Milestones by Phase

Key Activity	Description	Phase
Project Orientation	Establish the project team structure, key stakeholders, and operating guidelines for team activity throughout the course of the project. Conduct kickoff meeting to orient	Phase I

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Key Activity	Description	Phase
	team to project.	
Project Planning	Establish project management plan and project work plan.	Phase I
Gap CAD Sessions	Conduct CAD sessions to review changes between the 2006 forms and the 2012 forms and develop gap analysis report	Phase I
Design CAD Sessions	Conduct CAD sessions to discuss design changes which require State input.	Phase I
Phase I Deliverables • **Project Work Plan (Schedule)** • **20006 to 2012 Forms Gap Analysis Report** • **As-Built DSDD**		
Development	Software changes required to support the detailed functional design including: • Screens • Interfaces • Functionality (driven by use cases) • Data Models • Reports • Letters	Phase II
Test Planning	Collaborate with the State on the test cases and schedules for System Testing, and UAT of the operational release containing the 2012 CMS 100 and ADA from functionality	Phase II
Unit/System Testing	Internal CNSI testing of developed functionality at the component, subsystem and system level, including end-to-end regression testing.	Phase II
Phase II Deliverables • **System Test Results**		
Implementation Planning	Include in the applicable CHAMPS Operational release plan, any special activities	Phase III

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Key Activity	Description	Phase
	which may be needed to move the modified code for the 2012 CMS 1500 and ADA forms to production in conjunction with an operations release.	
UAT	State testing of all system changes as part of testing the applicable operation release using formal UAT test scripts.	Phase III
Phase III Deliverables • UAT Test Results (State) • **Code Deployment to Production**		
Post-Deployment Monitoring	Overall monitoring of CHAMPS system health and performance after code deployment.	Phase IV
Issue Resolution	Identification and plan-of-action to resolve issues should they arise after code deployment.	Phase IV
Performance Analysis	Measure and analyze post-deployment performance of the CHAMPS system in comparison to pre-deployment system performance.	Phase IV
Performance Tuning	Adjust system queries, database tables and interfaces as needed to improve system processing and throughput.	Phase IV
Phase IV Deliverables • None		

2.5.2.1 Phase 1 – Requirements Validation and Design

Activity 1 - Project Initiation

During this activity, CNSI will conduct the formal project kickoff and deliver team training and orientation.

The major milestone associated with this activity is the Project Kickoff Meeting.

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Activity 2 - Project Planning

During this activity, CNSI will develop the project work breakdown structure (WBS); and the baseline schedule.

The major milestone associated with this activity is delivery of the project work plan.

Activity 3 – Gap CAD Sessions

During this activity CAD sessions will be held with the State. The CAD sessions will include the State and CNSI functional and technical SMEs. These sessions will discuss how CHAMPS functionality needs to be modified to accommodate the 2012 versions of the CMS 1500 and ADA forms. These CAD sessions will use the changes between the 2006 and 2012 CMS 1500 and ADA forms, the CHAMPS DSDDs, current business rules, and the assumptions defined in this statement of work as a starting point to identify business rules and CHAMPS functionality changes that are needed to incorporate the processing of 2012 CMS 1500 and ADA forms into CHAMPS.

CNSI will compare the changes from the CAD sessions with current CHAMPS functionality to determine the impact of the new requirements across all CHAMPS subsystems, including system aspects such as:

- Screens
- Interfaces
- Functionality (use cases)
- Data Models
- Rules Engine
- Reports
- Letters

CNSI will use the results of the CAD sessions and the comparison with current CHAMPS functionality to prepare the gap analysis report to document functional changes that will be needed for CHAMPS to process the 2012 CMS 1500 and ADA forms. The approved gap analysis report will provide the specifications for processing the 2012 CMS 1500 and ADA forms in CHAMPS.

The major milestone associated with this activity is the delivery of the gap analysis report.

Activity 4 – Design CAD Sessions

Upon State approval of the gap analysis report, CNSI will review the CHAMPS detailed system design documents (DSDD) to assess what changes are needed for CHAMPS to process the 2012 versions of the CMS 1500 and ADA forms. CNSI envisions some of these changes will be straightforward. However, CNSI also recognizes that some of the design changes may require additional discussion with the State for clarification needed on the gaps or design options, which require State input before CNSI can make a design recommendation.

To support design discussions, CNSI will host CAD sessions to discuss design items requiring further discussion with the State. Sessions will be organized and scheduled per CHAMPS subsystem and/or MITA business area. The CAD sessions will include State and CNSI functional and technical SMEs.

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Using the existing CHAMPS design and gap analysis report, session participants will discuss design changes requiring State input across all CHAMPS subsystems, including system aspects such as:

- Screens – to reflect new or changed fields on the new forms
- Interfaces – to transfer new or changed data
- Functionality (Use Cases)
- Data Models – to accommodate new data from the paper claims
- Reports - to accommodate new or changed data elements
- Letters - to accommodate new or changed data elements

These design activities will result in final, revised design artifacts, such as use cases and data models, which will be the basis for developing the changes needed to accommodate the 2012 CMS 1500 and ADA forms in CHAMPS. CNSI will submit the completed design artifacts to the State. The State will formally approve the design artifacts via signature on an approval form, following the existing CHAMPS enhancement approval process. This approval indicates that design is final and development can begin. CNSI will submit a final as-built DSDD for the State approval upon completion of all Phase I design sessions.

The major milestone associated with this activity is the delivery of the as-built DSDD.

2.5.2.2 Phase II – Coding and System Testing

Activity 1 - Development

During this activity, CNSI codes the software changes required to support the updated detailed functional design. Development includes the coding changes as defined in the as-built DSDD for all CHAMPS subsystems, including system aspects such as:

- Screens
- Interfaces
- Functionality (Use Cases)
- Data Models
- Reports
- Letters

Development is performed in bi-weekly iterations. The major milestones associated with this activity include the completion of all development iterations.

Activity 2 – Test Planning

During this activity, CNSI collaborates with MDCH to produce detailed test cases and scripts for each phase of testing, including system, and UAT.

Milestones associated with this activity include:

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- System Test cases and scripts are created

Activity 3 – Unit/System Testing

During this activity, CNSI tests the developed functionality at the component, subsystem, and system level, including E2E regression testing.

Milestones associated with this activity include:

- System test results report delivered
- Code is deployed to UAT environment
- UAT begins

Activity 4 – Implementation Planning

The CMS 1500 and ADA forms project will be incorporated into the regular CHAMPS operational release schedule. During this activity, CNSI collaborates with the State to determine which operational release will include this functionality. Implementation planning activities will focus on targeting the operational release that will include this initiative and integrating the new features into the release.

The major milestone associated with this activity is the identification of the operational release where the software will be deployed.

2.5.2.3 Phase III – UAT Testing and Production Deployment

Activity 1 –UAT

During this activity, CNSI supports the State staffs who conduct UAT using formal test scripts. UAT will be accomplished during the UAT period for the operational release, which contains the 2012 CMS 1500 and ADA form functionality.

The major milestone associated with this activity is the State's approval of UAT results report.

2.5.2.4 Phase IV – Stabilization and Optimization

Activity 1 – Post-Deployment Verification

This task involves verifying the correct installation and operation for all system components. During this activity, CNSI performs a sanity check of paper claims functionality and after code deployment to ensure all features function as designed. This activity will be accomplished as part of the sanity check performed on the operational release which contains the 2012 CMS 1500 and ADA forms functionality.

Purpose:

- Verify Screen Operation
- Verify Queues Operation
- Verify Interfaces Operation
- Verify Interface Schedules

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Activity 2 – Post-Deployment Monitoring

This task involves monitoring the system in the months after the application upgrade has gone live.

Purpose:

- Monitor Key Operational Metrics:
- Claims Payment Rates
- Claims Payment Amounts
- Pay Cycle Statistics
- Monitor System Performance Metrics:
    - Application Screen Performance
    - Database Performance
    - Application Queues Performance
    - Interface Performance
    - Reports Performance

Activity 3 – Issue Resolution

This task involves evaluating issues reported in the 90-day period after the operational release, containing the 20012 CMS 1500 and ADA forms functionality goes live in production. Issues will be logged and processed according to the CHAMPS operations incident management, application support, change management, and release management processes. Issues that require system changes will be planned for software releases based on priority and will be assigned to CHAMPS operations releases in accordance with the approved schedule.

Purpose:

- Incident Management:
    - OTRS Ticket Entry
    - OTRS Ticket Triage
    - OTRS Ticket Analysis
    - OTRS Ticket Disposition Determination (Defect, Enhancement, RFC, or Closure)
- Application Support:
    - Iterative Development
    - System Testing
    - RFC Creation and Testing
- Change Management:
    - CQ Entry

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    - CQ Analysis
    - CQ Planning
        - Change Log Estimation and Approval
        - Code Promotion
        - RFC Deployment
- Release Management:
    - Release Planning
    - Release Assignment
    - Release Deployment

Activity 4 – Performance Analysis

This task is the process for analyzing the performance of CHAMPS after the 2012 CMS 1500 and ADA forms processing changes have gone live. Various operational reports and monitoring tools will be used to assess the performance of the system and identify opportunities for improvement.

Purpose:

- Operational Reports:
    - Identify any processes performing below benchmarks.
- Monitoring Tools:
    - Identify any servers with metrics outside normal operating ranges.
    - Identify any slow running queries.
    - Identify heavily used web pages.
    - Identify heavily used transactions.

Activity 5 – Performance Tuning

After all processes, servers, and queries where performance issues are identified, the application support and infrastructure teams will construct a remediation plan. The remediation plan will identify the changes to be made, the timeline for the changes, and the deployment plan either through software release, RFC, or maintenance outage in the case of server changes.

Purpose:

- Application Support:
    - Perform process tuning in development environment.
    - Plan software changes for software releases per the CHAMPS Operations release schedule.
    - Tuning changes are released and deployed according to the CHAMPS Operations Change Management and Release Management processes.

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  - If Application Support Teams require infrastructure changes, they will request the changes through the CHAMPS Operations RFC process.

- Infrastructure Support:
  - Perform server tuning in lower environments.
  - Deploy configuration changes to production during monthly planned maintenance outages.

Emergency maintenance outages may be requested if performance issues are severe and business impact is high. In that case, the emergency outage will be planned based on CHAMPS service-level agreements in order to minimize business impacts.

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Section 3: General Assumptions

This statement of work is presented based on the following assumptions:

1. The State will update and enhance the current DMS and the interface of the DMS to CHAMPS to support the 2012 version of the CMS 1500 and ADA paper claim forms and other HIPAA 5010- and ICD-10-related data elements. This update will be completed on a schedule to support system testing and UAT for the CHAMPS operational release containing the CMS 1500 and ADA Forms functionality per the project work plan approved for CNSI's performance of this statement of work.
2. The solution developed for the CMS 1500 ADA Forms Project will not require new hardware or any changes to the State's infrastructure.
3. The State will provide changes to business rules or piecing algorithms required to be implemented for the incorporation of the 2012 CMS 1500 and ADA forms into CHAMPS.
4. The State will provide staff to support CAD sessions associated with defining the requirements and reviewing the design.
5. The solution developed for the CMS 1500 and ADA Forms Project will not require any update to the CHAMPS operations or disaster recovery documentation.
6. The solution developed for the CMS 1500 and ADA Forms Project will meet all applicable State technical and security standards.
7. CNSI is modifying CHAMPS functionality to process the 2012 CMS 1500 and ADA forms and to retrieve data associated with this new functionality in a manner similar to what exists in CHAMPS today to retrieve similar data for the 2006 forms. The incorporation of additional retrieval functionality (beyond changing screens to reflect name or format changes associated with the 2012 CMS 1500 and ADA forms) is beyond the scope of this statement of work.
8. Once CHAMPS is modified to accept the new CMS 1500 and ADA forms, CHAMPS will no longer have the functionality to process the 2006 version of these forms.

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Section 4: Pricing

This section presents CNSI's fixed-price, overall labor cost for completing the CMS 1500 and ADA Forms Project. The cost was derived based on the expected effort required, as presented in our initial work plan, composed of the four phases depicted in Figure 56. The total fixed-price labor cost for the CMS 1500 and ADA Forms Project is $ 300,000.

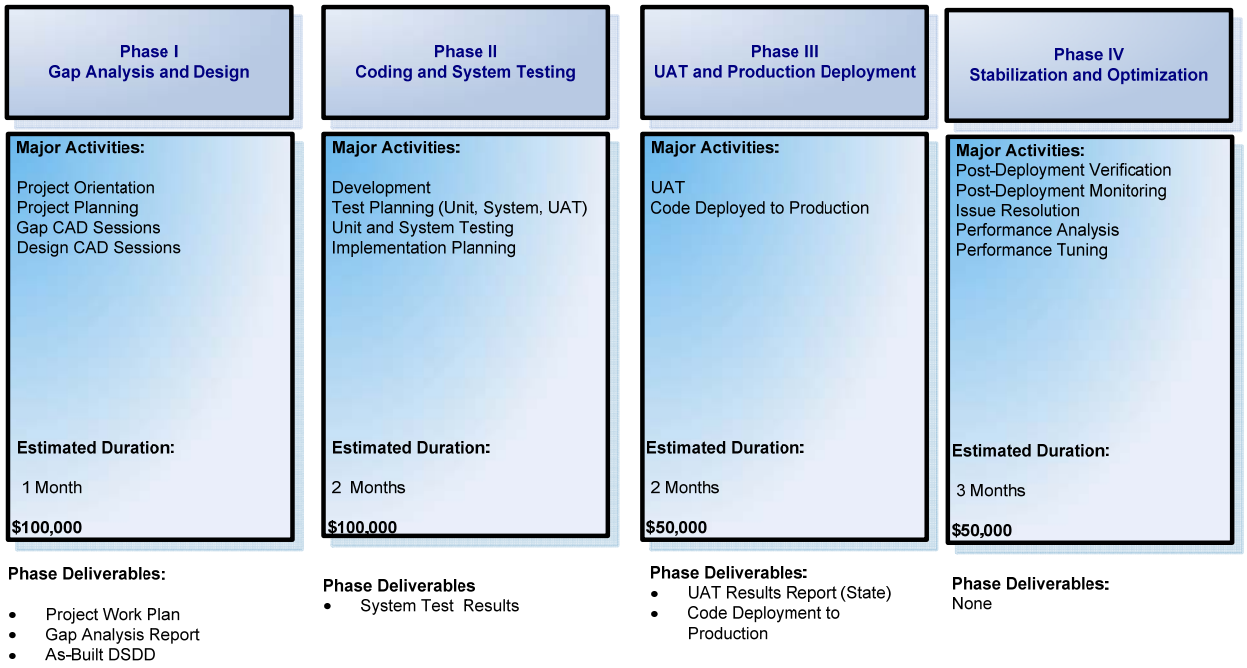

Figure 6. High-Level Project Phases and Activities

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Medicare/Medicaid Integrated Care Project
Statement of Work

Prepared For:

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June 21, 2013

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Section 1: Introduction

CNSI is pleased to present this statement of work to enhance the Community Health Automated Medicaid Processing System (CHAMPS) to support the State of Michigan Department of Community Health's (MDCH) initiative to integrate care for individuals who are dually eligible for Medicare and Medicaid (MMEs). Michigan is one of several states selected to partner with the Centers for Medicare & Medicaid Services (CMS) to design new approaches to better coordinate care for dual-eligible individuals.

The goal of this federal financial alignment initiative is to offer high-quality, seamless and cost-effective care through coordinated, person-centered services that meet the unique needs of all people who are MMEs. Integration of services and supports for those with dual eligibility will advance their health and quality of life. The program will improve the delivery of care by establishing integrated care organizations (ICOs) responsible for focusing on the individual's needs and preferences through the person-centered planning process and creation of an integrated individual care and services plan.

CNSI proposes to complete the Medicare/Medicaid Integrated Care Project under a fixed-cost agreement.

1.1 Regulatory and Business Drivers for Change

MDCH is developing a demonstration to strengthen services and supports for individuals who are dually eligible for Medicare and Medicaid. In the demonstration, services and supports for persons who are dually eligible will be delivered by newly created ICOs and currently existing prepaid inpatient health plans (PIHPs). ICOs will be responsible for the provision of all physical health, long-term care, and pharmacy services, while PIHPs will be expected to cover behavioral health and habilitative services for people with developmental disabilities, mental illness, or substance-use issues. The ICOs and PIHPs will be connected through the Care Bridge, a care model that requires the coordination of services and supports between the two entities and involved providers. CMS requires three-way contracts between the federal government, the State, and management entities. Within this structure, the State has proposed separate contracts for ICOs and for PIHPs.

CHAMPS will play a significant role in ensuring the ICOs have the data required to facilitate care-coordination for individual and ICO operations. The demonstration project is initially being extended to only four designated regions of the State:

- The Upper Peninsula
- A region in the southwest part of the state consisting of the following counties: Barry, Berrien, Branch, Calhoun, Cass, Kalamazoo, St. Joseph, and Van Buren
- Macomb as a single-county region
- Wayne as a single-county region

The demonstration project will initially operate for three years and will be implemented for this select set of regions, as opposed to State-wide.

Infocrossing has had a contract with CMS for nearly 20 years. CMS provides Infocrossing with an extract of the Medicare Beneficiary Database (MDB) and this file contains the demographics data for every person in the United States who is currently eligible for Medicare and/or Medicaid benefits.

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To facilitate the information exchange and data collection needed for program evaluation, CHAMPS modifications are expected to include:

- The ability to consume and process the CMS Infocrossing eligibility data.
- Daily file exchange to and from the enrollment broker.
- Changes to the daily Third Party Liability (TPL) interfaces.
- Creation of a new benefit plan and associated processing business rules.
- Rule changes for the outgoing HIPAA X12 834 Enrollment transactions to the ICOs.
- Rule changes for the outgoing HIPAA X12 820 Payment transactions to the ICOs.
- The ability to handle the demonstration population, in addition to dual-eligibles enrolled in health plans, but opting out of the demonstration.
- Daily extract to the MDCH data warehouse.
- Revised or new federal and operational reports to support program evaluation.
- New loading and processing rules to ensure Michigan is able to consume the encounter data that will come from CMS rather than directly from the ICOs and PIHPs, while maintaining existing rules to process encounters for the non-demonstration population.

1.2 CNSI Capabilities

CNSI's approach to enhance CHAMPS to support the Medicare/Medicaid Integrated Care Project is based on its ongoing partnership with MDCH and the Department of Technology, Management & Budget (DTMB) and its extensive knowledge of CHAMPS design, implementation, and operation. As system developers and integrators, CNSI aligns its clients' business processes, and information systems to provide access to the right information at the right time, enabling the achievement of their desired business results and creating enterprise value. CNSI will employ its extensive technological experience in the industry and incorporate its flexible tools and methodologies to deliver quality results on time and within budget. CNSI completes jobs for clients by delivering on commitments with speed and purpose in accordance with the client's specifications and expectations.

CNSI will build upon its extensive knowledge gained from designing, developing, implementing, and operating CHAMPS for the State, as well as previous CHAMPS efforts, including the HIPAA 5010 compliance implementation, and the ongoing International Classification of Diseases, Tenth Edition (ICD-10), transition and remediation. In supporting the Medicare and Medicaid integration effort and integrating it with CHAMPS, CNSI will continue to collaborate with the State's business and technical personnel and provide an experienced team of Medicaid subject matter experts (SMEs) who have the technical, business, and project management expertise to support this endeavor.

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CNSI's experience working on prior Medicaid health information technology (IT) initiatives has led to incorporating the following factors in developing this statement of work:

- **Robust HIPAA framework successfully deployed in multiples states**

  CNSI has a robust HIPAA transaction framework that is developed and deployed in multiple states. This includes the 834 and the 820 transactions that will be modified for the Medicare/Medicaid Integrated Care Project. The team will leverage this framework and experiences from these multiple deployments to ensure an effective and efficient integration project.

- **CNSI's capability to conduct complex analysis of Medicaid system requirements**

  CNSI's project teams have a wealth of experience with multiple Medicaid programs, which allows them to efficiently conduct the data-gathering and analysis activities for this initiative. Architects and SMEs who have worked with CHAMPS for a variety of Medicaid health IT initiatives are among the team members involved in this effort.

- **CNSI's sensitivity to the State of Michigan's needs and constraints**

  CNSI is uniquely qualified to remain sensitive to the State's needs and constraints in defining the project's approach. The team will employ an orderly, structured, professional approach that is sufficiently flexible to respond to changes in requirements that evolve from additional understanding. Overall, CNSI has practical "hands-on" experience of what does and does not work.

1.3 Proposed Project Organization

CNSI believes this statement of work represents the best possible combination of architecture, technology, support, and experience to complete this project. The proposed team members are each the best possible candidates of their respective disciplines. The underlying logic behind identifying each member of this group is that:

- They share the same philosophical approach for undertaking this project – **the customer comes first**.
- They understand the values that each member brings to successfully implementing the project.
- They are committed to understanding and incorporating the State's requirements.
- They understand the necessary advanced technologies, business needs, and operational issues.

CNSI's primary objective is the successful implementation and completion of the project. Its team is fully dedicated to the Medicare/Medicaid Integrated Care Project and is confident in its ability to achieve that goal.

However, an effective project management plan cannot work with participation only by CNSI. As the customer, the State is the most important member of the project team. The customer must be actively engaged in the process at all levels. Implementation is only as good as the partnership established and maintained between all involved parties.

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Section 2: Project Management, Methodology, Tools, and Technical Approach

This section presents CNSI's project management and technical approaches, methodology, tools, and phased work plan for accomplishing all activities required for the Medicare/Medicaid Integrated Care Project implementation. This section describes the scope of activities to be addressed throughout the project, from the initiation phase to final implementation, as well as the techniques and methodologies CNSI's project team will use.

Each of the following subsections will contain a high-level description of the four-phase approach for this project. For each phase, the major activities and anticipated deliverables are presented, followed by a high-level description of the major milestones and approximate timelines.

2.1 Project Management Approach

The project's successful implementation relies on the framework and environment provided by project and quality management. Figure 1 shows CNSI's project and quality management framework and how the related activities interact with project tasks.

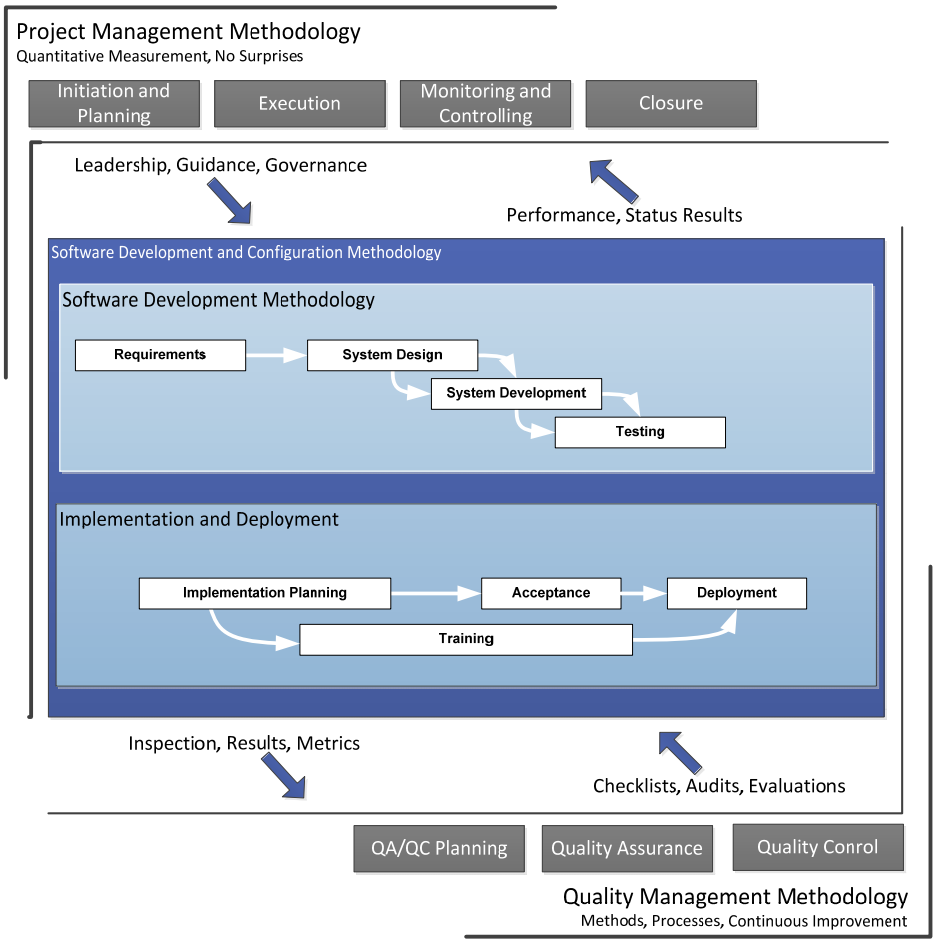

Figure 1. CNSI's Project Management and Quality Management Framework

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Although all projects are unique, they share common components and processes. The generally accepted process groups defined by the *Project Management Body of Knowledge* (*PMBOK*), as incorporated into the CNSI project management process, are:

- **Initiating:** This process group defines the project objectives and grants authority to proceed. For CNSI, the initiating processes are largely incorporated into the proposal development process, during which required partners are identified.
- **Planning:** This process group refines the project objectives and scope and plans the tasks, activities, and steps necessary to meet the project's objectives. The planning processes start during proposal development and proceed following contract award while CNSI works with the customer to establish and baseline the project management plan. The project management plan is modified and updated as necessary over the course of the project. It is the culmination of the planning processes for scope definition and management, time (scheduling), staffing (human resources), communications, and risk management.
- **Executing:** This process group puts the project's plans into motion. This is where the bulk of the work for the project is performed.
- **Monitoring and Controlling:** This process group measures the performance of the project's executing activities and reports these performance results to project managers and stakeholders. Output is used to refine, improve, and/or change project management (including plans and schedules) as necessary to meet the project's objectives.
- **Closing:** This process group documents the formal acceptance and approval of the project's product and brings all aspects of the project to a close.

CNSI is confident it has the correct methodology and project framework in place to successfully implement the Medicare/Medicaid Integrated Care Project modifications. CNSI continually improves its project management processes using lessons learned from previous projects and through the proficiency and continuous education of its program and project managers, senior technical and engineering staff, and senior and corporate management. This ensures a number of advantages:

- The project management philosophy is firmly entrenched within the entire project team, including the State of Michigan and CNSI.
- Project management is a core competency.
- The project staff is focused on successfully implementing the project.
- Project management, quality management, and cost management processes are fully integrated and their infrastructure is in place.
- Effective project status reporting is established throughout the project life cycle.
- Project and software development methodologies are well documented.
- Project information is communicated continuously to the right people at the right time.
- The project is continuously monitored against performance.
- Excellence in quality and delivery are built in.

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- Deliverable review and approval processes are in place.

Through developing the project management plan, CNSI expects to collaborate with the State of Michigan project management team to further customize CNSI's project management system to successfully complete the project.

2.2 Project Methodology

CNSI's holistic approach for this project will use its proven methodology as the overarching framework and bring an experienced team of program managers, SMEs, technical experts, and change management resources to support this effort.

The project methodology is a framework that facilitates the integration of CNSI's extensive system experience, which is rooted in application implementations, methodologies, and delivery tools. This framework allows CNSI to deliver services to its clients consistently across its footprint and gather continued enhancements for its supporting methodology, thereby providing continued value for its clients.

CNSI's methodology is an integrated methodology that combines its best delivery assets. The methodology:

- Provides a scalable, integrated collection of assets.
- Provides a consistent level of detail and presentation.
- Supports tailoring to scale, which provides a unique, but consistent cost-effective delivery approach.

CNSI's methodology approach consists of the following:

- The **Manage** work approach provides a single, consistent approach to managing CNSI's engagements. Within the Manage Approach is the Quality Management activity, which verifies that deliverables and processes meet requirements. The Quality Management activity also supports continuous process improvement, as well as the methodology.
- The **Life Cycle** work approach addresses unique expertise while providing overall integration across the full implementation life cycle.

CNSI's methodology has the flexibility to be adapted to meet the State of Michigan's unique requirements while confirming that its experienced staff members follow established practices.

While no two engagements are the same, the State of Michigan expects CNSI to deliver in a consistent, systematic approach. The proposed project methodology incorporates CNSI's staff's delivery experience into a single, integrated approach. It provides the structure for integrating CNSI's capabilities while allowing individual project teams the flexibility to use client-mandated tools. The right assembly of technologies, techniques, and deliverable processes requires the specific experience and expertise found in CNSI's staff.

Investing time to create an effective plan with clear objectives is integral to effective project execution. CNSI's methodology provides a structured approach to the planning process. While this may appear to require more initial effort than desired, experience has shown that following these processes reduces the likelihood of planning mistakes and results in lower risk and a more cost-effective, rapid delivery.

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CNSI's methodology incorporates a consistent approach for identifying, tracking, and measuring the value derived from ongoing projects. CNSI's experience developing and delivering various client projects is incorporated into the project strategy and planning activities.

In undertaking this project, CNSI will employ its iVision360 system development life cycle (SDLC) methodology tailored for the Medicare/Medicaid Integrated Care Project:

- **User is at the Center:** CNSI's primary motivation in developing iVision360 is to put the user at the center of the project life cycle. Successful projects have high interaction with end users and place the user at the center of the project. Every phase and activity of iVision360 focuses on interaction and collaboration with the user community. CNSI does this by implementing agile techniques and building working software in an iterative fashion with user validation at periodic intervals.
- **Common Goals:** Users actively participate in configuration sessions with an integrated team of developers, analysts, and testers. This method avoids the pitfalls of waterfall methods. iVision360 provides the team with a sense of purpose, a goal, and the drive to accomplish the end objective: software that meets the requirements.
- **Early and Often Testing:** iVision360 provides an opportunity to test early and often so formal system test phases and subsequent test phases are more likely to meet schedule expectations with a lower error-discovery rate.

By introducing the baseline management features of waterfall, CNSI minimizes the risk of scope creep that is sometimes associated with iterative methods. Moreover, implementing and integrating with project management processes will provide integrated change, issue, and risk management. Table 1 describes the key benefits of each of the industry-standard methodologies that are blended into iVision360.

Table 1. SDLC Methodology Comparison

Methodology	Key Benefits Blended into iVision360
Waterfall	Baseline approval of requirements Structured documents and customer approvals Formalized testing
Iterative/Agile	Frequent customer interaction Decomposing work into small meaningful features that are presented in working software Frequent course corrections Sense of real progress Early and frequent testing
Extreme Programming	Teams formed between developing organization and customer Sense of common vision and goal

iVision360 has been adapted for the purposes of this project. The customized version is presented in Section 2.5.1 iVision360 Iterative Design, Testing, and Documentation Approach.

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2.3 Project Management Tools

Tools, when properly applied within the methodology framework, will reduce the time to complete a project by providing predefined processes, templates, documents, and training materials. More importantly, use of the appropriate tools will help reduce risk and increase efficiency.

CNSI will continue to use the tools already proven effective during the previous undertakings to reduce the time to complete the project and mitigate risk. Table 2 lists the tools CNSI will utilize for the project.

Table 2. CNSI Project Tools

Tool	Purpose
ReqTrace®	CNSI's requirements database used during design and test phases
Microsoft Visio	Develop use case diagrams, technical architecture diagrams, and support process flows
Microsoft Office	Develop project deliverables as well as presentations and spreadsheet artifacts needed to support deliverables
As-One	Repository for deliverables, presentations, and artifacts

Microsoft Visio and Microsoft Office are industry-standard tools. The following subsections provide additional information about ReqTrace and As-One.

2.3.1 ReqTrace

CNSI will use its ReqTrace web application for requirements analysis and validation.

During project initiation and requirements planning, ReqTrace will be loaded with the functional, technical, and support requirements. ReqTrace is CNSI's requirements management tool of choice being used in MMIS projects. ReqTrace provides the ability to trace requirements to use cases, related test cases, and results. The application can store requirements-related attributes, including revisions, notes, and comments.

CNSI began using ReqTrace during the implementation of CHAMPS. The requirements validation processes used on the project, as well as the use of ReqTrace, resulted in the requirements validation phase being completed ahead of schedule.

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2.3.2 As-One

Believing that continuous collaboration and information-sharing are key factors to successful project execution, CNSI will use As-One, its web-based enterprise program management solution. Figure 2 illustrates how As-One is designed to support team collaboration, knowledge management, and process improvement. As-One will provide a convenient repository for all program data and will give the State of Michigan oversight personnel direct visibility into project performance.

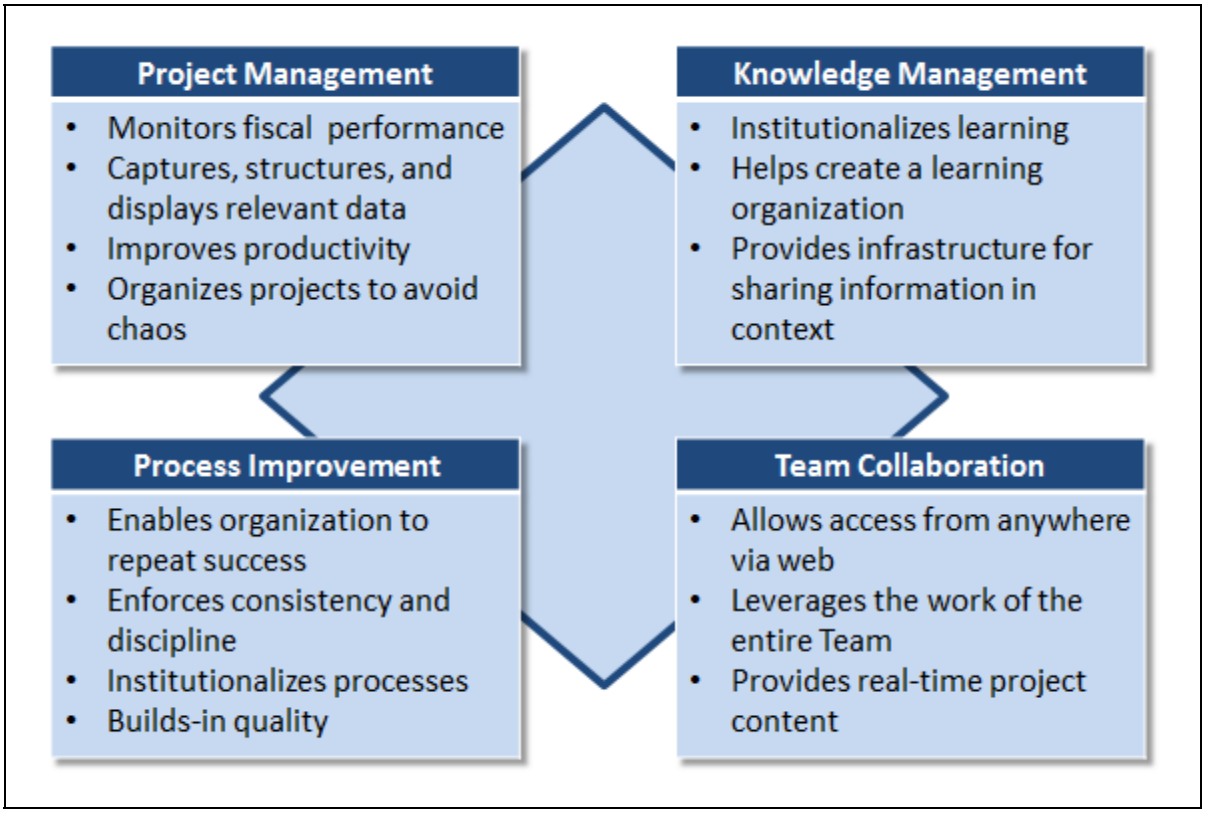

Figure 2. As-One Collaboration and Improvement

As-One is an "out-of-the-box" solution that supports CNSI's program management philosophy: experienced people, managed processes, and enabling technology.

As-One will allow CNSI users to share real-time data specific to the user's authority and association and is accessed via a standard web browser. CNSI's previous and ongoing projects with MDCH and DTMB use As-One. Training will be provided for team members new to the program.

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2.4 Solution

This section will review CNSI's proposed Medicare/Medicaid Integrated Care Project, including technical and functional overviews.

2.4.1 Technical Overview

CNSI's solution will use existing CHAMPS Interface Repository Framework (ISR) to generate and load interface with MI Enrolls, Bridges, and the CMS Infocrossing Vendor. CNSI's solution will use the existing electronic data interchange (EDI) framework to generate 834 and 820 files for new ICOs. DTMB's Data Exchange Gateway (DEG) will be used as the gateway for transmitting and receiving interface and EDI files. CNSI's solution will leverage the existing connectivity between DEG and CHAMPS to transmit files. CHAMPS will use the existing ETRR files to send encounter rejections to ICOs.

2.4.2 Functionality

Business process areas in CHAMPS that will be modified as part of Team CNSI's solution are listed below:

- Benefits Administration:
  - A new Medicaid managed care benefit plan for integrated care will be created.
- Eligibility and Enrollment:
  - CIMS files feed from Bridges will include new ICO related eligibility information for beneficiaries.
  - Batch In Batch Out (BIBO) transactions need to be modified to accommodate ICO-related changes.
  - CHAMPS will record and display Home Help Beneficiaries.
  - Existing long-term care processes need to be modified to accommodate ICO-related changes.
- Claims and Encounters:
  - Accept encounter files from CMS EDPS system for the new MMP plans.
  - Process encounter files for new MMP plans.
  - Generate acknowledgment files (ETRR) after processing the encounters.
- Contracts Management:
  - A new Medicare Medicaid Plan (MMP) program will be created.
  - Existing MME-MC program will need to be modified to exclude the population identified for the new program.
  - Enroll new ICO health plans under this new program.
  - Identify rates for the new MMP program.

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  - Create voluntary and auto-assign provider numbers.
- Long-Term Care:
  - At least three rates (using MVA indicator) (source of MVA):
    - 00 = ICO base (enrolled in an MMP)
    - 01 = ICO with Home Help
    - 02 = ICO in an LTC nursing facility
- Interfaces:
  - A new interface from ASAP System Home Help eligibility.
  - A new outbound interface with Integrated Care enrollment file to Infocrossing (proprietary format).
  - Accept inbound Infocrossing response files:
    - Accepted transactions
    - Rejected transactions
  - Modify the CHAMPS-to-Maximus TPL file to include all Medicaid payers and the OI 89 codes.
  - Need new logic to reconcile the data received from the MARx system with the same data received from the TPL MMA file.
  - Modify 1032.01 First Health file to Magellan to include MMP members.
- EDI/HIPAA transactions
  - 834 enrollment files to MMP plans
  - 820 capitation payment files to MMP plans
  - Encounter files from CMS/MMP plans

2.5 Technical and Phased Approach Work Plan

CNSI has created an initial work plan and timeline for the Medicare/Medicaid Integrated Care Project. This work plan describes the expected activities for the proposed phases and major activities. This information is presented in Figure 3 below. A detailed description of the major activities within each phase is presented in *Section 2.5.2 Phased Approach Work Plan*.

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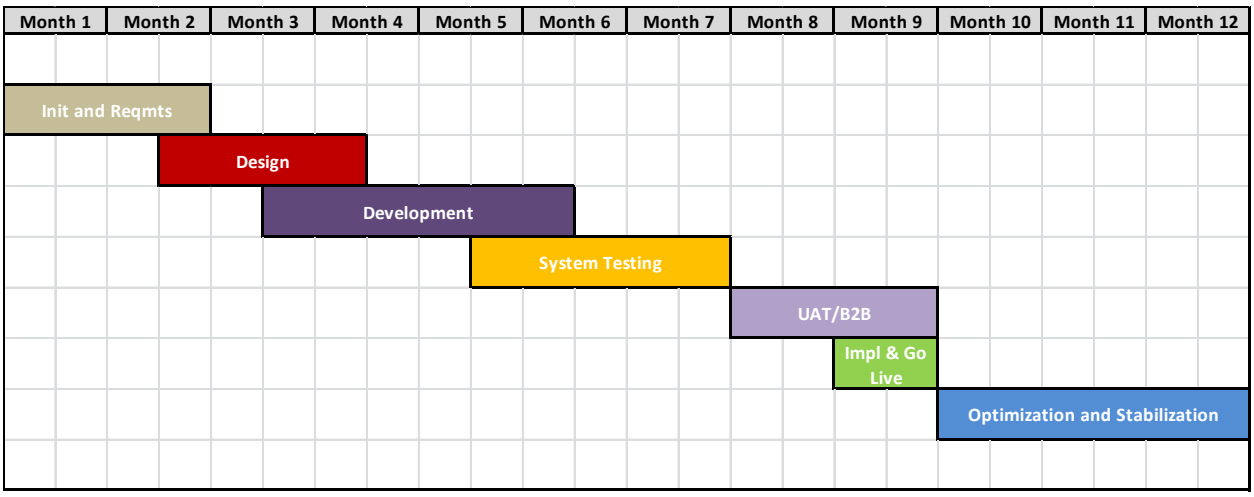

Figure 3. Initial Project Work Plan

CNSI structured this work plan to address the overall relationships of the phases and activities required to complete the project. It effectively uses the professional resources required to accomplish these phases and produce high-quality products in a cost-conscious manner.

The following subsections further describe how CNSI intends to accomplish the goals of the work plan by employing its iVision360 methodology in the proposed approach for the Medicare/Medicaid Integrated Care Project.

2.5.1 iVision360 Iterative Design, Testing, and Documentation Approach

In this section, CNSI provides an outline of its iVision360 SDLC. The SDLC is a full-featured methodology that includes standard design and development processes. CNSI's SDLC processes have been adapted to address the specific needs of the project. This project will be divided into four phases.

CNSI will engage in iterative requirements analysis and design with State at the beginning of each release. The State will be able to review requirements analysis and design documents as soon as a logical set of iterations are completed. CNSI expects initial State signoff upon acceptance of the iteration's document scope. This will help reduce the time required for document review and approval. The documents reviewed at any time will have a smaller scope to help the State perform a thorough review. At the end of all iterations for a release, an overall document will be produced for a final delivery and acceptance to State.

The iterative/agile development and testing portion of the iVision360 methodology is visible in each release of design and coding. During this phase, technical design specifications for impacted functions and user stories are constructed in parallel by developers and the SMEs. As the impacted function's design is completed, the team lead will plan the related development iterations.

Developers will build internal design documentation prior to, and during, the iterations. The beginning of each iteration is reserved for startup activities, including finalizing the internal design documentation. The developer meets with the data modeling team on Day 1 of an iteration to conduct a walkthrough of any required data model changes. The data modeling team makes the required changes to the database schema

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and approves the physical model for coding. Developers also develop iteration test cases (for the tasks that may not be tested with automatic internal iteration test code), which are required to test each story completely.

Coding begins when the internal design and pre-coding work is completed for the iteration. The developer will write internal iteration test scripts in parallel to actual working code and update screens and other system functions to fit the physical mode. The developer will execute the iteration test scripts as they complete sections of code. The codes will be built and tested incrementally. The developer will coordinate daily stand-up meetings and communicate any development issues.

This development approach ensures developers do not work in silos. It also avoids the traditional approach of throwing design documentation "over the fence" to developers to begin coding, only to discover later that major rework is required halfway through the development process.

Developers eventually test the code against internal auto-unit-code and manual internal iteration test scripts. As they reach the end of the iteration, they will run the code against functional scripts developed by the test team. Discrepancies are identified and corrected, and the developer retests to ensure all discrepancies are corrected and closed before the iteration ends. The developer will conduct a peer review of the impacted function's code on the last day of the iteration and then update the code based on the review. When developer iteration testing and software code reviews are successfully completed for the iteration, the code will be promoted to the integration test stream. The code will be released to the test team for system testing when coding and developer iteration testing is completed for all of an impacted functions user stories.

During initial development iterations, the test team will develop system test cases based on requirements specification. During system testing, the test team will execute system test cases to validate system results against requirements.

CNSI plans to engage the test and development teams early on to build the regression test suite for critical functions. This will help to speed up testing and improve overall quality of implementation. During system testing, if required, regression tests will be performed on impacted functions based on changes to a previously tested baseline. The intent of regression testing is to demonstrate that the CHAMPS system continues to meet all approved requirements after changes have been introduced to a previously tested baseline.

As soon as system testing is completed for an activity, CNSI will deliver the code to the UAT environment. CNSI plans to engage the State as early as possible and well before the beginning of the planned UAT phase. This will ensure enough time is allowed for thorough UAT and reduce the risk of schedule slippage for UAT completion.

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Figure 4 presents a graphical overview of the processes that are part of the iVision360 methodology.

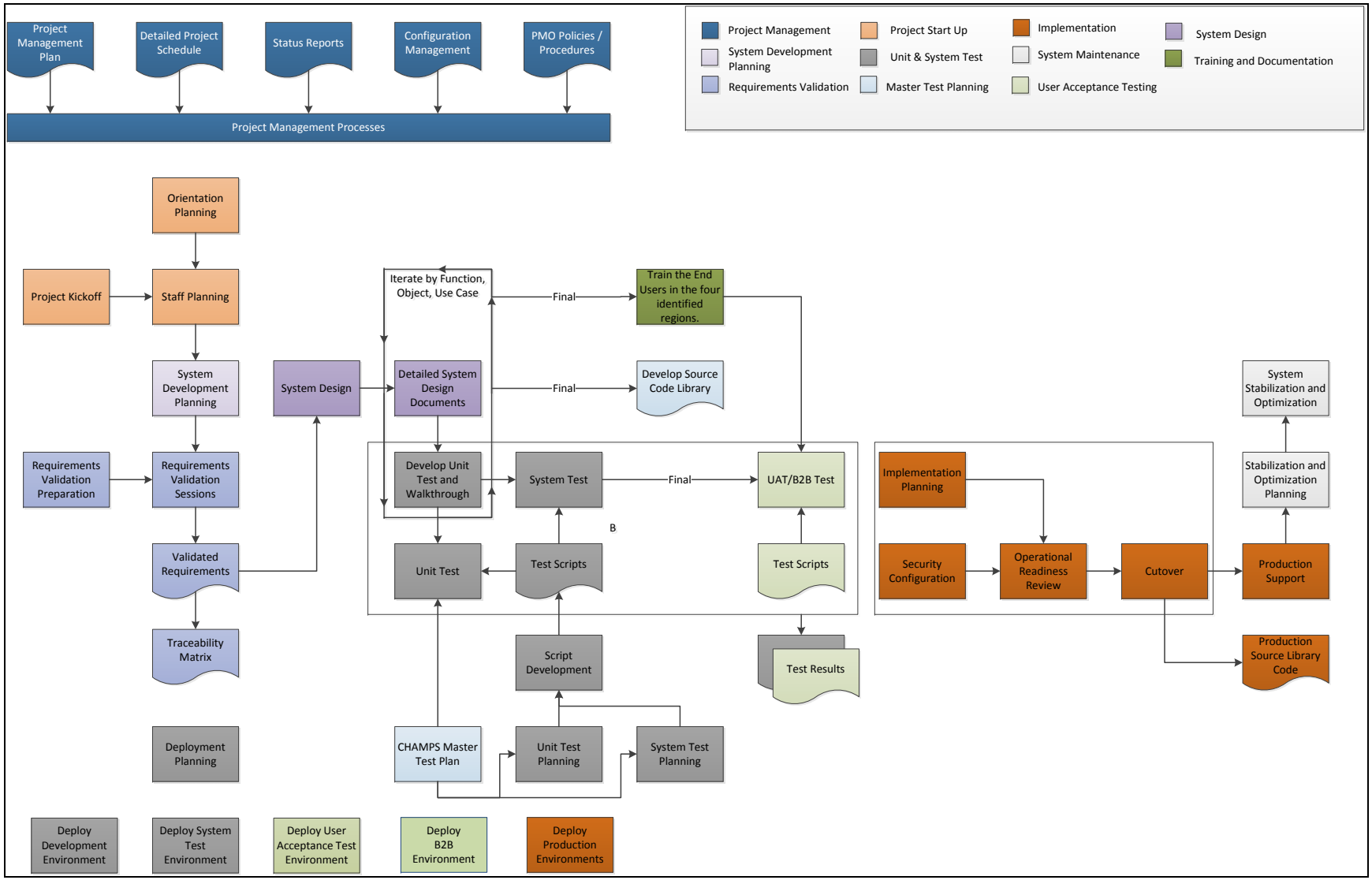

Figure 4. iVision360 Process Diagram

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2.5.2 Phased Approach Work Plan

CNSI proposes an overlapping, four-phase approach to the Medicare/Medicaid Integrated Care Project, consisting of design, development, implementation, stabilization, and optimization activities.

The four phases are:

- **Phase I:** Initiation and Requirements
- **Phase II:** Design, Coding and System Testing
- **Phase III:** UAT and Production Deployment
- **Phase IV:** Stabilization and Optimization

Figure 5 provides a high-level overview of the four phases, their major activities, and expected timelines.

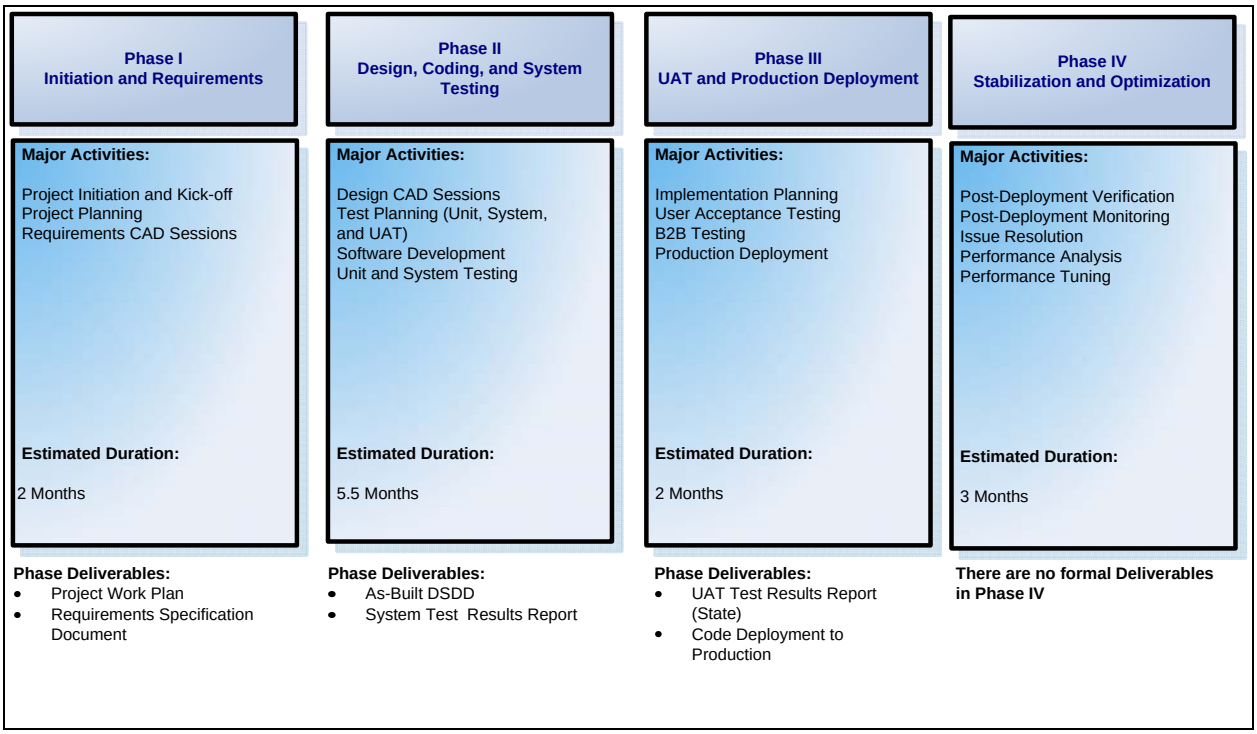

Figure 5. High-Level Project Phases and Activities

With every project, there are critical milestones to be met and work products and deliverables that must be developed and produced in order to provide the inputs necessary to perform the next phase.

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Table 3 elaborates on the key high-level milestones of the proposed implementation plan, along with the expected deliverables.

Table 3. High-Level Activities and Milestones by Phase

Major Activity	Description	Phase
Project Initiation	Establish the project team structure, key stakeholders, and operating guidelines for team activity throughout the course of the project.	Phase I
Project Planning	Establish project schedule	Phase I
Requirements CAD Sessions	Conduct CAD sessions to elicit and validate requirements for the Provider subsystem and technical architecture.	Phase I
Phase I Deliverables • **Project Work Plan (Schedule)** • **Requirements Specification Document**		
Design CAD Sessions	Conduct CAD sessions to document detailed system design changes for CHAMPS architecture.	Phase II
Test Planning	Develop detailed System and E2E test cases and share them with the State UAT team.	Phase II
Software Development	Software changes required to support the detailed functional design including: • Interfaces • Functionality (driven by use cases) • Reports • HIPAA EDI Transactions • Encounter Claims Business Rules	Phase II
Unit and System Testing	Internal CNSI testing of developed functionality at the component, subsystem and system level, including end-to-end regression testing.	Phase II

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Major Activity	Description	Phase
Phase II Deliverables • **As Built DSDD** • **System Test Results Report**		
Implementation Planning	Decision to identify the operational release during which the system changes will be deployed to production.	Phase III
UAT Testing	State testing of all system changes using formal UAT test scripts and testing with trading partners.	Phase III
Production Deployment	CNSI and the State of Michigan deploy the modifications in the CHAMPS production environment.	Phase III
Phase III Deliverables • **UAT Test Results Report (State Deliverable)** • **Code Deployment to Production**		
Post Deployment Verification	Perform a sanity check of all system functions after code deployment to ensure all features function as designed.	Phase IV
Post Deployment Monitoring	Overall monitoring of CHAMPS system health and performance after code deployment.	Phase IV
Issue Resolution	Identification and plan-of-action to resolve issues should they arise after code deployment.	Phase IV
Performance Analysis	Measure and analyze post-deployment performance of the CHAMPS system in comparison to pre-deployment system performance.	Phase IV
Performance Tuning	Adjust system queries, database tables and interfaces as needed to improve system processing and throughput.	Phase IV
There are no formal Deliverables for Phase IV		

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2.5.2.1 Phase 1 – Initiation and Requirements

Activity 1: Project Initiation

During this activity, CNSI will collaborate with the State of Michigan to identify the key business and technical team members who will participate in the Medicare/Medicaid Integrated Care Project. CNSI will conduct the formal project kickoff and deliver orientation for the project effort.

The major milestones associated with this activity are:

- Participating State team members are identified
- Project kickoff is delivered

Activity 2 - Project Planning

During this activity, CNSI will develop the project work breakdown structure (WBS); and the baseline schedule.

The major milestone associated with this activity is delivery of the project work plan.

Activity 3 – Requirements CAD Sessions

The goals of the Medicare/Medicaid Integrated Care Project have been defined at a high level within this statements of work. During this activity, CNSI will host CAD sessions to elicit and validate functional and technical requirements. The CAD sessions will include State and CNSI functional and technical SMEs. CNSI will compare the validated requirements with current CHAMPS functionality and technical architecture to determine the impact of the new requirements across all CHAMPS subsystems, including system aspects, such as:

- Functionality (Use Cases)
- Reports
- Interfaces
- HIPAA EDI Transactions
- Encounter Claims Business Rules

This will result in a final requirements specification document for the Medicare/Medicaid Integrated Care Project which provides a clear, concise, and final definition of each requirement. The finalized requirements will be used during the Phase II design and development effort.

The major milestones associated with this activity are:

- Delivery of the functional requirements specification document
- Approved requirements are loaded into ReqTrace

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2.5.2.2 Phase II – Design, Coding, and System Testing

Activity 1 – Design CAD Sessions

During this activity, CNSI will host CAD sessions to produce detailed design artifacts for the Medicare/Medicaid Integrated Care Project. Sessions will be organized and scheduled per CHAMPS subsystem and technical architecture requirement. The CAD sessions will include State and CNSI functional and technical SMEs. Using the existing CHAMPS Detailed Design Specification Documents (DSDDs) design and the requirements specification document as a starting point, session participants will identify and document required design changes, including system aspects, such as:

- Functionality (Use Cases)
- Reports
- Interfaces
- HIPAA EDI Transactions
- Encounter Claims Business Rules

This will result in final revised design artifacts, such as use cases and data models, which will be the basis for the development of changes to system functions. CNSI will submit the completed design artifacts to the appropriate State decision maker shortly after the completion of a CAD session. The State decision maker will provide formal approval of the design artifacts via signature on an approval form, similar to the existing CHAMPS enhancement approval process. This approval indicates that the design is final and development can begin. CNSI will submit a final, as-built DSDD for State approval upon completion of all design sessions.

The major milestones associated with this activity is the delivery of the as-built DSDD.

Activity 2 - Development

During this activity, CNSI codes the software changes required to support the updated detailed functional and technical design for the Medicare/Medicaid Integrated Care Project. Development is performed through a series of bi-weekly development iterations. As previously described, development includes the coding changes as defined in the as-built DSDD for all CHAMPS subsystems, including system aspects, such as:

- Functionality (Use Cases)
- Reports
- Interfaces
- HIPAA EDI Transactions
- Encounter Claims Business Rules

At the conclusion of each development iteration, the developed code is delivered to the CNSI System Test Team. The major milestone associated with this activity is the completion of all development iterations.

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Activity 3 – Test Planning

During this activity, CNSI collaborates with MDCH to produce detailed test cases and scripts for each phase of testing, including system, and UAT.

Milestones associated with this activity include:

- System Test cases and scripts are created

Activity 4 – Unit and System Testing

During this activity, CNSI tests the developed functionality at the component, subsystem, and system level, including E2E regression testing.

The major milestones associated with this activity include:

- System test results report is delivered
- Code is deployed to UAT
- UAT begins

2.5.2.3 Phase III – UAT and Production Deployment

Activity 1 – Implementation Planning

During this activity, CNSI collaborates with the State, all the data exchange partners, and the State's data warehouse vendor to develop the detailed implementation plan and schedule the production installation of the system changes for the Medicare/Medicaid Integrated Care Project.

The major milestone associated with this activity is the delivery of the implementation plan.

Activity 2 –UAT

During this activity, CNSI provides support to the State staff who will conduct UAT using formal, State-developed test scripts.

The major milestone associated with this activity is the UAT results report published by the State.

Activity 3 – B2B Testing

During this activity, CNSI deploys the final code to the B2B environment and provides support for external B2B testing with the data exchange partners. Testing is conducted via a B2B test plan and test scripts produced by the State.

The major milestone associated with this activity is the B2B test results report published by the State.

Activity 4 – Production Deployment

During this activity, CNSI, the State, all the data exchange partners, and the State's data warehouse vendor collaborate to execute the implementation plan for the Medicare/Medicaid Integrated Care Project. CNSI deploys the final code to the production environment and it is available for use by the State of Michigan site-visit inspection teams.

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The major milestones associated with this activity include:

- Code is deployed to Production
- Stabilization and Optimization Phase (Phase IV) begins

2.5.2.4 Phase IV – Stabilization and Optimization

Activity 1 – Post-Deployment Verification

This task involves verifying the correct installation and operation for all system components. During this activity, CNSI performs a sanity check of all system functions after code deployment to ensure all features function as designed.

Purpose:

- Verify Queues Operation
- Verify Interfaces Operation
- Verify Data Warehouse Extract Operation
- Verify all Production Job Schedules:
- Interface Schedules
- Data Warehouse Extract Schedules
- Queue Schedules
- Pay Cycle Schedules

Activity 2 – Post-Deployment Monitoring

This task involves monitoring the system in the months after the application upgrade has gone live.

Purpose:

- Monitor Key Operational Metrics:
- Claims Payment Rates
- Encounter Acceptance Rates
- Prompt Pay Rates
- Claims Payment Amounts
- Pay Cycle Statistics
- Monitor System Performance Metrics:
- Database Performance
- Application Queues Performance
- Interface Performance

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- Data Warehouse Extract Performance
- Reports Performance

Activity 3 – Issue Resolution

This task involves evaluating issues reported in the 90-day period. Issues will be logged and processed according to the CHAMPS operations incident management, application support, change management, and release management processes. Issues that require system changes will be planned for software releases based on priority and will be assigned to CHAMPS operations releases in accordance with the approved schedule.

Purpose:

- Incident Management:
  - OTRS Ticket Entry
  - OTRS Ticket Triage
  - OTRS Ticket Analysis
  - OTRS Ticket Disposition Determination (Defect, Enhancement, Request for Change (RFC), or Closure)
- Application Support:
  - Iterative Development
  - System Testing
  - RFC Creation and Testing
- Change Management:
  - CQ Entry
  - CQ Analysis
  - CQ Planning
    - Change Log Estimation and Approval
    - Code Promotion
    - RFC Deployment
- Release Management:
  - Release Planning
  - Release Assignment
  - Release Deployment

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Activity 4 – Performance Analysis

This task is the process for analyzing the performance of CHAMPS after the Medicare/Medicaid Integrated Care Project's changes have gone live. Various operational reports and monitoring tools will be used to assess the performance of the system and identify opportunities for improvement.

Purpose:

- Operational Reports:
  - Identify any processes performing below benchmarks.
- Monitoring Tools:
  - Identify any servers with metrics outside normal operating ranges.
  - Identify any slow running queries.
  - Identify heavily used web pages.
  - Identify heavily used transactions.

Activity 5 – Performance Tuning

After all processes, servers, and queries where performance issues are identified, the application support and infrastructure teams will construct a remediation plan. The remediation plan will identify the changes to be made, the timeline for the changes, and the deployment plan either through software release, RFC, or maintenance outage in the case of server changes.

Purpose:

- Application Support:
  - Perform process tuning in development environment.
  - Plan software changes for software releases per the CHAMPS operations release schedule.
  - Tuning changes are released and deployed according to the CHAMPS operations change management and release management processes.
  - If application support teams require infrastructure changes, they will request the changes through the CHAMPS operations RFC process.
- Infrastructure Support:
  - Perform server tuning in lower environments.

Configuration changes will be deployed to Production during monthly planned maintenance outages. Emergency maintenance outages may be requested if performance issues are severe and business impact is high. In that case, the emergency outage will be planned based on CHAMPS service-level agreements in order to minimize business impacts.

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Section 3: General Assumptions

This statement of work is presented based on the following assumptions:

1. All required participants, including MDCH , DTMB, and data exchange partners, including Infocrossing, CMS, and the IPOs and PIHPs are available and will participate in CAD sessions and testing activities where needed.
2. DTMB is responsible for changes required for new data exchange partners to make use of the DEG. DTMB will provide the necessary services in accordance with the project timeline.
3. The Optum Data Warehouse organization is responsible for making changes to the State's data warehouse to accept any new data elements resulting from the Medicare/Medicaid Integrated Care Project.
4. The solution developed for the Medicare/Medicaid Integrated Care Project will meet all applicable State technical and security standards.
5. The solution developed for the Medicare/Medicaid Integrated Care Project will not require any update to the CHAMPS operations or disaster recovery documentation.
6. The solution developed for the Medicare/Medicaid Integrated Care Project will not require new hardware or changes to the State's infrastructure.

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Section 4: Pricing

This section presents CNSI's fixed-price, overall labor cost for completing the Medicare/Medicaid Integrated Care Project. The cost was derived based on the expected effort required, as presented in our initial work plan, composed of the four phases depicted in Figure 56. The total fixed-price labor cost for the Medicare/Medicaid Integrated Care Project is $1,500,000.

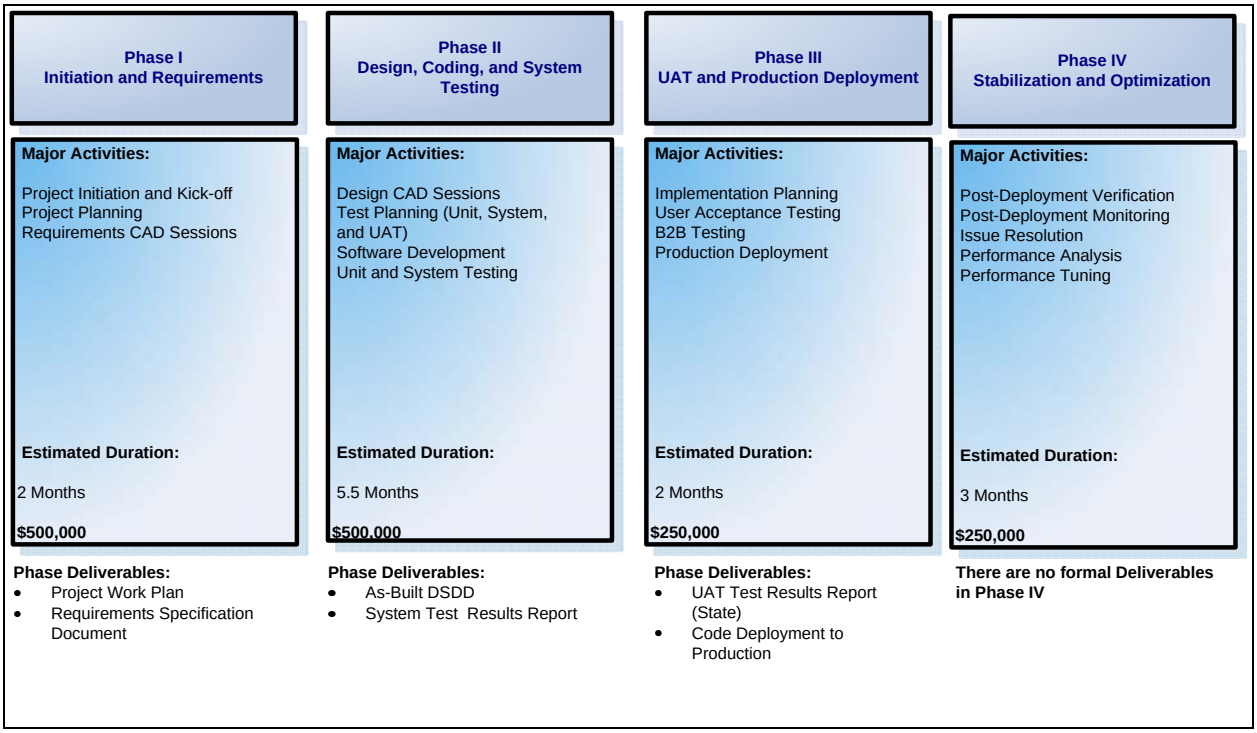

Figure 6. High-Level Project Phases and Cost

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Form No. DTMB-3521 (Rev. 4/2011)
AUTHORITY: Act 431 of 1984
COMPLETION: Required
PENALTY: Contract change will not be executed unless form is filed

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
PROCUREMENT
P.O. BOX 30026, LANSING, MI 48909
OR
530 W. ALLEGAN, LANSING, MI 48933

CHANGE NOTICE NO. 17
to
CONTRACT NO. 071B6200168
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF CONTRACTOR	PRIMARY CONTACT	EMAIL
Client Network Services, Inc. (CNSI) 702 King Farm Boulevard, 2nd Floor Rockville, MD 20850	John H. Cousins III	john.cousins@cns-inc.com
	TELEPHONE	CONTRACTOR #/MAIL CODE
	(301) 634-4600	

STATE CONTACTS:	AGENCY:	NAME:	PHONE:	EMAIL:
CONTRACT COMPLIANCE INSPECTOR:	DTMB	John Spitzley	(517) 335-6612	spitzleyl1@michigan.gov
BUYER:	DTMB	Steve Motz	(517) 241-3215	motzs@michigan.gov

CONTRACT SUMMARY:

DESCRIPTION: **Medicaid Services Administration**

INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL OPTIONS INCLUDED	CURRENT EXPIRATION DATE
March 14, 2006	September 30, 2011	Two One-Year	September 30, 2018
PAYMENT TERMS	F.O.B	SHIPPED	SHIPPED FROM
N/A	N/A	N/A	N/A

ALTERNATE PAYMENT OPTIONS:	AVAILABLE TO MIDEAL PARTICIPANTS
☐ P-card ☐ Direct Voucher (DV) ☐ Other	☐ YES ☒ NO

MINIMUM DELIVERY REQUIREMENTS:
N/A

DESCRIPTION OF CHANGE NOTICE:

OPTION EXERCISED:	EFFECTIVE DATE OF CHANGE:	EXPIRATION DATE:
☒ NO ☐ YES	November 12, 2013	September 30, 2018

Effective immediately this contract is hereby INCREASED to provide funding for various Community Health Administrative Management Payment System (CHAMPS) initiatives that include not to exceed $13,000,000.00. All initiatives funded by this change notice require prior approval by the Michigan Department of Community Health, Medical Services Administration of a project proposal before they are authorized to proceed. Project proposals will be added to the contract through subsequent change notices as they are approved.

All other terms, conditions, pricing and specifications remain unchanged.

Per Administrative Board Approval on November 12, 2013.

VALUE/COST OF CHANGE NOTICE:	$ 12,999,511.00
ESTIMATED AGGREGATE CONTRACT VALUE:	$ 371,392,904.00

Form No. DTMB-3521 (Rev. 4/2012)
AUTHORITY: Act 431 of 1984
COMPLETION: Required
PENALTY: Contract change will not be executed unless form is filed

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
PROCUREMENT
P.O. BOX 30026, LANSING, MI 48909
OR
530 W. ALLEGAN, LANSING, MI 48933

CHANGE NOTICE NO. 16
to
CONTRACT NO. 071B6200168
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF CONTRACTOR:	PRIMARY CONTACT	EMAIL
Client Network Services, Inc. (CNSI) 702 King Farm Boulevard, 2nd Floor Rockville, MD 20850	John H. Cousins III	jee@cns-inc.com
	TELEPHONE	CONTRACTOR #, MAIL CODE
	(301) 634-4600	

STATE CONTACTS	AGENCY	NAME	PHONE	EMAIL
CONTRACT COMPLIANCE INSPECTOR:	DTMB	John Spitzley	(517) 335-6612	spitzleyj1@michigan.gov
BUYER:	DTMB	Steve Motz	(517) 241-3215	motzs@michigan.gov

CONTRACT SUMMARY:			
DESCRIPTION: **Medicaid Services Administration**			
INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL OPTIONS INCLUDED	CURRENT EXPIRATION DATE
March 14, 2006	September 30, 2011	Two One-Year	September 30, 2013
PAYMENT TERMS	F.O.B	SHIPPED	SHIPPED FROM
N/A	N/A	N/A	N/A
ALTERNATE PAYMENT OPTIONS:			AVAILABLE TO MIDEAL PARTICIPANTS
☐ P-card	☐ Direct Voucher (DV)	☐ Other	☐ YES ☒ NO
MINIMUM DELIVERY REQUIREMENTS:			
N/A			

DESCRIPTION OF CHANGE NOTICE:		
OPTION EXERCISED: ☒ NO ☐ YES	EFFECTIVE DATE OF CHANGE: September 13, 2013	EXPIRATION DATE: September 30, 2018

The following Community Health Automated Medicaid Processing System (CHAMPS) Operations and Maintenance proposal to continue through September 2018 the operational support activities for this processing system that are integral to the administration of the Medicaid program has been approved by the Michigan Department of Community Health and is incorporated into this change notice.

All other terms, conditions, pricing and specifications remain unchanged.

VALUE/COST OF CHANGE NOTICE:	$131,238,669.00
ESTIMATED AGGREGATE CONTRACT VALUE:	$358,393,393.00

The CHAMPS application will be extended to support the Illinois' HFS Medicaid program by transforming the application architecture to enable the multi-tenancy cloud-model. At present, the traditional single-tenant CHAMPS application has been utilizing the resources to support one organization – Michigan. The overarching objective is to enable this single application to support both Michigan and Illinois by enabling the system as a service in the cloud.

2.4.2 Approach

The guiding principles of CNSI's proposed approach for leveraging the cloud model are based on the CMS Cloud Computing Standard. This standard is built on the following five basic essential characteristics:

1. On-Demand self service capability
2. Broad network access
3. Resource pooling
4. Rapid elasticity
5. Measured service

There are many approaches to accomplish the multi-tenant cloud model. Because of the inherent nature of Medicaid claims processing, the high volume transactions, and the need for data security compliant with HIPAA, CNSI is proposing a Cloud Health Care Engine (HCE) that will enable the existing platform to transform into a next generation cloud model that implements the three service models of the CMS Cloud Computing Standard and National Institute of Standards and Technology recommendations on Cloud Computing Reference Architecture. These service models include:

1. Software as a Service (SaaS)
2. Platform as a Service (PaaS)
3. Infrastructure as a Service (IaaS)

CNSI's cloud solution will include:

- **SaaS components including:**
  - **A single code base** to support multi-tenant use ensures that the same code is deployed for all tenants. This is further achieved by reengineering the eCAMS platform to externalize the configurable tenant-specific extensions that can be incorporated into the shared codebase.
  - **Database sharing** where computing resources are shared between all the tenants on a server, but each tenant has its own set of data that remains logically isolated from the data that belongs to all other tenants. Data isolation provides the necessary data security and supports handling high volume transactions. The data architecture will be the same for all tenants, but will allow for an extended schema to incorporate tenant specific data needs.
  - **Shared middleware with multiple application instances** where tenants use different instances of the application deployed on different instances of the shared middleware. Tenants share the operating system and servers. Since the middleware instance is different, each tenant is allocated its own set of operating system processes, for example JVM and HEAP size.

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- **PaaS components including core services sharing with a centralized mediation layer** which mediates between requests coming from users belonging to multiple tenants and multiple instances of an application. This centralized layer routes requests from a particular tenant's users to a tenant specific application instance and efficiently enables additional common multi-tenancy features such as access control, metering, monitoring, and auditing among others. An example of this approach includes the use common content management tool IBM FileNet® to store the content from multiple tenants in a centralized document repository by routing the tenant specific requests.
- **IaaS components for infrastructure sharing** to allow multiple tenants to share hardware, software, storage, and network.

The deployment approach is along the community cloud model (MDCH and HFS being the two tenants) in accordance with CMS Cloud Computing Standard and National Institute of Standards and Technology recommendations on Cloud Computing Reference Architecture and applicable State of Michigan Standards.

Figure 4 depicts proposed architecture for CNSI's MaaS cloud solution.

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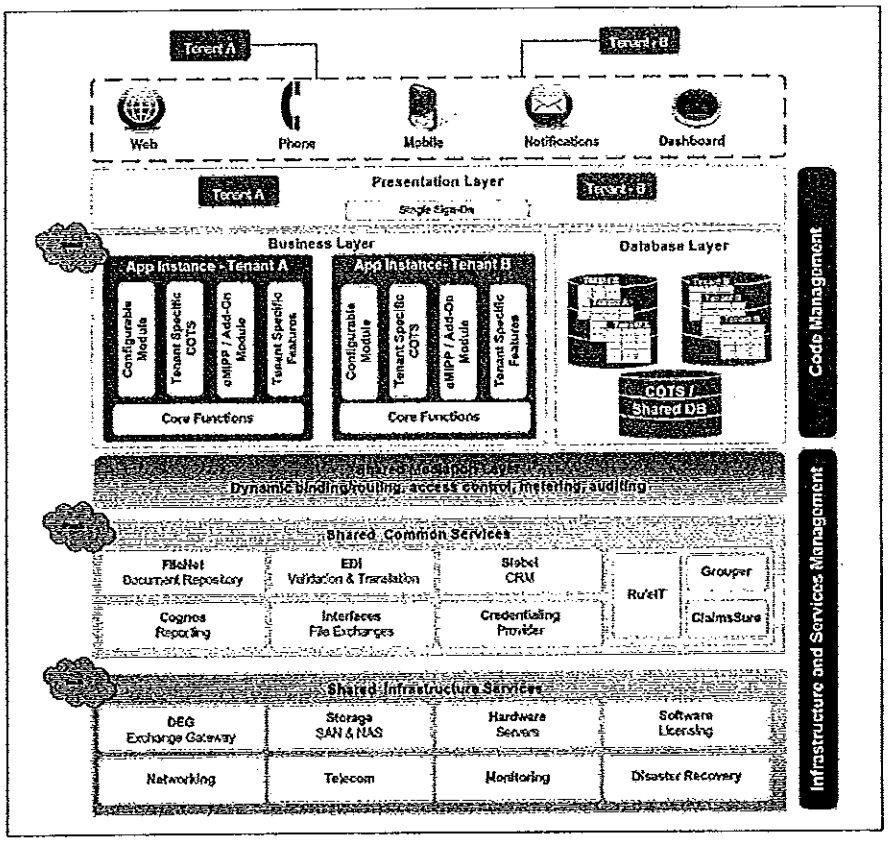

Figure 4. Cloud Health Care Engine

Figure 4 is a conceptual illustration of CNSI's Cloud Health Care Engine. This architecture entails technical implementation for software, platforms and infrastructure as well as logical hierarchies and delivery mechanisms to extend the management of these artifacts as a service.

The business components, databases and the shared middleware that constitute the SaaS layer, provide business features and their delivery mechanisms like the web, phone and other mobile devices.

Shared common platform services, the PaaS layer, promotes and facilitates standardization of common application environments for participating tenants. It is designed for tenants to select server platforms or complete software stacks based on the specific requirements of each tenant.

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Shared infrastructure services, the IaaS layer, includes logical integration points for supplemental value added features as shown and is designed to be scalable to add newer features with time.

Together, these three layers comprise the logical elements of a cloud environment. CNSI's proposed Cloud Health Care Engine implementation approach is in line with the CMS's Cloud Computing Standard (CMS-CISO-2011-vIII-std3.2) and implements recommendations of the National Institute of Standards and Technology (NIST SP 500-292) on Cloud Computing Reference Architecture.

The proposed architecture will undergo DTMB's enterprise architecture (EA) review process to ensure that the solution will also meet all State of Michigan standards.

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2.5 Technical and Phased Approach Work Plan

CNSI has created an initial work plan and timeline for the MaaS SIA. This work plan describes the expected activities we envision for the proposed phases. The timeline is presented in Figure 5 below. A detailed work plan is presented in 2.5.1 Phased Approach Work Plan.

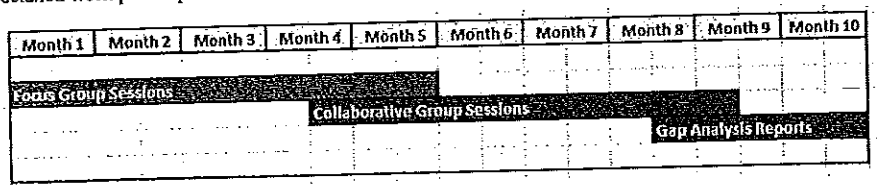

Figure 5. Initial Project Timeline

CNSI structured this work plan to address the overall relationships of the phases, activities, and tasks required to complete the project. It effectively uses the professional resources required to accomplish these phases and produce high-quality products in a cost-conscious manner.

The essence of a successful project is planning, and proper planning requires developing a detailed, task-oriented approach. By reviewing CNSI's work plan, project participants can obtain a clear and thorough understanding of its proposed three-phased approach to the MaaS SIA.

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2.5.1 Phased Approach Work Plan

CNSI proposes a three-phased approach to the MaaS SIA effort. Within each phase, CNSI will operate three parallel tracks including functional gap analysis, technical architecture planning, and infrastructure and operations planning.

The three phases are as follows:

Phase I: Project Initiation and Planning, Information Gathering Focus Group Sessions

Phase II: Collaborative Review and Validation Sessions

Phase III: Assessment Report Preparation

Figure 6 provides a high-level overview of the project phases with major activities and anticipated deliverables:

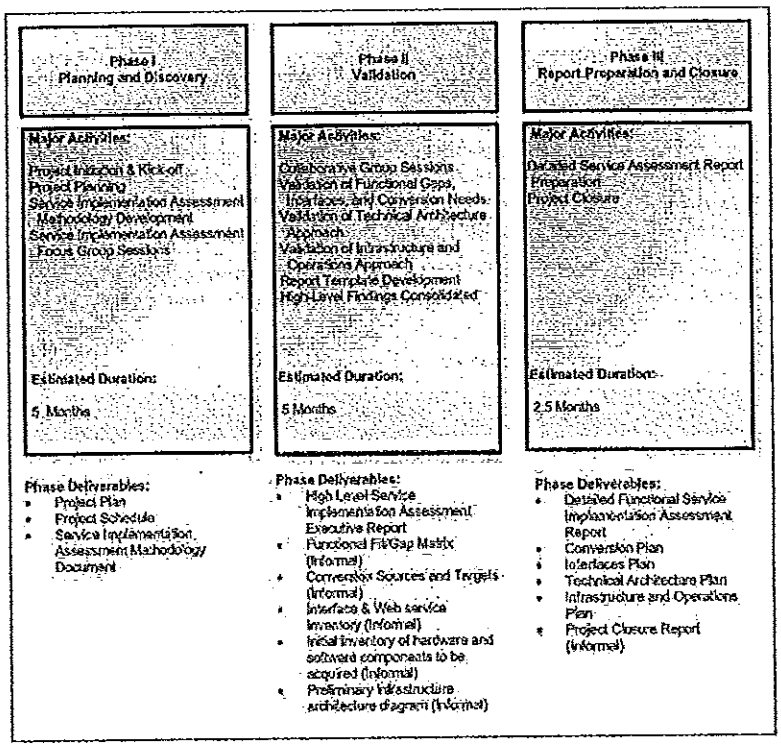

Figure 6. High-Level Project Phases and Activities

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As presented in the initial work plan schedule, because of the tight implementation schedule there will be an overlap between Phase I and Phase II to allow for completion of data gathering sessions while beginning review and validation sessions. CNSI will begin the collaborative review sessions as soon as an independent piece of work has been completed. Overlap between Phase II and Phase III will also occur as expected completion of the final reports will begin when the validation and review work has been completed. The detail of these overlaps will be further elaborated and agreed upon in Phase I as the Project Plan and Schedule are finalized.

The Service Implementation Assessment will consist of three tracks:

- Functional Assessment – This will identify all functional fits and gaps between CHAMPS and the Illinois MMIS operation. Gaps may exist on either side and will be evaluated and remediated during the subsequent MaaS implementation project.
- Technical Architecture Assessment – CNSI, along with DTMB where appropriate, will perform a detailed technical analysis to architect the appropriate MaaS cloud solution that meets the functional needs of Michigan and Illinois while providing a scalable platform for future growth. The recommended technical architecture solution will meet all applicable State of Michigan standards.
- Infrastructure and Operations Assessment – CNSI, in partnership with DTMB, will build an Infrastructure and Operations Plan which identifies the key components of the cloud infrastructure required for the cloud solution and lays out a path for bringing the MaaS cloud solution to an operational state. The recommended infrastructure and operations solution will meet all applicable State of Michigan standards.

In Table 2, we summarize the high-level activities to be completed as a part of this engagement. In this table, we also provide the deliverable to be produced in each phase of the effort. **Formal deliverables** are shown in bold text.

Table 2. High-Level Activities by Phase and Track

Key Activity	Description	Phase and Track
Project Initiation	Establish the project team structure, key stakeholders, project infrastructure, and operating guidelines for team activities throughout the course of the project.	Phase I – All
Assessment Planning	Develop assessment methodology and core analysis artifacts to be used for all three track assessment activities. Develop focus group meeting schedule.	Phase I – All
Functional Assessment Discovery	Identify functional differences between MDCH and HFS through CHAMPS demonstrations and functional use case, data structure walkthroughs, and related fit/gap analysis.	Phase I – Functional

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Key Activity	Description	Phase and Track
Conversion Assessment Discovery	Identify HFS data sources to be converted and identify CHAMPS data model targets and gaps.	Phase I – Functional
Interfaces Assessment Discovery	Identify required interfaces by reviewing interfaces held in common with MDCH and unique HFS inbound and outbound interfaces.	Phase I – Functional
Technical Architecture Assessment Discovery	Develop an architecture approach based on the assessment performed both on functional and infrastructure areas.	Phase I – Technical Architecture
Infrastructure and Operations Assessment Discovery	Review existing infrastructure and operational components and capacities and develop base asset inventories.	Phase I – Infrastructure and Operations
Phase I Deliverables • **Project Management Plan** • **Project Schedule** • **Analysis Methodology and Approach Document** • Focus Group Meeting Notes and Artifacts		
Functional Analysis Validation	Analyze interaction of functional differences discovered, validate differences, and confirm cross-functional interactions.	Phase II – Functional
Conversion Analysis Validation	Validate interaction of HFS data sources to be converted and confirm CHAMPS data model targets and gaps.	Phase II – Functional
Interfaces Analysis Validation	Validate interaction of HFS unique interfaces and functional and cross-functional implications for the cloud model.	Phase II – Functional
Technical Architecture Analysis	Review the approach and create a detailed technical plan that would support the cloud model.	Phase II – Technical Architecture
Infrastructure and Operations Analysis	Develop initial shared infrastructure and operations capacity and growth projections and needs based on Michigan and Illinois expected growth trends.	Phase II – Infrastructure and Operations
MaaS Implementation Executive Report	Consolidate high-level assessment findings across all tracks into a concise executive summary report.	Phase II – All

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Key Activity	Description	Phase and Track
Phase II Deliverables • Informal Deliverables – to be incorporated into Phase III Report Deliverables o Validated Functional Gap Matrix (To be incorporated into Phase III Report Deliverable) o Validated potential sources and targets inventory for Data Conversion (Informal – to be incorporated into Phase III Report Deliverable) o Validated potential interfaces and web services inventory o Initial inventory of hardware and software components to be acquired o Preliminary infrastructure architecture diagram • **High-Level Service Implementation Assessment Executive Report**		
Functional Assessment Report	Prepare validated functional assessment analysis report.	Phase III – Functional
Conversion Plan	Prepare validated initial plan for HFS data conversion.	Phase III – Functional
Interfaces Plan	Prepare validated initial plan for interface changes to address HFS' unique interface needs.	Phase III – Functional
Technical Architecture Plan	Finalize the technical approach plan and provide the details on the transformation of eCAMS into a cloud HCE.	Phase III – Technical Architecture
Infrastructure and Operations Plan	Prepare infrastructure and operations asset inventory and proposed implementation timeline.	Phase III – Infrastructure and Operations
Project Transition and Closure	Formally conclude the SIA effort and conduct turnover to the Remediation and Implementation Team.	Phase III – All
Phase III Deliverables • **Detailed Functional Service Assessment Analysis Report** • **Conversion Plan** • **Interfaces Plan** • **Technical Architecture Plan** • **Infrastructure and Operations Plan** • Project Closure and Transition Report (Informal)		

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2.5.1.1 Phase I – Project Initiation and Planning, Information Gathering Focus Group Sessions

Activity 1 - Project Initiation

During this activity CNSI will develop the Project Management Plan, conduct the formal project kickoff, and deliver team training and orientation. The Project Management Plan outlines the standards and procedures for risk, issue, and action item management, project governance including coordination between this project team and the MDCH PMO, communications plan, deliverable management plan, project work breakdown structure (WBS), and baseline schedule.

Milestones associated with this activity include:

- Project Charter is published.
- Project Management Plan and Schedule are delivered.
- Project Kickoff Meeting is completed.

Activity 2 – Assessment Planning

The tasks for this activity start at the same time as the Project Initiation tasks are being completed. Assessment Planning tasks include developing the data collection tools needed for each track of the Assessment, developing the templates that will be used to document meetings, guide presentations and demos and collect inventory information. Team members complete orientation and training activities and perform dry-runs of system demonstrations and focus group sessions. Assessment techniques are developed and documented. Staff assignments for each track are finalized by CNSI, MDCH, DTMB, and HFS and the focus group meeting schedule is developed. Any security requests for access to physical properties and State systems will be defined and submitted as a part of this activity.

Milestones associated with this activity include:

- Staff directory is completed.
- Assessment templates are loaded to As-One.
- Security requests are authorized and completed.
- Staff training and orientation is completed.
- Initial Focus Group schedule is published.
- Assessment Methodology Document is delivered.

Activity 3 – Functional Assessment Discovery

This is the core data gathering activity for identifying potential differences in system needs between MDCH and HFS. A series of Focus group meetings will be conducted for each major functional area of CHAMPS. Medicaid Information Technology Architecture (MITA) 3.0 business areas and business processes will be used to guide discussions where it is determined that CHAMPS, as currently used by

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MDCH, does not provide system support for an area where HFS currently has MMIS support. The functional focus group sessions will begin with a demonstration of the target area of CHAMPS.

The CHAMPS design specification artifacts will be used as the baseline for documenting differences in operation of the two Medicaid programs. CNSI will collaborate with HFS to identify Illinois documentation to be reviewed as part of the analysis such as policy documentation, claims edits, and benefits plan descriptions. Reports, correspondence business rules, and logical data models as represented through CHAMPS screens will be reviewed as a part of this activity. The assessment team will identify the functional areas of the system where there are functional fits and functional gaps.

The milestone associated with this activity is completion of the Initial Functional Fit/Gap Matrix for review and validation in Phase II.

Activity 4 – Conversion Assessment Discovery

This activity involves reviewing the data conversion landscape for the State of Illinois. The CNSI team will meet with key stakeholders to begin the process of identifying potential sources of legacy data for conversion. The discovery will involve both formal meetings with key business areas along with informal discussions with key business and technical representatives. Conversion Discovery will be coordinated to ensure that it is well aligned with the functionality of the system.

The milestone associated with this activity is the completion of a comprehensive list of potential HFS conversion sources.

Activity 5 – Interfaces Assessment Discovery

This activity involves reviewing the interface landscape for the State of Illinois. The Interfaces Team will meet with key stakeholders to begin the process of identifying the required inbound interfaces, outbound interfaces, and external web services. Discovery will involve both formal meetings with key business areas along with informal discussions with key business and technical representatives. Interfaces Discovery will be coordinated to ensure that it is well aligned with the functionality of the system.

The milestone associated with the activity is the completion of a comprehensive list of HFS interfaces and web services unique to HFS.

Activity 6 – Technical Architecture Assessment Discovery

The assessment team will study the current technology landscape at HFS and put together architecture models that illustrate the existing relationships between data, functions and platform components.

We will collect and/or develop inventory for existing data, function/application, and platform components. This phase will involve conducting architecture interviews, reviewing existing documents, and analyzing gathered data.

The milestones associated with the activity include:

- Current high level system component diagram is prepared.
- Current data architecture definition is documented.
- Current technical architecture is documented.

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- Non-functional requirements are documented.
- Current application deployment and hosting methodology is documented.
- Current technical architecture principles, constraints and assumptions are documented.

Activity 7 – Infrastructure and Operations Assessment Discovery

This activity involves two primary tasks. The first is an in depth analysis of the existing infrastructure and currently planned upgrades. This part of the assessment results in an asset inventory. The second is a sizing analysis of MDCH and HFS volume and capacity growth trends. This task is closely linked to the Technical Architecture Assessment Discovery Activity. This activity is done in collaboration with DTMB.

The milestones associated with this activity include:

- Asset Inventory data capture is completed.
- A capacity and growth sizing analysis is completed.

2.5.1.2 Phase II: Collaborative Review and Validation Sessions

Activity 1 – Functional Analysis Validation

This is the activity where the project team performs detailed analysis of the data gathered in the discovery phase. The analysis will focus on cross-functional system interactions. For example changes in the data captured for provider enrollment may result in the identification of other functional gaps related to member lock-in or provider validation during claim processing. The analysis will identify additional gaps not seen in the review of individual functional areas. Following analysis, the Functional Fit/Gap Matrix will be updated. CNSI will collaborate with MDCH and HFS for functional gap validation through a series of CAM meetings.

The milestone related to this activity is the validation and finalization of the updated Functional Fit/Gap Matrix.

Activity 2 -- Conversion Analysis Validation

This activity involves validation of the sources and targets for conversion and collaboration with MDCH and HFS to determine conversion strategies. During this activity, the CNSI team will also identify the DTMB-approved tools and methodologies to be used for the conversion effort. CNSI will collaborate with MDCH and HFS for conversion validation through a series of CAM meetings.

The milestone for this activity is the completion and validation of the Inventory of Conversion Sources and Targets.

Activity 3 – Interfaces Analysis Validation

This activity involves validation interfaces identified during the discovery phase and collaboration with MDCH and HFS to determine interface strategies. During this activity, the CNSI team will also identify the DTMB-approved tools and methodologies to be used for the interfaces. Interfaces validated will

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include interfaces common to both MDCH and HFS and interfaces that are unique to only one State. CNSI will collaborate with MDCH and HFS for interfaces validation through a series of CAM meetings.

The milestone for this activity is the completion and validation of the Inventory of Interface Sources and Targets.

Activity 4 – Technical Architecture Analysis

As part of architecture validation, CNSI will review all aspects of the architecture including requirements, reliability, availability, performance, security, error recovery, operations, administration, maintenance, and provisioning. The assessment will ensure completeness, understanding design choices, and prioritizing areas of concern.

This phase will also involve study and analysis of tools and third party COTS applications that may be required to support eCAMS HCE Implementation or additional functional features as required by the business functional units at HFS.

The milestones associated with this activity include:

- Analysis of current architecture is completed.
- Assessment of proposed application architecture design is completed.
- Analysis of tenancy approach is documented.
- Scalability approaches and strategies are identified.
- Security authorization and authentication approaches are defined.
- Audit and compliance approaches are defined.
- The provisioning and implementation approach is defined.
- The architecture is validated through the DTMB EA review process.

Activity 5 – Infrastructure and Operations Analysis

This activity involves reviewing the impacts of the information captured through the functional assessment discovery focus groups along with the assets, and capacity and growth trends to identify the components of the infrastructure needed to support the MDCH/HFS alliance. The analysis will be done in collaboration with DTMB. The analysis will also factor in the technical architecture strategies and approaches identified in Phase I and incorporate the unique needs of the cloud eCAMS HCE implementation. The analysis phase will identify the timeline for acquisition and installation of the additional components necessary for the new architecture.

The milestones for this activity include:

- Completion of an initial inventory of hardware and software components to be acquired.
- Completion of the preliminary infrastructure architecture diagram.

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Activity 6 – MaaS SIA Executive Report

This activity will produce a formal report documenting overall outcome of the SIA efforts across functional, technical, architectural, operational, and infrastructure domains.

The milestone associated with this activity is the delivery of the report to MDCH management. MDCH will provide the report to other involved organizations including HFS and DTMB.

2.5.1.3 Phase III: Assessment Report Preparation

Activity 1 – Functional Assessment Report

In this activity the CNSI team will build a comprehensive report of the synergies and differences found and validated in Phases I and II. The report will present detailed findings for each business area assessed and will describe material differences to be resolved during the Remediation and Implementation Project. This will include the validated fit/gap matrix.

The milestone associated with this activity is MDCH approval of the Functional Assessment Report. MDCH will provide the report to other involved organizations including HFS and DTMB.

Activity 2 – Conversion Plan

A comprehensive Conversion Plan will be built based on the results of the discovery and subsequent validation activities. The plan will outline the Data Conversion Strategy and identify the tools and methodologies for the conversion. The plan will include a high level inventory of conversion sources and targets including information about the location and technology composition of the data. The report will also describe the scope, strategies, proposed tools and methodologies for data conversion.

The milestone associated with this activity is MDCH approval of the Conversion Plan. MDCH will provide the report to other involved organizations including HFS and DTMB.

Activity 3 – Interfaces Plan

A comprehensive Interfaces Plan will be built based on the results of the Interfaces Discovery effort. The plan will outline the Interfaces Strategy and identify the tools and methodologies for interfaces. The plan will include a high level inventory of inbound interfaces, outbound interfaces, and external web services.

The milestone associated with this activity is MDCH approval of the Interfaces Planning Report. MDCH will provide the report to other involved organizations including HFS and DTMB.

Activity 4 – Technical Architecture Plan

During this phase the team will summarize current technical architecture findings. We will also compare current technical architecture to target technical architecture requirements and this task relates to building the infrastructure and operations plan for the Michigan/Illinois cloud solution.

The Technical Architecture Plan also defines what components and relationships are needed to address the implementation of the proposed MaaS in the cloud, not how the eventual applications will deliver on these. The how will require much further analysis by the application architects and their respective development teams during later phases of this project.

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This Plan will include design, development and maintenance processes of the proposed technical architecture approach. It will also include a high level plan for design and development of administrative features for regular operational maintenance for the solution that includes areas like Tenancy, Scalability, Provisioning and Implementation of upgrades.

MDCH approval of the plan is the milestone associated with this activity. MDCH will provide the report to other involved organizations including HFS and DTMB.

Activity 5 – Infrastructure and Operations Plan

This task involves building the Infrastructure and Operations Plan for the Michigan/Illinois cloud solution. This will be done in collaboration with DTMB. The Infrastructure and Operations Plan will be based on the findings documented in the Functional Fit/Gap Analysis and the Technical Architecture Plan. The Infrastructure Plan will finalize the target infrastructure required to support the cloud solution along with the currently available infrastructure assets. Based on the requirements and available assets, a plan will be constructed for acquiring and implementing the infrastructure components.

In addition, a high level Operations Strategy will be built based on the Service Implementation model and timeline. The strategy will be used to guide activities in the remediation and Service implementation effort that will follow completion of the Assessment. Key components of the strategy will include a phased implementation approach, and the operations support strategy to be used throughout the phases. Based on these key factors, a high level Transition to Operations Plan will be constructed.

The milestone associated with this activity is MDCH and DTMB approval of the Infrastructure and Operations Plan. MDCH will provide the report to other involved organizations including HFS.

Activity 6 – Project Transition and Closure

This activity concludes the Assessment effort and provides both lessons learned and a high-level timeline for the Remediation and Implementation Project to follow. As a part of this activity, the Assessment Team will prepare a high-level timeline outlining key activities and related timeframes for the Remediation and Implementation Project. The project team will conduct any turnover sessions needed to bring the Remediation and Implementation Project team up to speed on the project. This activity includes a final audit of the project documentation stored on As-One. As part of project closure the CNSI team will conduct lessons learned sessions with the project team and prepare a project closure report.

The milestones associated with this activity include:

- High-level timeline is constructed.
- Lessons learned sessions are documented.
- Turnover sessions are completed.
- Project closure report is delivered.

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Section 3: General Assumptions

1. The MaaS SIA will use the CHAMPS system and supporting architecture and infrastructure as the baseline for undertaking the project. Major initiatives currently underway in Michigan will be included as part of the baseline discussion. This includes implementation of CORE Operating Rules, ICD-10, and the Affordable Care Act-related modified adjusted gross income-based eligibility impacts on CHAMPS.
2. Major initiatives facing both Michigan and Illinois will be included as gaps in the fit/gap analysis. An example of an initiative is the mandated use of Health Plan ID and Other Entity Identifier.
3. CHAMPS is a living system. Throughout the course of this project, CHAMPS is expected to be be enhanced. Major enhancements will be periodically presented in the functional fit/gap analysis sessions for review and categorization as a "fit" or a "gap."
4. The MITA 3.0 business areas and processes will provide an alternate baseline in for functions not fully supported by CHAMPS.
5. CNSI assumes that HFS and MDCH will provide access to, and time commitment from, subject matter experts who understand their programs and systems and are able to articulate how they operate.
6. HFS will provide background information and technical artifacts needed on a timely basis. Due dates are collaboratively agreed upon for any such requests.
7. HFS will provide timely access to business documentation to include the Illinois State Medicaid Plan, edit and pricing rules, Medicaid Policy Manuals and other internal documentation needed to complete the assessment.
8. HFS will provide the Assessment Team with the means to view or access to their legacy system in test mode.
9. HFS agrees to provide access to specific contacts outside the HFS organization that may exchange data with the HFS program via interface or web service.
10. The gap analysis relative to the HFS Data Warehouse will be conducted by Optum and is not included in the scope of CNSI's effort.
11. The gap analysis relative to all COTS products included in the baseline CHAMPS solution are considered a part of CHAMPS and are included in the scope of CNSI's effort. This includes Cognos, Doc1, Oracle Financials, Java Composite Application Processing Suite (JCAPS), Seibel Customer Relationship Management (CRM), EDIFECS, and FileNet integration within CHAMPS.
12. The gap analysis relative to FileNet implementation will be conducted by DTMB and is not included in the scope of CNSI's effort.
13. State of Michigan resources will be available to attend and will present in all meetings conducted with HFS.

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Section 4: Proposed Project Cost

This section of CNSI's proposal presents the fixed price overall labor cost estimates for completing the MaaS SIA project. The cost was derived based on the expected effort required as presented in the initial work plan, composed of the three phases depicted in Figure 6. The total fixed price labor cost for the MaaS Service Implementation Assessment project is $7,611,267. There are no hardware or software licensing costs.

The overall project labor cost is detailed within each phase, along with a presentation of the major activities and planned deliverables as depicted in Figure 7.

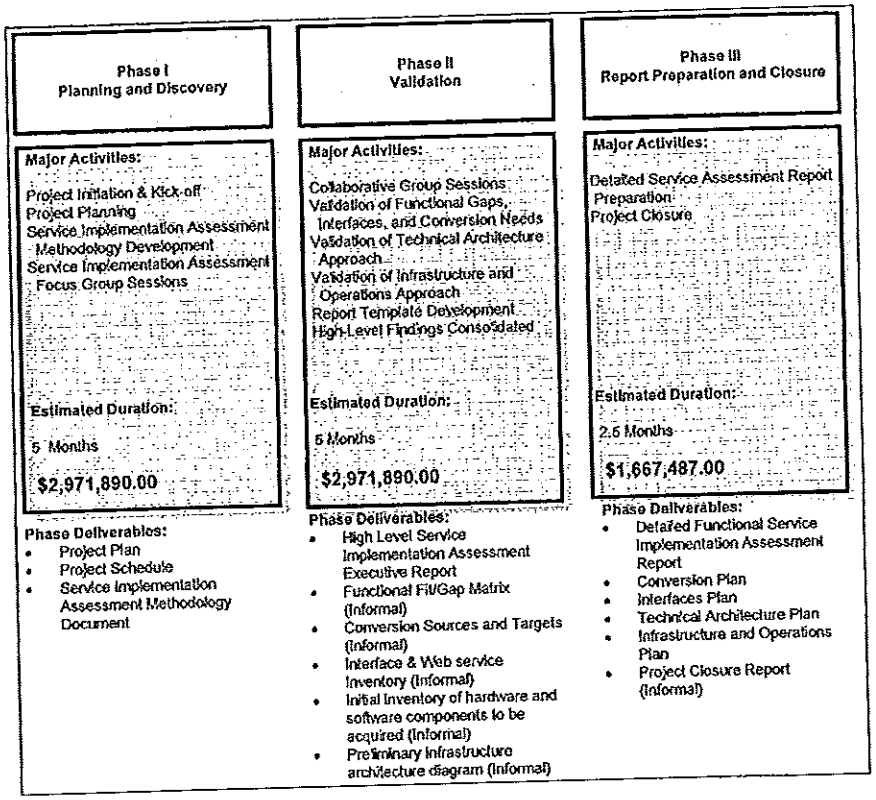

Figure 7. Project Phases with Costs

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Impact of Change to ACA Medicaid Eligibility Requirements on CHAMPS Statement of Work

Prepared For:

State of Michigan
Department of Community Health
Grants and Purchasing Division

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April 8, 2013

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Section 1: Introduction

The Affordable Care Act[1] (ACA), signed into law on March 23, 2010, requires Medicaid Eligibility and Enrollment Initiatives to be established throughout the United States of America. Medicaid Eligibility and Enrollment Initiatives should provide individuals and small businesses access to health insurance coverage and the ability to compare and purchase health insurance regardless of preexisting conditions.

Under the federal mandate, access to health insurance exchanges must be in place by October 1, 2013. Coverage under health insurances selected through Medicaid Eligibility and Enrollment Initiatives is federally mandated to begin by January 1, 2014. The Medicaid Eligibility and Enrollment Initiatives are expected to be operated, or overseen, by state governments.

The State will implement a State modified adjusted gross income (MAGI) eligibility determination system for Medicaid and CHIP eligibility assessment. This new system will complete Medicaid enrollment for applicants who meet the MAGI standards under at least one of the four federally mandated coverage groups (children, pregnant women, parents or caretakers, and adults).

The State intends to establish a new system (hub) to manage the exchange of data between a Medicaid Eligibility and Enrollment Initiative, the State MAGI eligibility determination system, BRIDGES, MAXSTAR, and the Community Health Automated Medicaid Processing System (CHAMPS). The new system will apply the Michigan Department of Community Health's (MDCH's) MAGI standards to Michigan residents who apply for insurance through a Medicaid Eligibility and Enrollment Initiative.

While there will be a direct connection between the State MAGI eligibility determination system hub and CHAMPS, the Medicaid enrollments completed through the State MAGI eligibility determination system will also continue to be sent to BRIDGES. These Medicaid enrollments will continue to flow from BRIDGES to CHAMPS as they do today. The MiChild (CHIP) enrollments completed through the State MAGI eligibility determination system will continue to be sent to MAXSTAR. These MIChild enrollments will continue to flow from MAXSTAR to CHAMPS as they do today.

[1] (Office of the Legislative Council May, 2010)

The objective of this project is to augment CHAMPS to:

1. Interface with the State of Michigan HUB to process eligibility transactions.
2. Manage multiple new data interfaces to and from the new State MAGI eligibility determination system using web services (SOAP).
3. Support both Synchronous and Asynchronous transactions from new State MAGI eligibility determination system.
4. Modify existing inbound and outbound data interfaces as needed to accommodate new ACA coverage group information.
5. Ensure only one enrollment and Medicaid or CHIP identifier is assigned to each enrolled individual.
6. Correctly assign both legacy benefit plan identifiers and the new federally mandated ACA coverage groups on the beneficiary's records.
7. Accurately adjudicate claims, enroll beneficiaries into managed care plans and pay those plans, and provide eligibility verification responses in accordance with the ACA benefit plans as well as the legacy benefit plans assigned to the beneficiary.

The State has also elected to support the Medicaid population defined under ACA[2]. This may result in an increased volume of claims and eligibility transactions, the potential for newly defined benefit programs with associated business rules, different cost sharing/co-pay rates per income range, and more complex interface logic to incorporate the Michigan MAGI qualification as a new source of eligible members.

Figure 1 depicts CNSI's vision to seamlessly integrate the State's MAGI eligibility determination system into the existing flow of Medicaid eligibility and enrollment data.

[2] (Analysts International Corperation 2012)

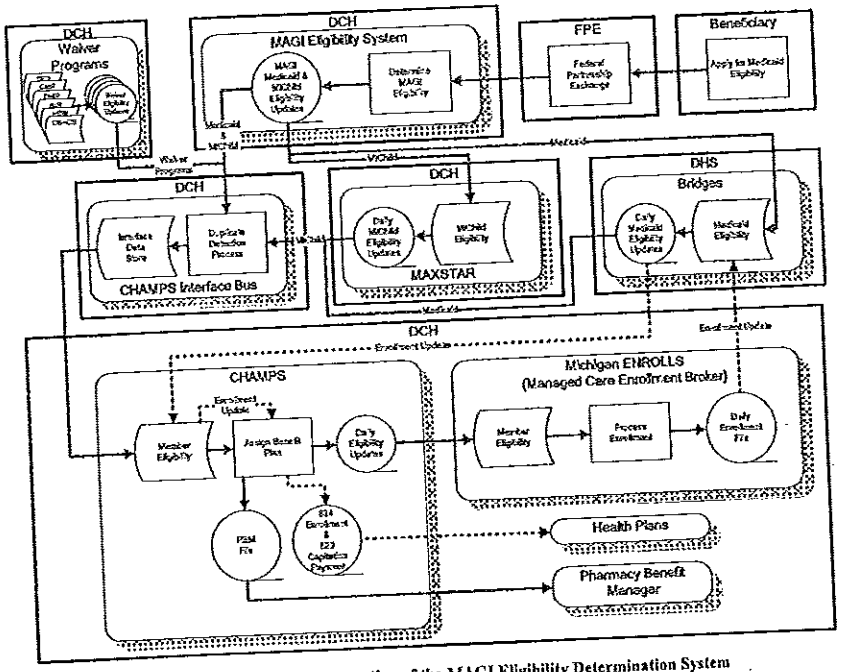

Figure 1. Seamless Integration of the MAGI Eligibility Determination System

1.1 Regulatory and Business Drivers for Change

This project supports MDCH's goal to fully assess and implement changes to all existing Medicaid systems downstream of eligibility determination in order to comply with ACA regulations. Medicaid processing includes, but is not limited to, selecting a Medicaid health plan, enrolling into a health plan, de-enrollment, reactivation, redeterminations, administrative changes to beneficiary information, claims payment, and so on. This also involves collapsing Michigan's more-than-20 existing eligibility groups into just the four groups established under ACA.

The project aligns Michigan's CHAMPS Medicaid management information system (MMIS) to seamlessly support the ACA Medicaid eligibility requirements and:

- Retains existing eligibility, benefit plan, and managed care programs and processes while accommodating new programs and processes required to support ACA.
- Preserves support for waiver eligibility from non-MAGI sources, such as Children Special Health Care Services (CSHCS), Serious Emotional Disturbance Waiver (SED), Children's Home and Community Based Services Waiver Program (CWP), and Habilitation Supports Waiver Program (HSW).

- Improves Medicaid eligibility processing efficiency through tighter coupling of Medicaid eligibility determination, eligibility verification, managed care enrollment, and claim processing.
- Delivers the most cost-effective solution with realistic, proven strategies to ensure implementation within the required timeline.

1.2 CNSI Capabilities

CNSI's approach to conducting this project is based on its extensive knowledge of CHAMPS design, implementation, and operations. As a solution provider, CNSI aligns its clients' business processes and information systems to allow them to access the right information at the right time, empowering them to achieve their desired business results and create enterprise value. Our professionals have extensive industry and technology experience and flexible tools and methodologies to deliver on time and on budget. CNSI completes jobs for its clients by delivering on its promises with speed and purpose in accordance with client specifications and expectations.

For the Impact of Change to ACA Medicaid Eligibility Requirements on CHAMPS on CHAMPS project, we will use our business, technical, and operational knowledge of the MDCH Medicaid program, CHAMPS system capabilities, MDCH's ACA High-Level Business Requirements, and Federal Data Services Hub requirements to identify, design, test, and implement the changes required in CHAMPS to support Michigan's ACA Medicaid eligibility requirements.

CNSI brings an experienced team of Medicaid and CHAMPS subject matter experts (SME), technical and architectural experts, and project management expertise to support this endeavor in the collaborative style CNSI has used in its previous work with MDCH. CNSI's experience working with MDCH has led it to incorporate the following factors in developing this statement of work:

- **CNSI's experience with the Federal Data Services Hub**

  The Federal Data Services Hub enables the communication between health insurance entities, including Federally Funded Exchanges (FFEs), federal agencies, and states. It acts as a single interface point for exchanges to the federal agency partners and provides common functional service support, simplifying the integration required of the exchanges. Common services allow for adherence to federal and industry standards regarding security, data transport, and information safeguards management.

  CNSI holds a position of the Chief Architect on the Federal Data Services Hub Project. As a major partner on the project team, CNSI designed and built the data services hub. CNSI's areas of expertise include solutions architecture, business analysis, large systems development, service-oriented architecture (SOA), and agile development.

- **CNSI's capability to conduct detailed analysis of CHAMPS system requirements**

  Above all else, CHAMPS is a multifunctional MMIS-certified information system that integrates all Medicaid activities into a complete system. As such, the existing CHAMPS (designed, developed, and implemented by CNSI) system is the baseline from which the required changes to support ACA Medicaid eligibility requirements will be defined. CNSI is positioned to take advantage of the extensive knowledge accumulated during the CHAMPS implementation, HIPAA 5010 migration, ICD-10 assessment project, and ICD-10 remediation project to

strategically apply to the Impact of Change to ACA Medicaid Eligibility Requirements on CHAMPS project.

- **CNSI's capability to validate business requirements**

  The prompt validation of MDCH ACA Medicaid eligibility business requirements is key to ensuring the system meets MDCH's ACA Medicaid eligibility processing needs. CNSI's proven approach to requirement validation will ensure the following design, development, testing, and implementation phases succeed. CNSI will conduct collaborative application design (CAD) sessions where each requirement is reviewed and validated among a focus group of MDCH and CNSI business and technical experts. The results of the requirement validation CAD sessions are documented in a formal requirement specification document (RSD) deliverable. This document provides the foundation upon which system design will be created.

- **CNSI's detailed understanding of CHAMPS' integration with other systems within the Medicaid enterprise**

  CNSI is uniquely qualified to remain sensitive to the State's needs while determining the granular business and technical changes needed to maintain seamless integration between CHAMPS, BRIDGES, MAXSTAR, Pharmacy Benefit Management, and multiple waiver program eligibility systems. Because of its multi-year history of collaboration with MDCH and understanding of CHAMPS, CNSI can provide business and technical expertise in support of requirement validation, design, and testing while allowing MDCH SMEs to participate strategically, as required. CNSI understands that MDCH staff members are involved in multiple implementation efforts in addition to their regular production workload. It is critical to the success of the project that MDCH staff members are involved at the right time and in the correct context. Using its knowledge of the system, the CNSI team will be able to minimize MDCH involvement to the sessions most critical to the completion of the project.

- **CNSI's technical leadership to support MDCH's vision**

  Beginning with the implementation of the CHAMPS system, CNSI has continually shown technical leadership. Through collaboration with its equally forward-thinking MDCH leadership, CNSI has jointly achieved milestones that have moved Medicaid business into a modern state. CNSI has continued to drive innovation through the implementation of eMIPP, HealthBeat, and myHealthButton. This proven technical leadership will help deliver the most effective and efficient changes and seamlessly integrate ACA Medicaid eligibility processing into Michigan's Medicaid enterprise.

1.3 Proposed Project Organization

CNSI believes that this statement of work represents the best possible combination of architecture, technology, support, and experience to complete this project. The proposed team members are each the best possible candidates of their respective disciplines. The underlying logic behind identifying each member of this group is that:

- They share the same philosophical approach for undertaking this project – **the customer comes first.**

- They understand the values that each member brings to successfully implementing the project.
- They are committed to understanding and incorporating MDCH's requirements.
- They understand the necessary advanced technologies, business needs, and operational issues.

CNSI's primary objective is the successful implementation and completion of the project. CNSI is confident in its team's ability to achieve that goal. CNSI has assembled a team with the best combination of technology, support, project implementation skills, experience, and expertise who are dedicated to the Impact of Change to ACA Medicaid Eligibility Requirements on CHAMPS project initiative and overall successful implementation of Michigan's ACA Medicaid eligibility processing. Figure 2 depicts CNSI's proven, customer-centric project high level organization chart for the Impact of Change to ACA Medicaid Eligibility Requirements on CHAMPS project.

However, MDCH is the most important member of the project team. An effective project management plan cannot work with participation only by CNSI. The customer must be actively engaged in the process at all levels.

Implementation is only as good as the partnership established and maintained between all involved parties. This includes, first and foremost, MDCH's project team.

The project's success depends on the full and active participation of MDCH's designated staff members from the initial planning activity through the requirements, design, and testing activities that will ultimately lead to the project's completion, acceptance, and implementation.

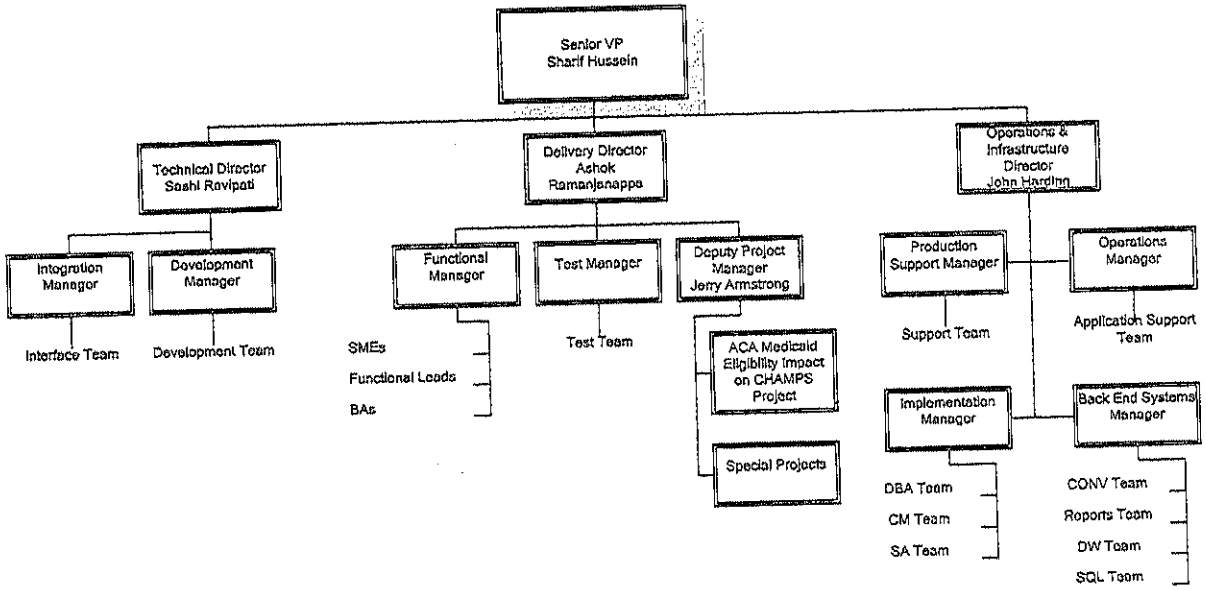

Figure 2. CNSI's Proven Customer-Centric Project Organization

Section 2: Project Management, Methodology, Tools, and Technical Approach

This section presents our project management approach, methodology, tools, technical approach, and phased work plan for accomplishing all tasks required for the Impact of Change to ACA Medicaid Eligibility Requirements on CHAMPS project and overall successful implementation of Michigan's ACA Medicaid processing. This section describes the scope of activities to be addressed throughout the project, from the Requirement Validation phase to the Optimization and Stabilization phase, and the techniques and methodologies the project team will use. The goal of this section is to demonstrate that CNSI understands how to validate requirements, produce detailed design, and develop, test, and implement the functionality needed to seamlessly integrate ACA Medicaid eligibility processing into Michigan's Medicaid enterprise.

Each of the following subsections will contain a high-level description of the four phases we will use throughout the project. For each phase, the major activities and anticipated deliverables are presented. This is followed by a high-level description of the major milestones and approximate timelines.

2.1 Project Management Approach

The project's successful implementation relies on the framework and environment provided by project and quality management. Figure 3 shows CNSI's project and quality management framework and how the related activities interact with other project tasks.

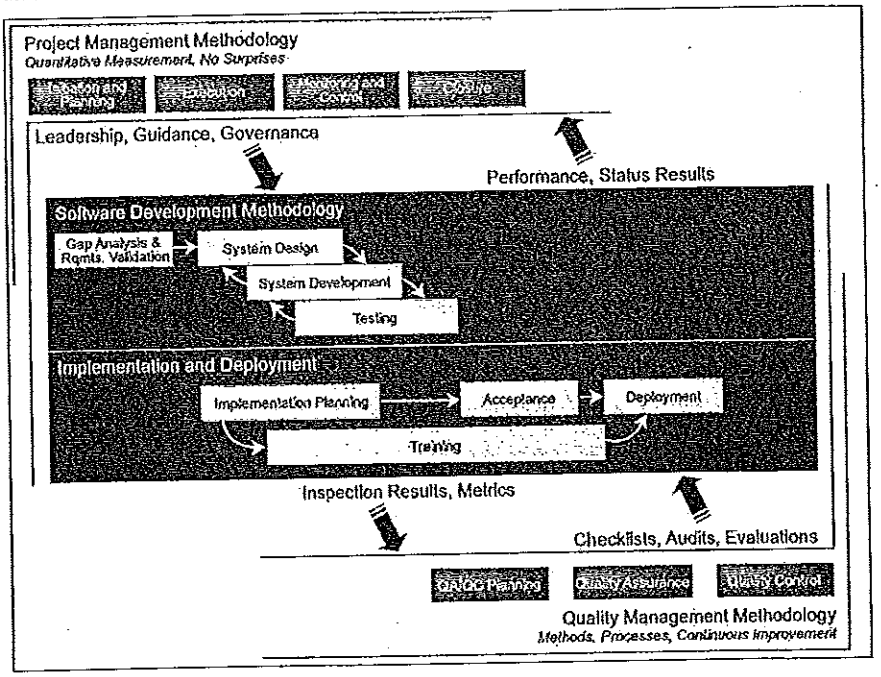

Figure 3. CNSI's Project Management and Quality Management Framework

Although all projects are unique, they share common components and processes. The generally-accepted process groups defined by the Project Management Body of Knowledge (PMBOK), as incorporated into the CNSI project management processes, are:

- **Initiating:** This process group defines the project objectives and grants authority to proceed. For CNSI, the initiating processes are largely incorporated into the proposal development process, during which required partners are identified. The request-for-proposal acts as a project charter and the proposal itself is the preliminary scope statement.
- **Planning:** This process group refines the project objectives and scope and plans the tasks, activities, and steps necessary to meet the project's objectives. The project management plan (PMP) is modified and updated as necessary over the course of the project and is the culmination of the planning processes for scope definition and management, time (scheduling), staffing (human resources), communications, and risk management.

- **Executing:** This process group puts the project's plans into motion and performs the work of the project. For the design phase, this will include the software development methodology included in the iVision360 approach.
- **Monitoring and Controlling:** This process group measures the performance of the project's executing activities and reports these performance results to project managers and stakeholders. Output is used to refine, improve, and/or change project management (including plans and schedules) as necessary to meet the project's objectives.
- **Closing:** This process group documents the formal acceptance and approval of the project's product and brings all aspects of the project to a close.

CNSI is confident it has the correct methodology and project framework in place to successfully complete the Impact of Change to ACA Medicaid Eligibility Requirements on CHAMPS project. CNSI continually improves its project management processes using lessons learned from previous projects and through the proficiency and continuous education of its program and project managers, senior technical and engineering staff, and senior and corporate management. This ensures a number of advantages:

- The project management philosophy is firmly entrenched within the entire project team, including CNSI and MDCH.
- Project management is a core competency.
- The project staff is focused on successfully implementing the project.
- Project management, quality management, and cost management processes are fully integrated and their infrastructure is in place.
- Effective project status reporting is established throughout the project life cycle.
- Project and software development methodologies are well documented.
- Project staff is provided comprehensive training.
- Project information is communicated continuously to the right people at the right time.
- The project is continuously monitored against performance.
- Excellence in quality and delivery are built in.
- Deliverable review and approval processes are in place.

Through developing the PMP, CNSI expects to collaborate with the MDCH project management team to further customize CNSI's project management system to successfully complete the project.

The overall engagement will be managed by DCH project manager, while the Impact of Change to ACA Medicaid Eligibility Requirements on CHAMPS project will be managed by CNSI's project manager. CNSI Project manager will provide weekly updates on the status of the Impact of Change to ACA Medicaid Eligibility Requirements on CHAMPS project to State project manager.

An integrated project management board will be set up that consists of State and CNSI members. The board will meet on a weekly basis to discuss the status of the project, to resolve any issues or

discrepancies and identify /resolve / mitigate risks. The board will also control the change management related to the project.

2.2 Project Methodology

CNSI's holistic approach for this project will use its proven methodology as the overarching framework and bring an experienced team of program managers, SMEs, technical experts, and change management resources to support this effort.

The project methodology is a framework that facilitates the integration of CNSI's extensive system experience, which is rooted in application implementations, methodologies, and delivery tools. This framework allows CNSI to deliver services to its clients consistently across its footprint and to gather continued enhancements for its supporting methodology, thereby providing continued value for its clients.

CNSI's methodology is an integrated methodology that combines its best delivery assets. The methodology:

- Provides a scalable, integrated collection of assets.
- Provides a consistent level of detail and presentation.
- Supports tailoring to scale, which provides a unique, but consistent, cost-effective delivery approach for MDCH.

CNSI's methodology provides a consistent and flexible approach to address the following:

- The **Manage** work approach provides a single, consistent approach to managing CNSI's engagements. Within the Manage approach is the Quality Management sub-work activity, which verifies that deliverables and processes meet requirements. The Quality Management activity also supports continuous process improvement for MDCH and the methodology.
- The **Life Cycle** work approach addresses unique expertise while providing overall integration across the full Impact of Change to ACA Medicaid Eligibility Requirements on CHAMPS project life cycle.
- The flexibility to be adapted to meet MDCH's unique requirements, while confirming that our experienced staff members follow our established practices.
- The ability to integrate additional application- and technology-specific requirements to further enhance the quality and speed of our delivery.

While no two engagements are the same, MDCH expects CNSI to deliver in a consistent, systematic approach. The proposed project methodology incorporates CNSI's staff's delivery experience with CHAMPS into a single, integrated approach. It provides the structure for integrating our capabilities while allowing individual project teams the flexibility to use client-mandated tools.

CNSI's methodology abstracts the specifics of technologies and techniques. The right assembly of technologies, techniques, and deliverable processes requires the specific experience and expertise found with CNSI's staff.

Time invested in an effective plan with clear objectives has repeatedly shown to be a key to effective execution. CNSI's methodology provides a structured approach to the planning process. While this may

appear to require more initial effort than desirable, experience has shown that following these processes reduces the likelihood of planning mistakes and results in lower risk and more cost-effective rapid delivery.

Moreover, CNSI's methodology incorporates a consistent approach for identifying, tracking, and measuring the value derived from ongoing projects. CNSI's experience developing and delivering various client projects are incorporated into the project strategy and planning activities.

In undertaking this project, CNSI will employ its iVision360 system development life cycle (SDLC) methodology tailored for the Impact of Change to ACA Medicaid Eligibility Requirements on CHAMPS project initiative.

CNSI's iVision360 is a unique blend of the waterfall methodology, iterative agile development, and rapid prototyping. This offers the following benefits:

- **User is at the Center:** CNSI's primary motivation in developing iVision360 is to put the user at the center of the entire life cycle. Software projects succeed or fail largely from the developer's understanding of the customer's business rules, requirements, and needs. The more insight the developing organization has, the greater the quality and likelihood of success for the project. Successful projects have high interaction with end users and place the user at the center of the development life cycle. Every phase and task of iVision360 focuses on interaction and collaboration with the user community. CNSI does this by implementing agile techniques and building working software in an iterative fashion with user validation at periodic intervals.
- **Common Goals:** Users actively participate in design sessions with an integrated team of developers, analysts, and testers. This method avoids the pitfalls of waterfall development and test methods which leave, for example, test case refinement and execution until the completion of development. It also provides the team with a sense of purpose, a goal, and the drive to accomplish the end objective: software that meets the requirements.
- **Early and Often Testing:** iVision360 provides an opportunity to test early and often so formal system test phases and subsequent test phases are more likely to meet schedule expectations with a lower error-discovery rate.
- **Prototyping to Reduce Complexity:** Prototypes are developed when necessary (and if applicable to the project) to model and present complex interactions. Prototyping is not applicable for this project.

The collaborative, and somewhat "free-form," nature of iterative, agile development is balanced with the structure and baseline management features of the waterfall methodology. By introducing the baseline management features of waterfall, CNSI minimizes the risk of scope creep that is sometimes associated with iterative development. Moreover, implementing and integrating with our project management processes will incorporate change, issue, and risk management processes. Table 1 describes the key benefits of each of the industry-standard methodologies that are blended into iVision360.

Table 1. SDLC Methodology Comparison

Methodology	Key Benefits Blended into iVision360
Waterfall	Baseline approval of requirements Structured documents and customer approvals Formalized testing

Methodology	Key Benefits Blended into iVision360
Iterative/Agile	Frequent customer interaction Decomposing work into small meaningful features that are presented in working software Frequent course corrections Sense of real progress Early and frequent testing
Rapid Prototyping	Reduce risk by visualizing complex features "A picture is worth 1,000 words" Immediate sense of progress
Extreme Programming	Teams formed between developing organization and customer Sense of common vision and goal

The iVision360 methodology uses a phased process to organize tasks associated with building and testing software. These phases represent major bodies of work that must be accomplished to move systematically through the life cycle. Table 2 describes the phases of iVision360.

Table 2. iVision360 Phases and Artifacts

Supporting Task	Major Activities	Artifacts
Configuration Management	• Support change management • Perform configuration identification, control, and status reporting • Provide baseline management	• Configuration Management Plan • Configuration Status Reports • Release Notes
Data Model Support	• Develop scripts to maintain standard data in the system's databases • Develop scripts to maintain the data structure for the system's databases	• Data Modification Scripts • Schema Modification Scripts • Logical and Physical Data Model • Data Dictionary

Supporting Task	Major Activities	Artifacts
System and Data Administration	• Maintain servers and configuration • Establish and maintain connectivity between sites • Manage database configurations • Lead performance improvement initiatives	• Performance Testing Plan • Performance Test Results • System Configuration Information • Database Configuration Information

2.3 Project Management Tools

Tools, properly applied within the methodology framework, will reduce the time to project completion by providing predefined processes, templates, documents and training materials. More importantly, the use of appropriate tools will help reduce risk and increase the benefits from the project.

It is also important to note, that we will continue to use the tools already proven effective during the previous undertaking to reduce time to completion and mitigate risk.

Table 3 depicts the tools CNSI will utilize on the project.

Table 3. CNSI Project Tools

Tool	Purpose
ReqTrace	CNSI's requirements database, used during requirements validation sessions and design and test phases
Microsoft Visio	Develop use case diagrams, technical architecture diagrams, and support process flows
Microsoft Office	Develop project deliverables as well as presentations and spreadsheet artifacts needed to support deliverables
As-One	Repository for deliverables, presentations, and artifacts

While Microsoft Visio and Microsoft Office are industry-standard tools, the following subsections provide additional information about ReqTrace and As-One.

2.3.1 ReqTrace

CNSI will use its ReqTrace database application for requirements analysis and validation.

During project initiation and requirements planning, ReqTrace will be loaded with the functional, technical, and support requirements. ReqTrace is CNSI's requirements management tool of choice that is being used in our MMIS projects. ReqTrace has the capability for storing several attributes for requirements, revisions, notes, and comments.

CNSI began using ReqTrace with the CHAMPS project. The requirements validation processes used on the project, as well as the use of ReqTrace, resulted in the requirements validation phase being completed ahead of schedule.

2.3.2 As-One

Believing that continuous collaboration and information-sharing are key factors to successful project execution, CNSI will use its web-based enterprise program management solution, As-One. As shown in Figure 4, As-One is designed to support team collaboration, knowledge management, and process improvement. As-One will provide a convenient repository for all program data, and will give MDCH oversight personnel direct visibility into project performance.

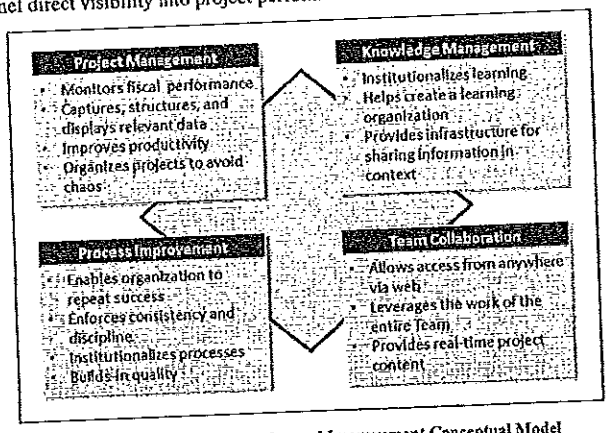

Figure 4. As-One Collaboration and Improvement Conceptual Model

As-One is an "out-of-the-box" solution that supports CNSI's program management philosophy: experienced people, managed processes, and enabling technology.

As-One has proven to be a successful project knowledge base for CHAMPS which allows CNSI and DCH users to share real-time data specific to authorized users. As-One will continue to be used as the project knowledge base for the Impact of Change to ACA Medicaid Eligibility Requirements on CHAMPS project.

2.4 Technical and Phased Approach Work Plan

CNSI has created an initial work plan and timeline for the Impact of Change to ACA Medicaid Eligibility Requirements on CHAMPS project. This work plan describes the expected tasks for the proposed phases and major activities CNSI proposes to use for this project. This information is presented in Figure 5. A detailed description of the activities within each phase is presented in *Section 2.4.1 iVision360 Iterative Development, Testing, and Documentation Approach.*

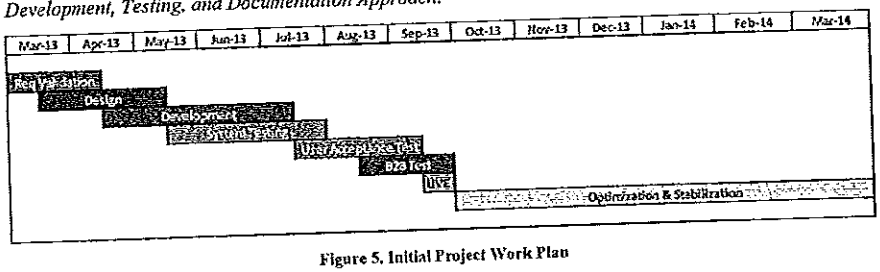

Figure 5. Initial Project Work Plan

CNSI structures work plans to address the overall relationships of the numerous phases, activities, and tasks required to complete the project. It effectively uses the professional resources required to accomplish these phases and produce high-quality products in a cost-conscious manner.

The essence of a successful project is planning, and proper planning requires developing a detailed, task-oriented approach. By reviewing CNSI's work plan, MDCH can obtain a clear and thorough understanding of our proposed technical approach to the project. CNSI proposes a four-phased approach, as described in *Section 2.4.2 Phased Approach Work Plan*, to the implementation and rollout of the Impact of Change to ACA Medicaid Eligibility Requirements on CHAMPS project.

The following subsections further describe how CNSI will employ its iVision360 methodology in the proposed iterative development, testing, and documentation approach for the Impact of Change to ACA Medicaid Eligibility Requirements on CHAMPS project.

2.4.1 iVision360 Iterative Development, Testing, and Documentation Approach

CNSI will engage in iterative analysis and design with MDCH early on in Phase I in order to begin early iterative development in Phase II. CNSI plans to produce deliverables during each phase.

During Phase I, CNSI will provide an opportunity for MDCH to review requirements analysis and design documents as soon as a set of logical iterations are completed for a use case. CNSI will expect initial signoff from MDCH upon acceptance of iteration document scope. This will help cut down the time required for overall document review and approval. The documents to be reviewed comprise specific use cases for each subsystem. At the end of all iterations for a phase, an overall As-Built Detailed System Design Document (DSDD) will also be produced for final delivery and acceptance to State.

The iterative/agile development and testing portion of the iVision360 methodology is visible in Phase II for the Impact of Change to ACA Medicaid Eligibility Requirements on CHAMPS project. During this phase, technical design specifications for impacted functions and user stories are constructed in parallel by the developers and SMEs. As the impacted function's design is being completed, the team lead plans the iterations required to complete development.

Development work is planned based on a two-week iteration schedule. Developers build internal design documentation prior to, and during, the two-week iterations. The first day of each iteration is reserved for startup activities, including finalizing the iteration's internal design documentation. The developer meets with the Data Modeling Team on the first day of the iteration and conducts a walkthrough of any required data model changes. The Data Modeling Team makes the required changes to the database schema and approves the physical model for coding. Developers also develop iteration test cases for tasks that may not be tested with automatic internal iteration test codes, which are required to test each story completely.

Coding begins once the internal design and pre-coding work is completed for the iteration. The developer writes internal iteration test scripts in parallel to actual working code and updates screens and other system functions to fit the physical mode. The developer executes the iteration test scripts as they complete sections of code. The developer builds code, tests incrementally, and coordinates and communicates with the team through daily stand-up meetings regarding any issues holding up the development work.

This entire approach ensures that the developers are not working in silos. It avoids the traditional approach of throwing design documentation "over the fence" to developers to begin coding, only to later discover that major rework is required halfway through the development process.

Developers then test the code against the internal auto-unit-code and manual internal iteration test scripts. As they reach the end of the iteration, they run the code against the functional scripts developed by the Test Team. Discrepancies are identified and corrected. The developer retests to ensure all discrepancies are corrected and closed before the iteration ends. The developer then conducts a peer review of the code of the impacted function on the last day of the iteration. The developer then updates the code based on the review. When developer iteration testing and software code reviews are successfully completed for the iteration, the code is then promoted to the integration test stream. The code is released to the Test Team for system testing when the coding and developer iteration testing is completed for all user stories for the impacted function.

During initial development iterations, the Test Team develops system test cases based on requirements specifications. During system testing, the Test Team executes system test cases to validate system results against requirements.

For the Impact of Change to ACA Medicaid Eligibility Requirements on CHAMPS project, CNSI plans to engage the test and development teams early on to build the regression test suite for critical functions. This will speed up testing and improve the overall quality of implementation. CNSI understands the importance and sensitivity of Impact of Change to ACA Medicaid Eligibility Requirements on CHAMPS project on an environment that is already in production. During system testing, regression tests will be performed on impacted functions based on changes to a previously tested baseline. The intent of regression testing is to demonstrate that CHAMPS continues to meet all approved requirements after changes have been introduced to a previously tested baseline.

As soon as regression testing is completed for a function, CNSI will deliver the code to the User Acceptance Test (UAT) environment. As we did in the 5010 project, we plan to engage MDCH as early as possible and well before the beginning of the planned UAT phase. This ensures that enough time is allowed for thorough acceptance testing, which will also reduce the risk of schedule slippage for UAT completion. CNSI will deploy system- and regression-tested functions to the UAT environment as they are completed during Phase II.

As presented in our initial work plan and timeline (Figure 5), UAT will have a two month duration. Any delay in the completion of UAT will significantly impact the ACA Medicaid eligibility requirement compliance date. CNSI will work with MDCH during Phase II to plan an early start to Business-to-business (B2B) testing. B2B testing can be started half way through UAT. CNSI will plan to develop critical functions first to allow more time for UAT testing.

Figure 6 presents a graphical overview of the processes that are part of the iVision 360 methodology.

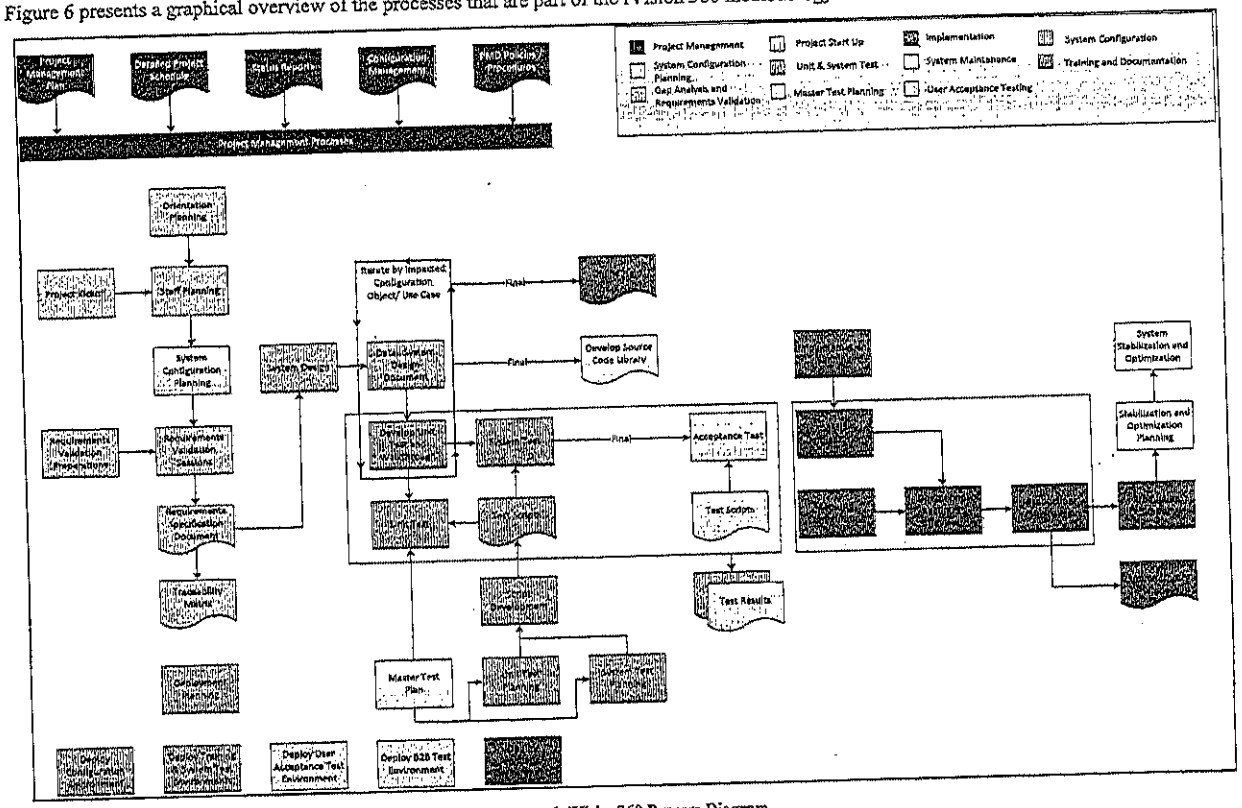

Figure 6. iVision360 Process Diagram

2.4.2 Phased Approach Work Plan

CNSI proposes a four-phased approach to the implementation and roll out of the Impact of Change to ACA Medicaid Eligibility Requirements on CHAMPS project. CNSI chose this approach and established assumptions in its work plan since the State's MAGI eligibility determination system is currently undetermined and no detailed requirements have been documented.

The four phases are as follows:

- **Phase I:** Requirements Validation and Design
- **Phase II:** Coding and System Testing
- **Phase III:** UAT, B2B Testing, and Production Deployment
- **Phase IV:** Stabilization and Optimization

Figure 7 provides a high-level overview of the project phases with major activities and anticipated deliverables:

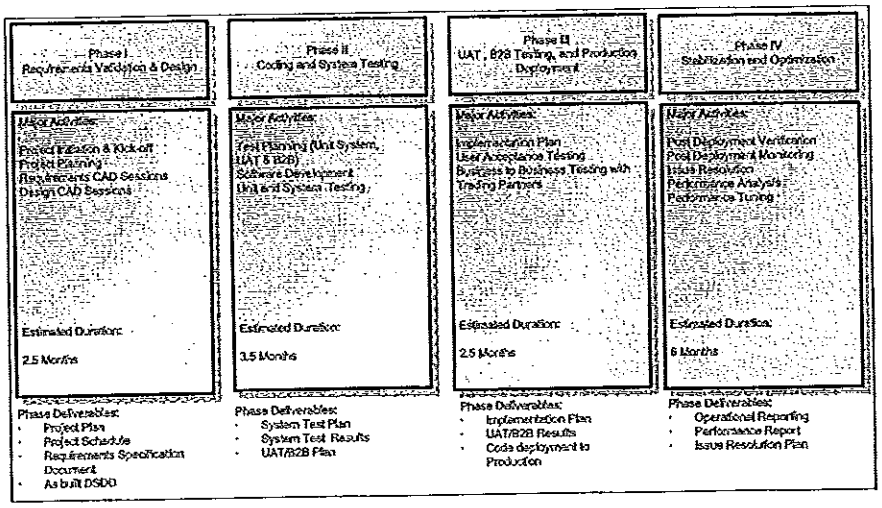

Figure 7. High-Level Project Phases and Activities

The deliverables for each phase are presented in Table 4, along a brief description of each and an anticipated month of delivery for each deliverable:

Table 4. Deliverable Summary

Phase	Deliverable	Timeline
Phase I – Requirements Validation and Design	Project Management Plan	April 2013
	Project Work Plan	April 2013
	Requirements Specification Document	April 2013
	As-Built Detailed System Design Documents	May 2013
Phase II – Coding and System Testing Deliverables	System Test Plan	May 2013
	System Test Results Report	August 2013
	UAT/B2B Test Plan (State)	July 2013
Phase III – UAT, B2B Testing, and Production Deployment	Implementation Plan	August 2013
	UAT/B2B Test Results (State)	October 2013
	Code Deployment to Production	September 2013
Phase IV – Stabilization and Optimization	Operational Reporting	Starting October 2013
	Performance Report	Starting October 2013
	Issue Resolution Plan	Starting October 2013

As presented in the initial work plan schedule (Figure 5), the tight implementation schedule will lead to an overlap between Phase I and Phase II. This will allow development to begin early. There will also be an overlap between Phase II and Phase III, allowing B2B testing to start early. A high-level overview of the overlap was presented in the previous paragraphs. The detail of these overlaps will be further elaborated and agreed upon in Phase I as the project plan and schedule are finalized.

The Impact of Change to ACA Medicaid Eligibility Requirements on CHAMPS project consists of all the activities required to validate, design, develop, test, implement and monitor changes in the following subsystems/processes in order to seamlessly integrate ACA Medicaid eligibility processing into CHAMPS and support the same seamless ACA Medicaid eligibility processing integration into Michigan's overall Medicaid enterprise. Subsystems/processes to be addressed include:

- Interfaces
- Eligibility and Benefit Plans
- Managed Care
- Claims
- HIPAA EDI transactions including 834 and 271
- Data Warehouse
- Reports and Correspondence

In Table 5, we summarize the high-level activities to be completed as a part of this engagement. In this table, we also provide the deliverable to be produced in each phase of the effort. **Formal deliverables** are shown in **bold text**.

Table 5. High-Level Activities by Phase

Key Activity	Description	Phase
Project Initiation and Kick-off	Establish the project team structure, key stakeholders, and operating guidelines for team activity throughout the course of the project.	Phase 1
Project Planning	Establish project plans and schedules.	Phase 1
Requirements CAD Sessions	Conduct CAD sessions to validate requirements across all subsystems.	Phase 1
Design CAD Sessions	Conduct CAD sessions to document detailed system design changes for all subsystems.	Phase 1
Phase 1 Deliverables **Project Management Plan** **Project Work Plan (Schedule)** **Requirements Specification Document** **As-Built DSDD**		
Development	Software changes required to support the detailed functional design including: Screens Interfaces Functionality (driven by use cases) Data Models Reports Letters	Phase 2

CNSI
Impact of Change to ACA Medicaid Eligibility Requirements on CHAMPS Statement of Work

Key Activity	Description	Phase
Test Planning	Produce detailed test plans and schedules for each phase of testing: Unit, System, UAT and B2B.	Phase 2
Unit/System Testing	Internal CNSI testing of developed functionality at the component, subsystem and system level, including end-to-end regression testing.	Phase 2
Phase 2 Deliverables System Test Plan System Test Results UAT/B2B Test Plan (State)		
Implementation Plan	Detailed plan and schedule to coordinate production installation of the system changes.	Phase 3
User Acceptance Testing	MDCH testing of all system changes using formal UAT test scripts.	Phase 3
B2B Testing	MDCH testing with trading partners.	Phase 3
Phase 3 Deliverables Implementation Plan UAT/B2B Test Results (State) Code Deployment to Production		
Post Deployment Verification	Perform a sanity check of all system functions after code deployment to ensure all features function as designed.	Phase 4
Post Deployment Monitoring	Overall monitoring of CHAMPS system health and performance after code deployment.	Phase 4
Issue Resolution	Identification and plan-of-action to resolve issues should they arise after code deployment.	Phase 4
Performance Analysis	Measure and analyze post-deployment performance of the CHAMPS system in comparison to pre-deployment system performance.	Phase 4
Performance Tuning	Adjust system queries, database tables and interfaces as needed to improve system	Phase 4

Key Activity	Description	Phase
	processing and throughput.	
Phase 4 Deliverables		
Operational Reporting		
Performance Report		
Issue Resolution Plan		

2.4.2.1 Phase I – Requirements Validation and Design

Activity 1 - Project Initiation

During this activity, CNSI will conduct the formal project kickoff and deliver team training and orientation. The major milestone associated with this activity is the Project Kickoff Meeting.

Activity 2 - Project Planning

During this activity, CNSI will develop the Project Management Plan. The Project Management Plan outlines the standards and procedures for risk, issue, and action item management, project governance plan (including coordination between this project team and the MDCH PMO), communications plan, deliverable management plan, project work breakdown structure (WBS), and baseline schedule.

Milestones associated with this activity include:

- Project Charter is published
- Project Management Plan is delivered
- Project Work Plan is delivered

Activity 3 – Requirements CAD Sessions

During this activity, CNSI will host CAD sessions to validate functional requirements. Sessions will be organized and scheduled per CHAMPS subsystem and/or MITA business area. The CAD sessions will include MDCH and CNSI functional and technical SMEs. Using the MDCH ACA High-Level Business Requirements Document and the assumptions defined in this statement of work as a starting point, session participants will confirm the meaning of each functional requirement.

CNSI will compare the finalized requirements with current CHAMPS functionality to determine the impact of the new requirements across all CHAMPS subsystems including system aspects such as:

- Screens
- Interfaces
- Functionality (use cases)
- Data Models

- Reports
- Letters

CNSI will use the results of the impact assessment to plan and conduct design activities.

This will result in a final Requirements Specification Document which provides a clear, concise, and final definition of each functional requirement.

The major milestone associated with this activity is the delivery of the Functional Requirements Specification Document.

Activity 4 – Design CAD Sessions

During this activity CNSI will host CAD sessions to produce detailed functional design artifacts. Sessions will be organized and schedule per CHAMPS subsystem and/or MITA business area. The CAD sessions will include MDCH and CNSI functional and technical SMEs. Using the existing CHAMPS design and the Requirements Specification Document as a starting point, session participants will identify and document required design changes across all CHAMPS subsystems including system aspects such as:

- Screens
- Interfaces
- Functionality (use cases)
- Data Models
- Reports
- Letters

This will result in final revised design artifacts, such as use cases and data models, which will be the basis for development of changes to system functions. CNSI will submit the completed design artifacts to the appropriate MDCH subsystem team lead shortly after the completion of a CAD session. The MDCH team lead will provide formal approval of the design artifacts via signature on an approval form, similar to the existing CHAMPS enhancement approval process. This approval indicates that design is final and development can begin. CNSI will submit a final as-built DSDD for MDCH approval upon completion of all Phase I design sessions.

The major milestone associated with this activity is the delivery of the As-Built DSDD.

2.4.2.2 Phase II – Coding and System Testing

Activity 1 - Development

During this activity, CNSI codes the software changes required to support the updated detailed functional design. Development includes the coding changes as defined in the As-Built DSDD for all CHAMPS subsystems including system aspects such as:

- Screens

- Interfaces
- Functionality (use cases)
- Data Models
- Reports
- Letters

Development is performed in bi-weekly iterations. The major milestones associated with this activity include the completion of all development iterations.

Activity 2 – Test Planning

During this activity, CNSI collaborates with MDCH to produce detailed test plans and schedules for each phase of testing, including system, and UAT/B2B.

Milestones associated with this activity include:

- System Test Plan is delivered
- UAT/B2B Test Plan is delivered

Activity 3 – Unit/System Testing

During this activity, CNSI tests the developed functionality at the component, subsystem, and system level, including end-to-end regression testing.

Milestones associated with this activity include:

- System Test Results are delivered
- Code is deployed to UAT
- Start UAT

2.4.2.3 Phase III – UAT, B2B Testing and Production Deployment

Activity 1 – Implementation Plan

During this activity, CNSI collaborates with MDCH to develop the detailed plan and schedule to coordinate production installation of the system changes.

The major milestone associated with this activity is the delivery of the Implementation Plan.

Activity 2 – User Acceptance Testing (UAT)

During this activity, CNSI deploys the final code to the UAT environment and provides support to MDCH staff who conduct UAT using formal test scripts.

The major milestone associated with this activity is the UAT Results published by the State.

Activity 3 – B2B Testing

During this activity, CNSI deploys the final code to the B2B environment and provides support for external B2B testing with external trading partners. Testing is conducted via a B2B test plan and test scripts produced by MDCH.

Milestones associated with this activity include:

- B2B Test Results are published (State)
- Code is deployed to Production

2.4.2.4 Phase IV – Stabilization and Optimization

Activity 1 – Post-Deployment Verification

This task involves verifying the correct installation and operation for all system components. During this activity, CNSI performs a sanity check of all system functions after code deployment to ensure all features function as designed.

Purpose:

- Verify Screen Operation
- Verify Queues Operation
- Verify Interfaces Operation
- Verify DB2DB Jobs Operation
- Verify Data Warehouse Extract Operation
- Verify all Production Job Schedules:
- Interface Schedules
- DB2DB Job Schedules
- Data Warehouse Extract Schedules
- Queue Schedules
- Pay Cycle Schedules

Activity 2 – Post-Deployment Monitoring

This task involves monitoring the system in the months after the application upgrade has gone live.

Purpose:

- Monitor Key Operational Metrics:
- Claims Payment Rates
- Encounter Acceptance Rates
- Prompt Pay Rates

- Claims Payment Amounts
- Pay Cycle Statistics
- Monitor Program Specific Metrics for programs impacted by ACA Medicaid eligibility requirements
- Monitor System Performance Metrics:
- Application Screen Performance
- Database Performance
- Application Queues Performance
- Interface Performance
- DB2DB Job Performance
- Data Warehouse Extract Performance
- Reports Performance

Activity 3 – Issue Resolution

This task involves evaluating issues reported in the 90-day period. Issues will be logged and processed according to the CHAMPS Operations Incident Management, Application Support, Change Management, and Release Management processes. Issues that require system changes will be planned for software releases based on priority and will be assigned to CHAMPS Operations releases in accordance with the approved schedule.

Purpose:

- Incident Management:
  - OTRS Ticket Entry
  - OTRS Ticket Triage
  - OTRS Ticket Analysis
  - OTRS Ticket Disposition Determination (Defect, Enhancement, RFC, or Closure)
- Application Support:
  - Iterative Development
  - System Testing
  - RFC Creation and Testing
- Change Management:
  - CQ Entry
  - CQ Analysis
  - CQ Planning

    - Change Log Estimation and Approval
    - Code Promotion
    - RFC Deployment

- Release Management:
    - Release Planning
    - Release Assignment
    - Release Deployment

Activity 4 – Performance Analysis

This task is the process for analyzing the performance of CHAMPS after the ACA Medicaid eligibility processing changes have gone live. Various operational reports and monitoring tools will be used to assess the performance of the system and identify opportunities for improvement.

Purpose:

- Operational Reports:
    - Identify any processes performing below benchmarks.
- Monitoring Tools:
    - Identify any servers with metrics outside normal operating ranges.
    - Identify any slow running queries.
    - Identify heavily used web pages.
    - Identify heavily used transactions.

Activity 5 – Performance Tuning

After all processes, servers, and queries where performance issues are identified, the Application Support and Infrastructure Teams will construct a remediation plan. The remediation plan will identify the changes to be made, the timeline for the changes, and the deployment plan either through software release, RFC, or maintenance outage in the case of server changes.

Purpose:

- Application Support:
    - Perform process tuning in development environment.
    - Plan software changes for software releases per the CHAMPS Operations release schedule.
    - Tuning changes are released and deployed according to the CHAMPS Operations Change Management and Release Management processes.
    - If Application Support Teams require infrastructure changes, they will request the changes through the CHAMPS Operations RFC process.
- Infrastructure Support:
    - Perform server tuning in lower environments.

Deploy configuration changes to Production during monthly planned maintenance outages. Emergency maintenance outages may be requested if performance issues are severe and business impact is high. In that case, the emergency outage will be planned based on CHAMPS Service Level Agreements in order to minimize business impacts.

CNSI will support this effort with the following deliverables:

- Operational Reports
- Performance Report
- Issue Resolution Plan

Section 3: General Assumptions

The following assumptions are taken into consideration for this statement of work:

Project Assumptions

1. All required participants, including MDCH and Department of Technology, Management & Budget (DTMB) contractor staff, are available and will participate in meetings and CAD sessions, as needed.
2. All systems, including the new State MAGI eligibility determination system, will be ready to support testing as defined by the Project Work Plan.
3. All required hardware, including equipment to support a dedicated integration testing environment, will be available within 90 days of the project start date.
4. The functional business requirements defined in the document titled *Department of Community Health - ACA High-Level Business Requirements* will be used as the basis for the requirements validation activity. Should these requirements prove to be incomplete or inaccurate, change management may be necessary to extend the timeline for this effort.

Functional Assumptions

1. While the State MAGI eligibility determination system will transmit Medicaid eligibility data directly to CHAMPS, all Medicaid eligibility changes will be processed via the existing CIMS interface which transmits Medicaid eligibility data from BRIDGES to CHAMPS.
2. While the State MAGI eligibility determination system will transmit MIChild eligibility data directly to CHAMPS, all MIChild eligibility changes will be processed via the existing MIChild interface which transmits MIChild eligibility data from MAXSTAR to CHAMPS.
3. The CIMS interface from BRIDGES to CHAMPS will include a MAGI indicator in each Medicaid eligibility record to indicate which of the four new ACA programs to assign; and will also continue to include "legacy" data elements, such as program, scope coverage, LOC, and SLA, among others, as required for existing benefit plans.
4. BRIDGES will include income level data for beneficiaries determined eligible based on ACA Medicaid eligibility guidelines.
5. CHAMPS will derive the appropriate cost sharing/co-pay values for Medicaid beneficiaries, using the income level data provided by the MAGI eligibility determination system.
6. CHAMPS will continue to receive the following eligibility interfaces. The data format and content of these interfaces remains unchanged:
   a. SED – Serious Emotional Disturbance Waiver Program
   b. CWP – Children's Home and Community Based Services Waiver Program
   c. DHIP – DHS Incentive Payment

d. AUT – Autism-Related Services

e. HSW – Habilitation Supports Waiver Program

f. CSHCS – Children Special Health Care Services

Section 4: Proposed Project Cost

This section of our proposal presents our fixed price overall labor cost and hardware estimates for completing the Impact of Change to ACA Medicaid Eligibility Requirements on CHAMPS project. The cost was derived based on the expected effort required as presented in our initial work plan, composed of the four phases depicted in Figure 8. The total fixed price labor cost for the Impact of Change to ACA Medicaid Eligibility Requirements on CHAMPS project is $8,973,200. The hardware cost estimate is approximately $750,000 which includes the hardware required to establish the Development, System Test and UAT environments. The total combined estimated project cost for fixed labor and hardware is $9,723,200.

The overall project labor cost is detailed within each phase, along with a presentation of the major activities and planned deliverables as depicted in Figure 8. The total cost for the labor effort required to complete the four phases defined for the project is based on our approved blended rate of $146.76.

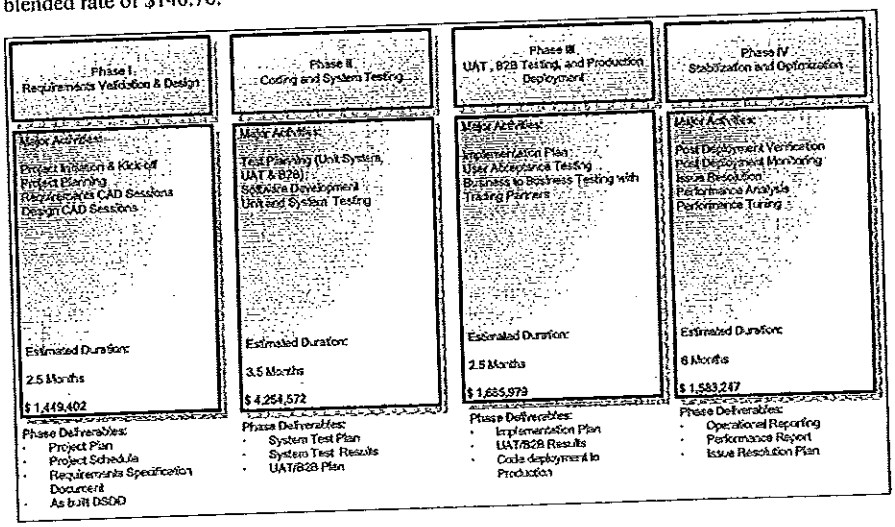

Figure 8. Project Deliverables and Cost by Phase

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Section 1: Introduction

CNSI is pleased to present this statement of work to implement the Document Management Portal (DMP) for the State of Michigan Department of Community Health (MDCH). CNSI proposes to implement the DMP using the IBM® FileNet® P8 platform under a fixed-cost agreement.

1.1 Regulatory and Business Drivers for Change

MDCH currently uses a third-party web application that enables providers to submit support documentation for Medicaid claims, programs, and services. MDCH staff must access both the Community Health Automated Medicaid Processing System (CHAMPS) and its document management application to review claims data and support documentation. This reduces overall productivity. Additionally, the State's current document management application is provided by a third-party as a hosted solution. This creates a compliance risk due to support documentation residing in a separate system outside the State network.

To improve staff productivity and mitigate compliance risks, MDCH and the Department of Technology, Management & Budget (DTMB) is planning to discontinue the use of its current document management application by expanding the current IBM® FileNet® P8 platform to provide functions and features available in the document management application.

To assist MDCH in this endeavor, CNSI will provide a portal for providers and other participants in the State's Medicaid program. Using the DMP, providers will be able to electronically submit authorization and consent forms, documentation supporting Medicaid claims, and other program-specific documents. This solution aligns with the State's objectives to:

- Mitigate regulatory compliance risk by having a single content repository.
- Remove dependency on third-party vendor systems and resources.
- Have a central governance of the system rather than multiple systems and owners.
- Leverage existing technology to enhance processes and service levels for Medicaid information submission and exchange.

1.2 CNSI Capabilities

CNSI's approach to implement the DMP and integrate it with CHAMPS is based on its ongoing partnership with MDCH and DTMB and its extensive knowledge of CHAMPS design, implementation, and operation. As system developers and integrators, CNSI aligns its clients' business processes and information systems to provide access to the right information at the right time, enabling the achievement of their desired business results and creating enterprise value. CNSI will employ its extensive technological experience in the industry and incorporate its flexible tools and methodologies to deliver quality results on time and within budget. CNSI completes jobs for clients by delivering on commitments with speed and purpose in accordance with the client's specifications and expectations.

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CNSI will build upon its extensive knowledge gained from designing, developing, implementing, and operating CHAMPS for the State, as well as previous CHAMPS efforts, including the Health Insurance Portability and Accountability Act (HIPAA) 5010 compliance implementation, and the ongoing International Classification of Diseases, Tenth Edition (ICD-10), transition and remediation. In implementing the DMP and integrating it with CHAMPS, CNSI will continue to collaborate with the State's business and technical personnel and provide an experienced team of Medicaid subject matter experts (SMEs) who have the technical, business, and project management expertise to support this endeavor.

CNSI's experience working on prior Medicaid health information technology (IT) initiatives has led to incorporating the following factors in developing this statement of work:

- **CNSI's capability to conduct complex analysis of Medicaid system requirements**

  CNSI's project teams have a wealth of experience with multiple Medicaid programs, which allows them to efficiently conduct the data-gathering and analysis activities for this initiative. Architects and SMEs who have worked with CHAMPS for a variety of Medicaid health IT initiatives are among the team members involved in this effort.

- **CNSI's sensitivity to the State of Michigan's needs and constraints**

  CNSI is uniquely qualified to remain sensitive to the State's needs and constraints in defining the approach to the DMP development and implementation. The team will employ an orderly, structured, professional approach that is sufficiently flexible to respond to changes in requirements that evolve from additional understanding. Overall, CNSI has practical "hands-on" experience of what does and does not work.

CNSI has engaged HTC Global Services as a subcontractor to provide specific technical and business expertise that will complement CNSI's capabilities. For the State of Michigan, CNSI has previously engaged HTC Global Services to develop the Electronic Document Management System (EDMS) for CHAMPS. For this engagement, HTC Global Services will provide the technology to supply the DMP.

Throughout this engagement, CNSI will be wholly responsible for the work done by HTC Global Services. HTC Global Services will be held accountable to comply with CNSI, MDCH, and DTMB applicable standards. CNSI will oversee and approve all work done by HTC Global Services, including professional services, software, and deliverables produced by HTC Global Services under this statement of work.

1.3 Proposed Project Organization

CNSI believes that this statement of work represents the best possible combination of architecture, technology, support, and experience to complete this project. The proposed team members are each the best possible candidates of their respective disciplines. The underlying logic behind identifying each member of this group is that:

- They share the same philosophical approach for undertaking this project – **the customer comes first.**
- They understand the values that each member brings to successfully implementing the project.

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- They are committed to understanding and incorporating the State's requirements.
- They understand the necessary advanced technologies, business needs, and operational issues.

CNSI's primary objective is the successful implementation and completion of the project. Its team is fully dedicated to the DMP implementation and is confident in its ability to achieve that goal.

However, an effective project management plan cannot work with participation only by CNSI. As the customer, the State is the most important member of the project team. The customer must be actively engaged in the process at all levels. Implementation is only as good as the partnership established and maintained between all involved parties.

Figure 1 below shows the organization structure for executing the DMP project. As depicted in the organization structure, HTC is going to be an integral part of CNSI team to effectively manage and execute the DMP project. CNSI senior management will oversee the whole engagement including HTC team to ensure schedule and quality compliance.

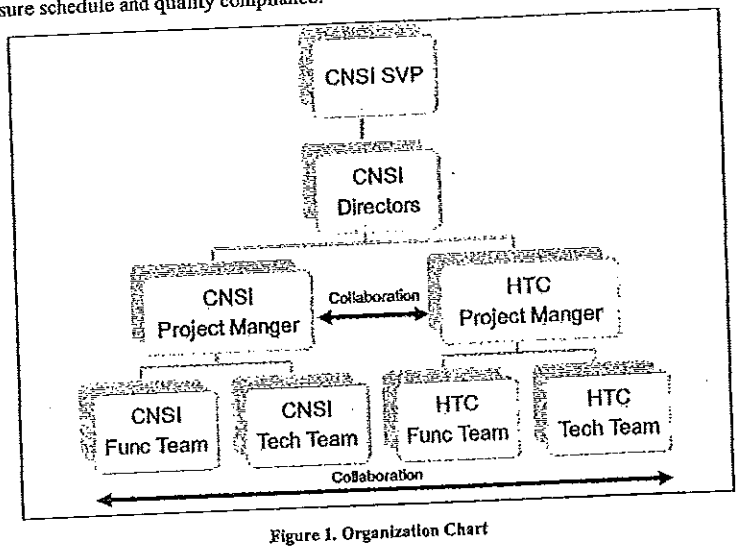

Figure 1. Organization Chart

1.4 Subcontractor Profile

Established in 1990 and headquartered in Troy, Michigan, HTC Global Services is a global provider of IT solutions and business process outsourcing services. HTC Global Services' clients include several Global 2000 organizations. HTC Global Services manages and improves IT environments, applications, and business processes for customers and has experience in providing enterprise-class document management systems, including its feature-rich docuSTACK product.

Since 2005, CNSI and HTC Global Services have successfully collaborated on previous Medicaid management information system (MMIS) projects in multiple states. HTC Global Services was involved in implementing the document management system for CHAMPS in Michigan and ProviderOne in Washington.

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As part of HTC Global Services' work in creating the DMP solution, it will provide CNSI with the following work products:

- Requirements Specification Document
- Design Specification Document
- System Test Results Report

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Section 2: Project Management, Methodology, Tools, and Technical Approach

This section presents CNSI's project management and technical approaches, methodology, tools, and phased work plan for accomplishing all activities required for the DMP implementation and integration with CHAMPS. This section describes the scope of activities to be addressed throughout the project, from the initiation phase to final implementation, as well as the techniques and methodologies CNSI's project team will use.

Each of the following subsections will contain a high-level description of the three-phase approach for this project. For each phase, the major activities and anticipated deliverables are presented, followed by a high-level description of the major milestones and approximate timelines.

2.1 Project Management Approach

The project's successful implementation relies on the framework and environment provided by project and quality management. Figure 2 shows CNSI's project and quality management framework and how the related activities interact with project tasks.

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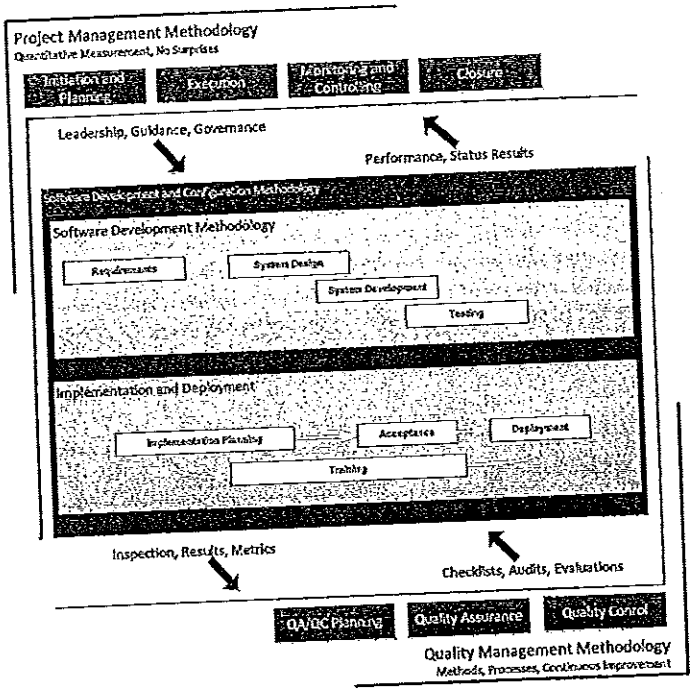

Figure 2. CNSI's Project Management and Quality Management Framework

Although all projects are unique, they share common components and processes. The generally accepted process groups defined by the *Project Management Body of Knowledge* (*PMBOK*), as incorporated into the CNSI project management process, are:

- **Initiating:** This process group defines the project objectives and grants authority to proceed. For CNSI, the initiating processes are largely incorporated into the proposal development process, during which required partners are identified.
- **Planning:** This process group refines the project objectives and scope and plans the tasks, activities, and steps necessary to meet the project's objectives. The planning processes start during proposal development and proceed following contract award while CNSI works with the customer to establish and baseline the project management plan. The project management plan is modified and updated as necessary over the course of the project. It is the culmination of the planning processes for scope definition and management, time (scheduling), staffing (human resources), communications, and risk management.
- **Executing:** This process group puts the project's plans into motion. This is where the bulk of the work for the project is performed.

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- **Monitoring and Controlling:** This process group measures the performance of the project's executing activities and reports these performance results to project managers and stakeholders. Output is used to refine, improve, and/or change project management (including plans and schedules) as necessary to meet the project's objectives.
- **Closing:** This process group documents the formal acceptance and approval of the project's product and brings all aspects of the project to a close.

CNSI is confident it has the correct methodology and project framework in place to successfully implement the DMP. CNSI continually improves its project management processes using lessons learned from previous projects and through the proficiency and continuous education of its program and project managers, senior technical and engineering staff, and senior and corporate management. This ensures a number of advantages:

- The project management philosophy is firmly entrenched within the entire project team, including MDCH and CNSI.
- Project management is a core competency.
- The project staff is focused on successfully implementing the project.
- Project management, quality management, and cost management processes are fully integrated and their infrastructure is in place.
- Effective project status reporting is established throughout the project life cycle.
- Project and software development methodologies are well documented.
- Project information is communicated continuously to the right people at the right time.
- The project is continuously monitored against performance.
- Excellence in quality and delivery are built in.
- Deliverable review and approval processes are in place.

Through developing the project management plan, CNSI expects to collaborate with the MDCH project management team to further customize CNSI's project management system to successfully complete the project.

2.2 Project Methodology

CNSI's holistic approach for this project will use its proven methodology as the overarching framework and bring an experienced team of program managers, SMEs, technical experts, and change management resources to support this effort.

The project methodology is a framework that facilitates the integration of CNSI's extensive system experience, which is rooted in application implementations, methodologies, and delivery tools. This framework allows CNSI to deliver services to its clients consistently across its footprint and gather continued enhancements for its supporting methodology, thereby providing continued value for its clients.

CNSI's methodology is an integrated methodology that combines its best delivery assets. The methodology:

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- Provides a scalable, integrated collection of assets.
- Provides a consistent level of detail and presentation.
- Supports tailoring to scale, which provides a unique, but consistent cost-effective delivery approach.

CNSI's methodology approach consists of the following:

- The **Manage** work approach provides a single, consistent approach to managing CNSI's engagements. Within the Manage Approach is the Quality Management activity, which verifies that deliverables and processes meet requirements. The Quality Management activity also supports continuous process improvement, as well as the methodology.
- The **Life Cycle** work approach addresses unique expertise while providing overall integration across the full implementation life cycle.

CNSI's methodology has the flexibility to be adapted to meet MDCH's unique requirements while confirming that its experienced staff members follow established practices.

While no two engagements are the same, MDCH expects CNSI to deliver in a consistent, systematic approach. The proposed project methodology incorporates CNSI's staff's delivery experience into a single, integrated approach. It provides the structure for integrating CNSI's capabilities while allowing individual project teams the flexibility to use client-mandated tools. The right assembly of technologies, techniques, and deliverable processes requires the specific experience and expertise found in CNSI's staff.

Investing time to create an effective plan with clear objectives is integral to effective project execution. CNSI's methodology provides a structured approach to the planning process. While this may appear to require more initial effort than desired, experience has shown that following these processes reduces the likelihood of planning mistakes and results in lower risk and a more cost-effective, rapid delivery.

CNSI's methodology incorporates a consistent approach for identifying, tracking, and measuring the value derived from ongoing projects. CNSI's experience developing and delivering various client projects is incorporated into the project strategy and planning activities.

In undertaking this project, CNSI will employ its iVision360 system development life cycle (SDLC) methodology tailored for the DMP implementation and integration with CHAMPS. This offers the following benefits:

- **User is at the Center:** CNSI's primary motivation in developing iVision360 is to put the user at the center of the project life cycle. Successful projects have high interaction with end users and place the user at the center of the project. Every phase and activity of iVision360 focuses on interaction and collaboration with the user community. CNSI does this by implementing agile techniques and building working software in an iterative fashion with user validation at periodic intervals.
- **Common Goals:** Users actively participate in configuration sessions with an integrated team of developers, analysts, and testers. This method avoids the pitfalls of waterfall methods. iVision360 provides the team with a sense of purpose, a goal, and the drive to accomplish the end objective: software that meets the requirements.

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- **Early and Often Testing:** iVision360 provides an opportunity to test early and often so formal system test phases and subsequent test phases are more likely to meet schedule expectations with a lower error-discovery rate.

By introducing the baseline management features of waterfall, CNSI minimizes the risk of scope creep that is sometimes associated with iterative methods. Moreover, implementing and integrating with project management processes will provide integrated change, issue, and risk management. Table 1 describes the key benefits of each of the industry-standard methodologies that are blended into iVision360.

Table 1. SDLC Methodology Comparison

Methodology	Key Benefits Blended into iVision360
Waterfall	Baseline approval of requirements Structured documents and customer approvals Formalized testing
Iterative/Agile	Frequent customer interaction Decomposing work into small meaningful features that are presented in working software Frequent course corrections Sense of real progress Early and frequent testing
Extreme Programming	Teams formed between developing organization and customer Sense of common vision and goal

iVision360 has been adapted for the purposes of this project. The customized version is presented in *Section 2.5.1 iVision360 Iterative Design, Testing, and Documentation Approach.*

2.3 Project Management Tools

Tools, when properly applied within the methodology framework, will reduce the time to complete a project by providing predefined processes, templates, documents, and training materials. More importantly, use of the appropriate tools will help reduce risk and increase efficiency.

CNSI will continue to use the tools already proven effective during the previous undertakings to reduce the time to complete the project and mitigate risk. Table 2 lists the tools CNSI will utilize for the project.

Table 2. CNSI Project Tools

Tool	Purpose
ReqTrace®	CNSI's requirements database used during design and test phases
Microsoft Visio	Develop use case diagrams, technical architecture diagrams, and support process flows
Microsoft	Develop project deliverables as well as presentations and spreadsheet artifacts needed to support

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Office	deliverables
As-One	Repository for deliverables, presentations, and artifacts

Microsoft Visio and Microsoft Office are industry-standard tools. The following subsections provide additional information about ReqTrace and As-One.

2.3.1 ReqTrace

CNSI will use its ReqTrace web application for requirements analysis and validation.

During project initiation and requirements planning, ReqTrace will be loaded with the functional, technical, and support requirements. ReqTrace is CNSI's requirements management tool of choice being used in MMIS projects. ReqTrace provides the ability to trace requirements to use cases, related test cases, and results. The application can store requirements-related attributes, including revisions, notes, and comments.

CNSI began using ReqTrace during the implementation of CHAMPS. The requirements validation processes used on the project, as well as the use of ReqTrace, resulted in the requirements validation phase being completed ahead of schedule.

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2.3.2 As-One

Believing that continuous collaboration and information-sharing are key factors to successful project execution, CNSI will use As-One, its web-based enterprise program management solution. Figure 3 illustrates how As-One is designed to support team collaboration, knowledge management, and process improvement. As-One will provide a convenient repository for all program data and will give MDCH oversight personnel direct visibility into project performance.

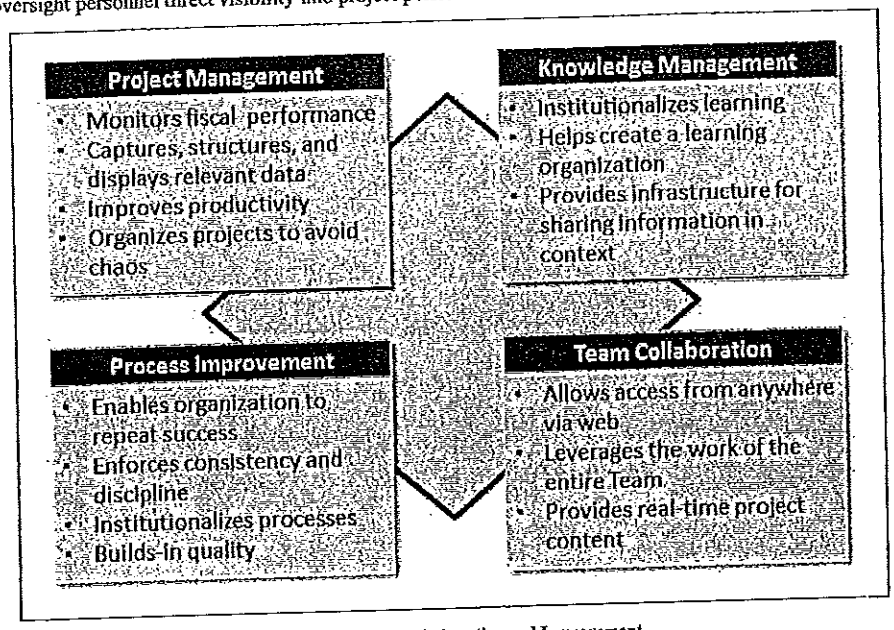

Figure 3. As-One Collaboration and Improvement

As-One is an "out-of-the-box" solution that supports CNSI's program management philosophy: experienced people, managed processes, and enabling technology.

As-One will allow CNSI users to share real-time data specific to the user's authority and association and is accessed via a standard web browser. CNSI's previous and ongoing projects with MDCH and DTMB use As-One. Training will be provided for team members new to the program.

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2.4 Document Management Portal Solution

This section will review CNSI's proposed DMP solution, including technical and functional overviews and a summary of CHAMPS' integration with the DMP.

2.4.1 Technical Overview

CNSI proposes that the DMP be built using the State's current IBM® FileNet® P8platform as a foundation. IBM® FileNet® P8 is a reliable and scalable enterprise platform allowing for the capture, storing, managing, securing, and processing of information to increase operational efficiency at a lower total cost of ownership. The IBM® FileNet® P8 platform enables the streamlining and automating of business processes, accessing and managing of content, and automating records management to meet compliance needs.

Figure 4 depicts the proposed DMP environment, its integration with CHAMPS, and the expected flow of data.

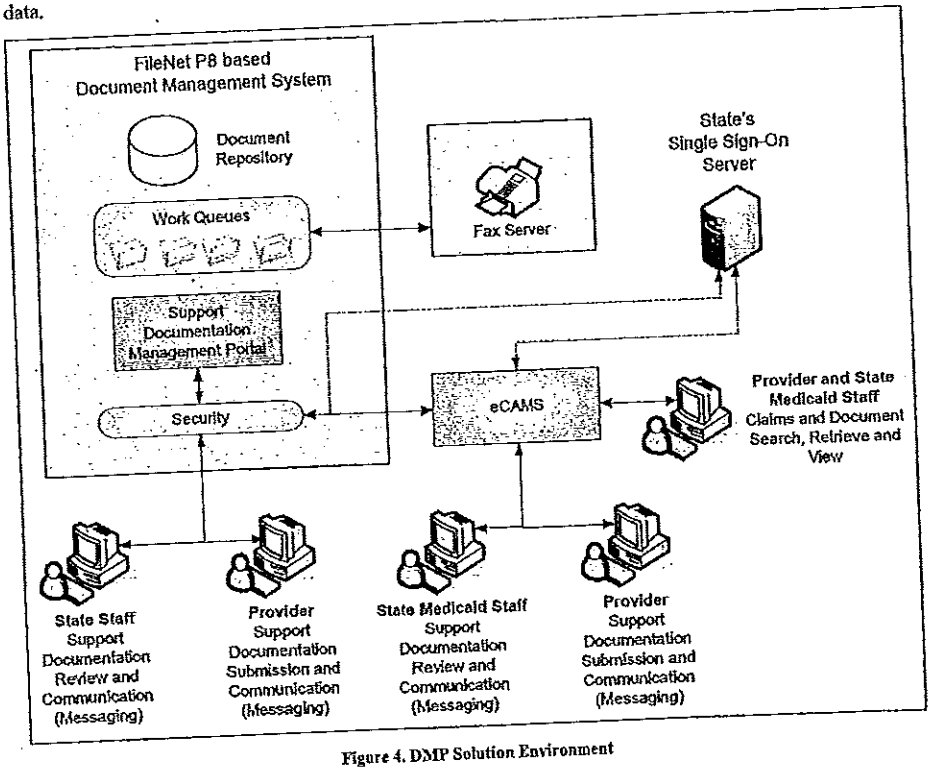

Figure 4. DMP Solution Environment

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Through web services, the DMP will be integrated with CHAMPS. As a result, users will be able to access DMP functionality either directly or through a CHAMPS interface. Users directly accessing the DMP will be authenticated via the State's Single Sign-On system. Access to various functions, features, work queues, and documents will be managed through user roles and user groups defined in the State's directory services server.

By accessing the DMP through CHAMPS, providers will be able to submit Medicaid-related documents and collaborate with State staff. Users accessing the DMP through CHAMPS will be able to:

- Submit support documents and authorizations.
- Send and receive messages pertaining to the submitted documents.
- Review, approve, and archive documents.
- View documents and correspondence history.

By directly accessing the DMP, State staff and other users will be able to submit Medicaid-related documents that may or may not be related to claims. Users accessing directly accessing the DMP will be able to:

- Submit support documents.
- Submit documents for authorization and approval.
- Submit requests for documentation.
- Send and receive messages pertaining to submitted documents.
- Review, approve, and archive documents, as appropriate.
- View documents and associated correspondence history.

2.4.2 Functionality

The DMP solution will provide a browser-based interface to perform various tasks pertaining to submission of documents, review and approvals, collaboration, and retrieval. The DMP's features and functionality are identified and described below.

Document Submission

Users will be able to submit multiple documents with metadata, such as date of service, beneficiary details, claim number, case number, and/or provider details. In addition to entering metadata, users will be able to enter a message for each submitted document. This message will be available to all parties viewing the submitted document.

After a document is submitted, the system will notify the appropriate parties. The document submission will also trigger an event to create a work item in the appropriate document- or case-processing queue.

For claim-related documents, the provider can submit documents through CHAMPS. For other document submissions, the users will directly use the DMP.

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Document Processing Workflow

Users will be able to set up a workflow for each case type or document type defined in the system. Work items created in the workflow are routed through each step based on predefined business rules and user-entered parameters. The system will notify the appropriate parties about tasks completed for the work item.

Messaging and Collaboration

Users will be able to "send" and/or "reply to" messages for documents submitted in the system. The complete message thread for each such document will be maintained in the system. When a message is created for a document, the system will notify the appropriate parties about the new message.

Document Archival

The DMP will use the IBM® FileNet® P8 content repository to archive submitted documents. Documents will be stored in associated metadata and message threads and additional metadata fields will be used to implement document retention policies.

Document Search and Retrieval

All documents archived in the IBM® FileNet® P8 content repository will be searchable using keywords that may be present in the document metadata. All documents will be viewable in their native format, and a full-text search feature will be available for some document types.

Users will also be able to retrieve documents through CHAMPS. Users will be able to retrieve all available documents associated with a record, including claims, providers, and beneficiaries.

Documentation Requests

Users will be able to receive and process requests for documentation directly through the MDCH portal. Documentation requests will create a work item in the request work queue. State staff will be able to review the request, assemble the documentation package, and publish it to be accessed by the requesting party. The system may provide the ability to securely deliver requested documents in encrypted formats through the Internet or a secured FTP.

Security and Authentication

The DMP will provide a security feature to manage access privileges by user roles. Access to documents, work items, and messages will be able to be managed by role, including the ability to set "read-only" and "read/write" access. The DMP will integrate with the State's Single Sign-On system for user authentication and application access. Authentication of users accessing this solution from CHAMPS will be managed within CHAMPS.

Audit Logs

The DMP will capture all system transaction details, including logins, access, and data changes. Reports will be available for such audit information.

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2.4.3 CHAMPS Integration

CHAMPS will integrate with the DMP through the use of web services and HTTPS redirects. This integration will provide users with the ability to upload claims attachments from the Claims Direct Data Entry (DDE) screen. Providers will be able to attach a claim document using beneficiary IDs, date of service (DOS), and billing national provider identifications (NPIs). The uploaded document will be archived in the IBM® FileNet® P8 system using the DMP application program interface. The transaction control number (TCN) can be linked to the claim attachment through the batch interface process.

Attachment Viewer

Users can view claim attachments through online claims screens by TCN or query all claim attachments submitted by a provider.

Notifications

CHAMPS integration with the DMP will also allow for secured communications between State users and providers through online screens. Email notices will automatically be sent when the provider uploads an attachment after the request is added to the State user's work queue.

Authentication

Once users are authenticated through CHAMPS Single Sign-On, users will access the DMP within the CHAMPS application to provide a seamless integration capability.

2.5 Technical and Phased Approach Work Plan

CNSI has created an initial work plan and timeline for the DMP implementation. This work plan describes the expected activities for the proposed phases and major activities. This information is presented in Figure 5 below. A detailed description of the major activities within each phase is presented in *Section 2.5.2 Phased Approach Work Plan.*

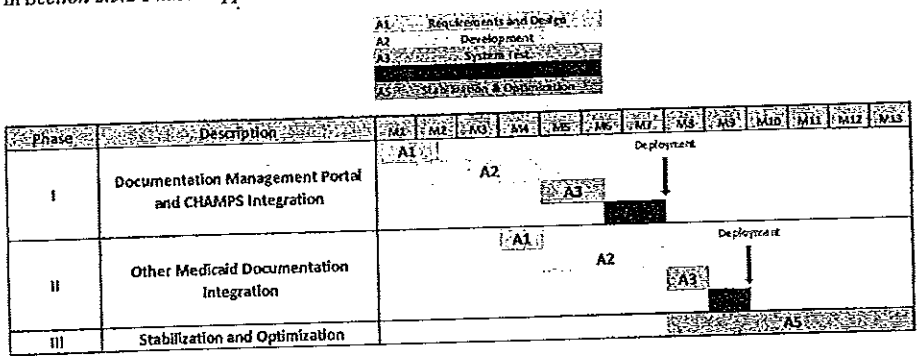

Figure 5. Initial Project Work Plan

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CNSI structured this work plan to address the overall relationships of the phases and activities required to complete the project. It effectively uses the professional resources required to accomplish these phases and produce high-quality products in a cost-conscious manner.

The following subsections further describe how CNSI intends to accomplish the goals of the work plan by employing its iVision360 methodology in the proposed approach for the DMP implementation and integration with CHAMPS.

2.5.1 iVision360 Iterative Design, Testing, and Documentation Approach

In this section, CNSI provides an outline of its iVision360 SDLC. The SDLC is a full-featured methodology that includes standard design and development processes. CNSI's SDLC processes have been adapted to address the specific needs of the project. This project will be divided into three phases, including two software releases adding specific system functionality.

CNSI will engage in iterative requirements analysis and design with State at the beginning of each release. The State will be able to review requirements analysis and design documents as soon as a logical set of iterations are completed. CNSI expects initial State signoff upon acceptance of the iteration's document scope. This will help reduce the time required for document review and approval. The documents reviewed at any time will have a smaller scope to help the State perform a thorough review. At the end of all iterations for a release, an overall document will be produced for a final delivery and acceptance to State.

The iterative/agile development and testing portion of the iVision360 methodology is visible in each release of design and coding. During this phase, technical design specifications for impacted functions and user stories are constructed in parallel by developers and the SMEs. As the impacted function's design is completed, the team lead will plan the related development iterations.

Developers will build internal design documentation prior to, and during, the iterations. The beginning of each iteration is reserved for startup activities, including finalizing the internal design documentation. The developer meets with the data modeling team on Day 1 of an iteration to conduct a walkthrough of any required data model changes. The data modeling team makes the required changes to the database schema and approves the physical model for coding. Developers also develop iteration test cases (for the tasks that may not be tested with automatic internal iteration test code), which are required to test each story completely.

Coding begins when the internal design and pre-coding work is completed for the iteration. The developer will write internal iteration test scripts in parallel to actual working code and update screens and other system functions to fit the physical mode. The developer will execute the iteration test scripts as they complete sections of code. The codes will be built and tested incrementally. The developer will coordinate daily stand-up meetings and communicate any development issues.

This development approach ensures developers do not work in silos. It also avoids the traditional approach of throwing design documentation "over the fence" to developers to begin coding, only to discover later that major rework is required halfway through the development process.

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Developers eventually test the code against internal auto-unit-code and manual internal iteration test scripts. As they reach the end of the iteration, they will run the code against functional scripts developed by the test team. Discrepancies are identified and corrected, and the developer retests to ensure all discrepancies are corrected and closed before the iteration ends. The developer will conduct a peer review of the impacted function's code on the last day of the iteration and then update the code based on the review. When developer iteration testing and software code reviews are successfully completed for the iteration, the code will be promoted to the integration test stream. The code will be released to the test team for system testing when coding and developer iteration testing is completed for all of an impacted functions user stories.

During initial development iterations, the test team will develop system test cases based on requirements specification. During system testing, the test team will execute system test cases to validate system results against requirements.

CNSI plans to engage the test and development teams early on to build the regression test suite for critical functions. This will help to speed up testing and improve overall quality of implementation. During system testing, if required, regression tests will be performed on impacted functions based on changes to a previously tested baseline. The intent of regression testing is to demonstrate that the CHAMPS system continues to meet all approved requirements after changes have been introduced to a previously tested baseline.

As soon as system testing is completed for an activity, CNSI will deliver the code to the UAT environment. CNSI plan to engage the State as early as possible and well before the beginning of the planned UAT phase. This will ensure enough time is allowed for thorough UAT and reduce the risk of schedule slippage for UAT completion.

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Figure 6 presents a graphical overview of the processes that are part of the iVision360 methodology.

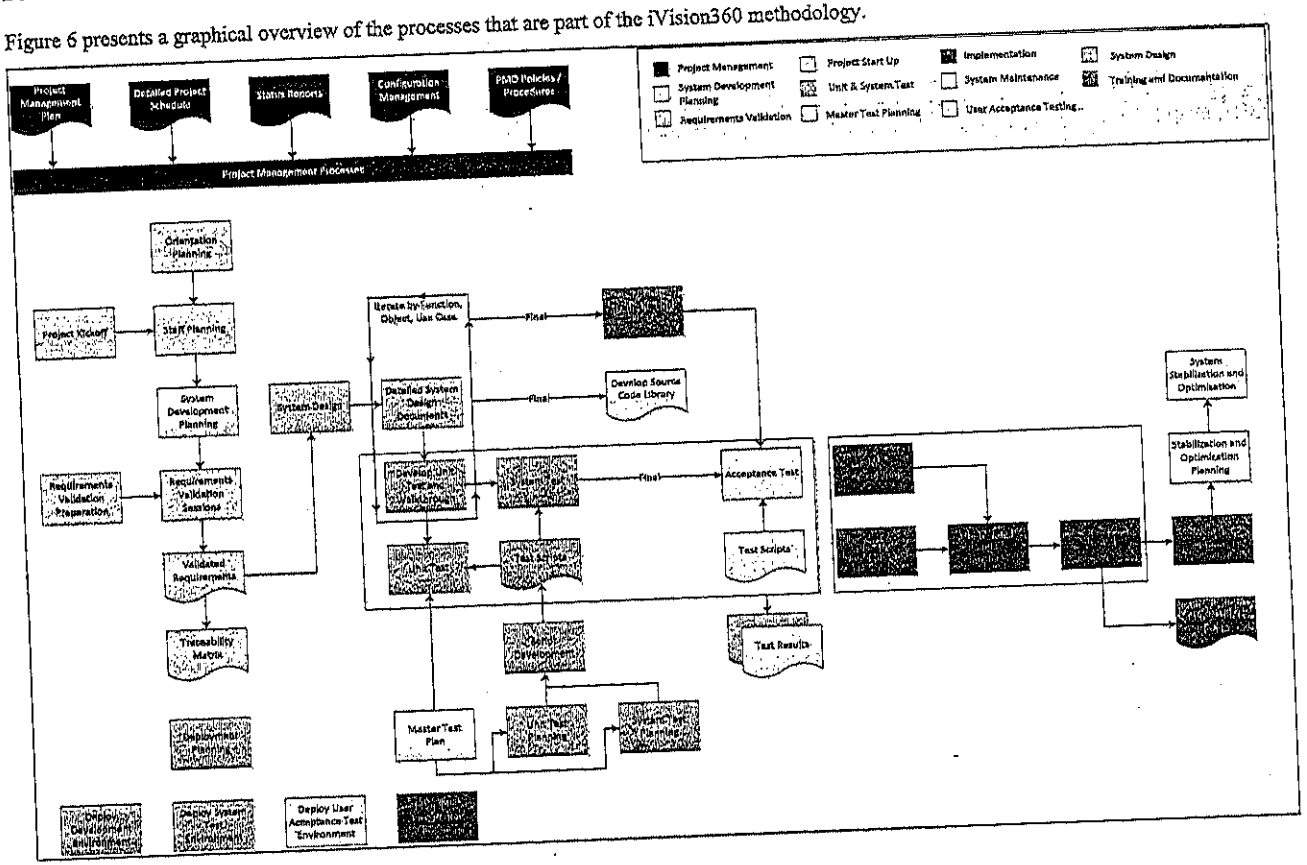

Figure 6. iVision360 Process Diagram

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2.5.2 Phased Approach Work Plan

CNSI proposes an overlapping, three-phase approach to the DMP implementation and integration with CHAMPS, consisting of the design, development, and implementation of two software releases and a stabilization and optimization phase.

The three phases are:

- **Phase I – DMP and CHAMPS Integration:** The first phase includes the design, development, and implementation of the first software release. This release's functionality will include:
  - Documentation Submission and Processing Workflow
  - Messaging and Collaboration
  - Document Archival, Search, and Retrieval
  - CHAMPS Integration
  - Claims Submission
  - Security, Authentication, and Audit Logs
- **Phase II – Other Medicaid Documentation Integration:** The second phase includes the design, development, and implementation of the second software release. This release's functionality will include:
  - Documentation Submission
  - Documentation Sharing and Management
  - MDCH Portal Integration
- **Phase III – Stabilization and Optimization:** Stabilization and optimization activities include post-deployment verification, post-deployment monitoring, issue resolution, performance analysis, and performance tuning.

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Figure 7 provides a high-level overview of the three phases, their major activities, and expected timelines.

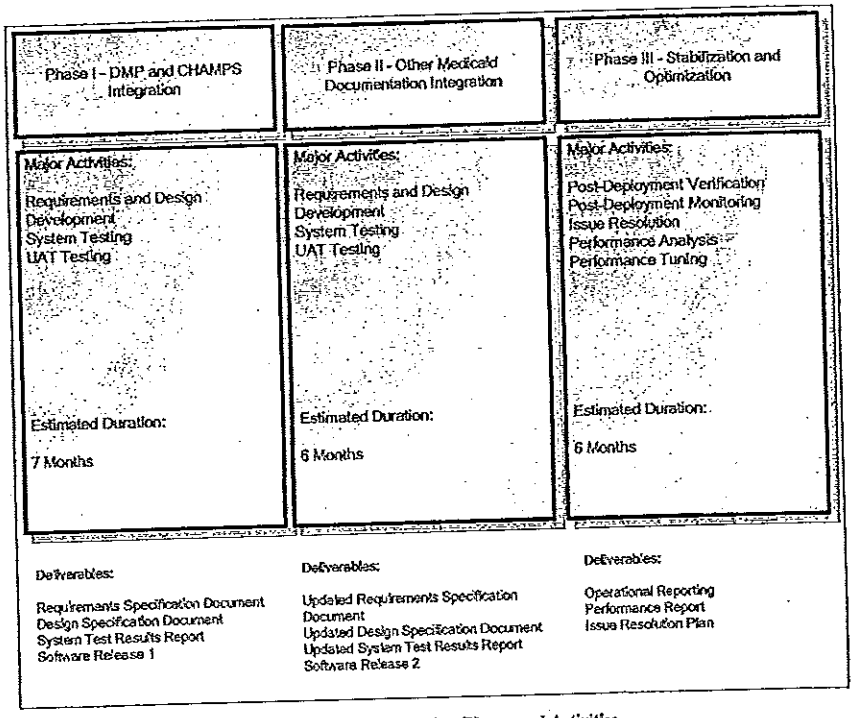

Figure 7. High-Level Project Phases and Activities

With every project, there are critical milestones to be met and work products and deliverables that must be developed and produced in order to provide the inputs necessary to perform the next phase. Table 3 elaborates on the key high-level milestones of the proposed implementation plan, along with the expected deliverables.

Table 3. High-Level Activities and Milestones by Phase

Major Activity	Description	Phase
Requirements and Design	CNSI will work with the State to elicit and evaluate requirements and document detailed system design changes relevant to the first software release.	Phase I
Development	CNSI will develop the software required to support the functional design relevant to the first software	Phase I

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Major Activity	Description	Phase
	release.	
System Testing	CNSI will test developed functionality after development of the first software release has completed.	Phase I
UAT Testing	The State will conduct UAT testing prior to software deployment.	Phase I
Phase I Deliverables • Requirements Specification Document • Design Specification Document • System Test Results Report • DMP Software Release 1		
Requirements and Design	CNSI will work with the State to elicit and evaluate requirements and document detailed system design changes relevant to the second software release.	Phase II
Development	CNSI will develop the software required to support the functional design relevant to the second software release.	Phase II
System Testing	CNSI will test developed functionality after development of the second software release has completed.	Phase II
UAT Testing	The State will conduct UAT/B2B testing prior to software deployment.	Phase II
Phase II Deliverable • Updated Requirements Specification Document • Updated Design Specification Document • Updated System Test Results Report • DMP Software Release 2		
Stabilization and Optimization	After software deployment, CNSI will engage in stabilization and optimization activities, including post-deployment verification, post-deployment monitoring, issue resolution, performance analysis,	Phase III

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Major Activity	Description	Phase
	and performance tuning.	
Phase III Deliverable • Operational Reporting • Performance Report • Issue Resolution Plan		

2.5.2.1 Phase I – DMP and CHAMPS Integration

Activity 1: Requirements and Design

CNSI will host requirements CAD sessions to elicit and define requirements for the proposed DMP solution, including the functionality targeted under the scope of the first software release:

- Document submission and processing workflow
- Messaging and collaboration
- Document archival, search, and retrieval
- CHAMPS integration
- Claims submission
- Security, authentication, and audit logs

The requirements CAD sessions will help CNSI and the State to:

- Define the scope of requirements.
- Elicit and validate requirements.
- Understand the underlying assumptions for each identified requirement.
- Classify the requirements as functional and non-functional.

After the requirements are identified, CNSI will create design specification documents to incorporate all functionalities identified in the requirements sessions. Design specification documents will include a list of use cases, main and alternate flows, business and system rules, data models, and screenshots. Once baselined, any change made to the design specification documents shall be treated as a change order and will follow a formal change order process.

The major milestones associated with this activity are:

- The completion of requirements elicitation and validation activities.
- The delivery of the requirements specification document.
- The delivery of the design specification document.

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Activity 2: Development

CNSI will develop and code the software required to support the implementation of the DMP solution and the updated functionality of CHAMPS using the toolsets and standards in place for the CHAMPS project. The modifications will be performed and released through an iterative development process.

The major milestone associated with this activity is the completion of development iterations, including the development of the DMP solution's code and the development and customization of the CHAMPS base code to accommodate and achieve the functional design of the project's first software release.

Activity 3: System Testing

CNSI will conduct internal system testing activities to test the developed functionality of the DMP solution at the component, subsystem, and system level.

The major milestone of this activity is the delivery of system test results report.

Activity 4: UAT Testing

CNSI will deploy the final code of the first software release to the UAT environment. MDCH will conduct UAT testing at this point, with CNSI assisting in the development of the UAT plan and related test scenarios and test cases.

After UAT is completed, the first software release will be implemented in accordance with the current CHAMPS release schedule.

2.5.2.2 Phase II – Other Medicaid Documentation Integration

Activity 1: Requirements and Design

CNSI will host requirements CAD sessions to define the gaps between the State's existing documentation management system and the proposed DMP solution, including the functionality targeted under the scope of the second software release:

- Documentation submission
- Documentation sharing and management
- MDCH portal integration

The requirements CAD sessions will help CNSI, MDCH, and DTMB to:

- Define the scope of requirements.
- Elicit and validate requirements.
- Understand the underlying assumptions for each identified requirement.
- Classify the requirements as functional and non-functional.

After the requirements are identified, CNSI will update the design specification documents to incorporate all gaps identified in the requirements sessions. Updates may include the addition, deletion, and modification of use cases, main and alternate flows, business and system rules, data models, and

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screenshots. Once baselined, any change made to the design specification documents shall be treated as a change order and will follow a formal change order process.

The major milestones associated with this activity are:

- The completion of requirements elicitation and validation activities.
- The delivery of the updated requirements specification document.
- The delivery of the updated design specification document.

Activity 2: Development

CNSI will develop and code the software required to support the implementation of the DMP solution and the updated functional design of CHAMPS using the toolsets and standards in place for the CHAMPS project. The modifications will be performed and released through an iterative development process.

The major milestone associated with this activity is the completion of development iterations, including the development of the DMP solution's code and the development and customization of the CHAMPS base code to accommodate and achieve the functional design of the project's second software release.

Activity 3: System Testing

CNSI will conduct internal system testing activities to test the developed functionality of the DMP solution at the component, subsystem, and system level.

The major milestone of this activity is the delivery of the updated system test results report.

Activity 4: UAT Testing

CNSI will deploy the final code of the second software release to the UAT environment. MDCH will conduct UAT testing at this point, with CNSI assisting in the development of the UAT plan and related test scenarios and test cases.

After UAT is completed, the second software release will be implemented in accordance with the current CHAMPS release schedule.

2.5.2.3 Phase III – Stabilization and Optimization

After implementing each software release, CNSI will engage in post-deployment stabilization and optimization activities.

The major milestones associated with this activity are:

- Verification of installation and operation for all components and functions.
- Overall system monitoring in the months after the application upgrade has gone live.
- Resolution of issues reported over a six-month period after successful implementation of the first software release. Issues will be addressed according to the CHAMPS Operations Incident Management, Application Support, Change Management, and Release Management processes, and resulting updates will be assigned to CHAMPS operations releases in accordance with the approved schedule.

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- Analysis of CHAMPS performance after the software releases have gone live.
- Remediation of any identified CHAMPS performance issues.

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Section 3: General Assumptions

This statement of work is presented based on the following assumptions:

1. State users and other stakeholders will be available for any discussions relevant to the project.
2. The State will provide the necessary hardware and software on a timely basis that supports the project schedule.
3. CNSI will oversee and manage all the code deployments done by HTC.
4. The DMP will be developed using the IBM® FileNet® P8, software version 4.x. The DMP will be built on a JAVA-based IBM® FileNet® P8 workplace/XT software component. The workplace/XT may be customized as per the user interface requirements.
5. Data migration from the current third-party-hosted document management application is not within the scope of this project.
6. Changes to the State's Single Sign-On system are not within the scope of this project.
7. The State will be responsible for provider training and outreach.

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Section 4: Pricing

This section presents CNSI's fixed-price, overall labor cost for completing the Document Management Project. The cost was derived based on the expected effort required, as presented in our initial work plan, composed of the three phases depicted in Figure 8. The total fixed-price labor cost for the Document Management Project is $2,257,111.36.

The overall project labor cost is detailed within each phase, along with a presentation of the major activities and planned deliverables as depicted in Figure 8.

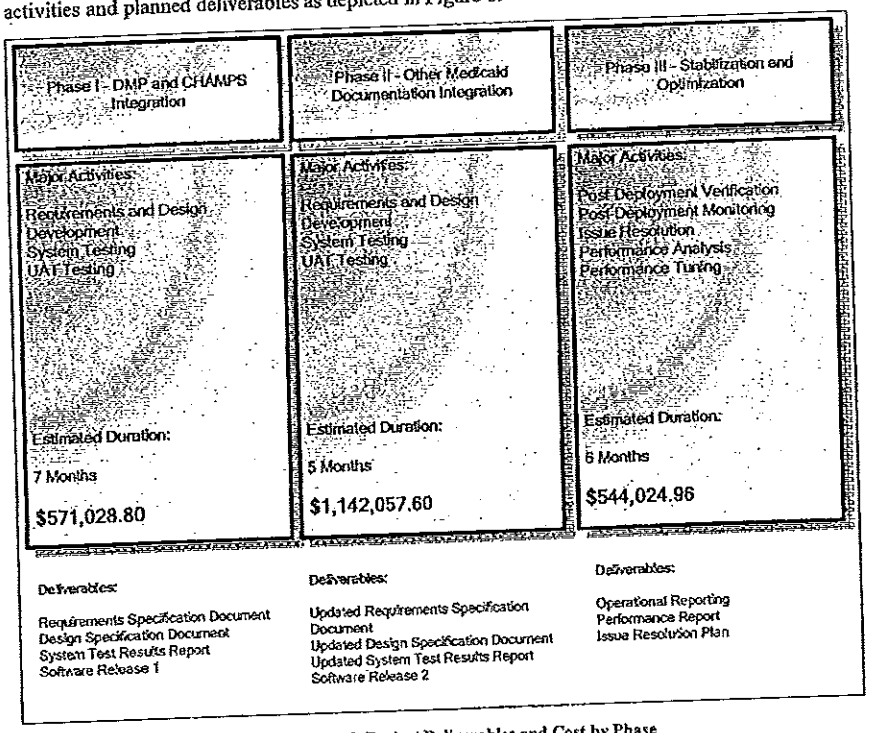

Figure 8. Project Deliverables and Cost by Phase

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Form No. DTMB-3521 (Rev. 4/2012)
AUTHORITY: Act 431 of 1984
COMPLETION: Required
PENALTY: Contract change will not be executed unless form is filed

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
PROCUREMENT
P.O. BOX 30026, LANSING, MI 48909
OR
530 W. ALLEGAN, LANSING, MI 48933

CHANGE NOTICE NO. 14
to
CONTRACT NO. 071B6200168
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF CONTRACTOR:	PRIMARY CONTACT	EMAIL
Client Network Services, Inc. (CNSI) 702 King Farm Boulevard, 2nd Floor Rockville, MD 20850	John H. Cousins III	jee@cns-inc.com
	TELEPHONE	CONTRACTOR #, MAIL CODE
	(301) 634-4600	

STATE CONTACTS	AGENCY	NAME	PHONE	EMAIL
CONTRACT COMPLIANCE INSPECTOR:	DTMB	John Spitzley	(517) 335-6612	spitzleyj1@michigan.gov
BUYER:	DTMB	Steve Motz	(517) 241-3215	motzs@michigan.gov

CONTRACT SUMMARY:

DESCRIPTION: **Medicaid Services Administration**

INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL OPTIONS INCLUDED	CURRENT EXPIRATION DATE
March 14, 2006	September 30, 2011	Two One-Year	September 30, 2013
PAYMENT TERMS	F.O.B	SHIPPED	SHIPPED FROM
N/A	N/A	N/A	N/A
ALTERNATE PAYMENT OPTIONS:			AVAILABLE TO MIDEAL PARTICIPANTS
☐ P-card	☐ Direct Voucher (DV)	☐ Other	☐ YES ☒ NO

MINIMUM DELIVERY REQUIREMENTS:

N/A

DESCRIPTION OF CHANGE NOTICE:

OPTION EXERCISED:	EFFECTIVE DATE OF CHANGE:	EXPIRATION DATE REMAINS:
☒ NO ☐ YES	November 29, 2012	September 30, 2013

Effective immediately this contract is hereby INCREASED to provide funding for various Community Health Administrative Management Payment System (CHAMPS) initiatives and on-going core operations support not to exceed $51,500,000.00. All initiatives funded by this change notice require prior approval by the Michigan Department of Community Health, Medical Services Administration of a project proposal before they are authorized to proceed. Project proposals will be added to the contract through subsequent change notices as they are approved.

All other terms, conditions, pricing and specifications remain unchanged.

Per Administrative Board Approval on December 18, 2012.

VALUE/COST OF CHANGE NOTICE:	$51,500,000.00
ESTIMATED AGGREGATE CONTRACT VALUE:	$227,154,724.00

Form No. DTMB-3521 (Rev. 4/2012)
AUTHORITY: Act 431 of 1984
COMPLETION: Required
PENALTY: Contract change will not be executed unless form is filed

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
PROCUREMENT
P.O. BOX 30026, LANSING, MI 48909
OR
530 W. ALLEGAN, LANSING, MI 48933

CHANGE NOTICE NO. 13
to
CONTRACT NO. 071B6200168
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF CONTRACTOR:	PRIMARY CONTACT	EMAIL
Client Network Services, Inc. (CNSI) 702 King Farm Boulevard, 2nd Floor Rockville, MD 20850	John H. Cousins III	jee@cns-inc.com
	TELEPHONE	CONTRACTOR #, MAIL CODE
	(301) 634-4600	

STATE CONTACTS	AGENCY	NAME	PHONE	EMAIL
CONTRACT COMPLIANCE INSPECTOR:	DTMB	John Spitzley	(517) 335-6612	spitzleyj1@michigan.gov
BUYER:	DTMB	Steve Motz	(517) 241-3215	motzs@michigan.gov

CONTRACT SUMMARY:

DESCRIPTION: **Medicaid Services Administration**

INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL OPTIONS INCLUDED	CURRENT EXPIRATION DATE
March 14, 2006	September 30, 2011	Two One-Year	September 30, 2013
PAYMENT TERMS	F.O.B	SHIPPED	SHIPPED FROM
N/A	N/A	N/A	N/A

ALTERNATE PAYMENT OPTIONS:			AVAILABLE TO MiDEAL PARTICIPANTS
☐ P-card	☐ Direct Voucher (DV)	☐ Other	☐ YES ☒ NO

MINIMUM DELIVERY REQUIREMENTS:
N/A

DESCRIPTION OF CHANGE NOTICE:

OPTION EXERCISED:	EFFECTIVE DATE OF CHANGE:	EXPIRATION DATE REMAINS:
☒ NO ☐ YES	November 29, 2012	September 30, 2013

Effective immediately this contract is hereby INCREASED by $6,500,000.00 to provide partial funding for the Affordable Care Act (Attachment 1) and ICD 10 Implementation (Attachment 2) projects. The attached CNSI proposals provided with this Change notice include the full scope of the projects for which the balance of the funding is expected to be added through a subsequent change notice following Administrative Board approval.

All other terms, conditions, pricing and specifications remain unchanged.

Per Administrative Board Approval on November 20, 2012.

VALUE/COST OF CHANGE NOTICE:	$6,500,000.00
ESTIMATED AGGREGATE CONTRACT VALUE:	$175,654,724.00

Form No. DMB 234 (Rev. 1/96)
AUTHORITY: Act 431 of 1984
COMPLETION: Required
PENALTY: Contract will not be executed unless form is filed

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET October 6, 2011
PROCUREMENT & REAL ESTATE SERVICES ADMINISTRATION
P.O. BOX 30026, LANSING, MI 48909
OR
530 W. ALLEGAN, LANSING, MI 48933

CHANGE NOTICE NO. 12
TO
CONTRACT NO. 071B6200168
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF CONTRACTOR / VENDOR CLIENT NETWORK SERVICES, INC. (CNSI) 702 King Farm Boulevard, 2nd Floor Rockville, MD 20850 Email: chatterjee@cns-inc.com	VENDOR TELEPHONE (301) 634-4600 VENDOR NUMBER/MAIL CODE BUYER/CA Steve Motz Tel: (517) 241-3215
Contract Compliance Inspector: John Spitzley Medicaid Services Administration	
CONTRACT PERIOD: From: 03/14/2006 To: 9/30/2013	
TERMS: Enclosed	SHIPMENT N/A
F.O.B. N/A	SHIPPED FROM N/A
MINIMUM DELIVERY REQUIREMENTS: N/A	
MISCELLANEOUS INFORMATION:	

NATURE OF CHANGE(S):

The state of Michigan Contract Compliance Inspector has been changed to John Spitzley. See contract information below:

John Spitzley
(517) 335-6612
spitzleyj1@michigan.gov

All other terms, conditions, specifications and pricing remain unchanged.

AUTHORITY/REASON:

Per agency and DTMB Purchasing Operations approval.

TOTAL ESTIMATED CONTRACT VALUE REMAINS: $169,154,724.00

Form No. DMB 234 (Rev. 1/96)
AUTHORITY: Act 431 of 1984
COMPLETION: Required
PENALTY: Contract will not be executed unless form is filed

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET September 29, 2011
PROCUREMENT & REAL ESTATE SERVICES ADMINISTRATION
P.O. BOX 30026, LANSING, MI 48909
OR
530 W. ALLEGAN, LANSING, MI 48933

CHANGE NOTICE NO. 11
TO
CONTRACT NO. 071B6200168
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF CONTRACTOR / VENDOR **CLIENT NETWORK SERVICES, INC. (CNSI)** **702 King Farm Boulevard, 2nd Floor** **Rockville, MD 20850** Email: chatterjee@cns-inc.com	VENDOR TELEPHONE **(301) 634-4600** VENDOR NUMBER/MAIL CODE BUYER/CA Steve Motz **Tel: (517) 241-3215**
Contract Compliance Inspector: Jay Slaughter **Medicaid Services Administration**	
CONTRACT PERIOD: From: **03/14/2006**	To: **9/30/2013**
TERMS: Enclosed	SHIPMENT **N/A**
F.O.B. **N/A**	SHIPPED FROM **N/A**
MINIMUM DELIVERY REQUIREMENTS: **N/A**	
MISCELLANEOUS INFORMATION:	

NATURE OF CHANGE(S):

Effective immediately this contract is hereby INCREASED by $31,498,938.00 and EXTENDED to 9/30/2013 (through exercising option). Refer to the attached CNSI proposal.

All other terms, conditions, specifications and pricing remain unchanged.

AUTHORITY/REASON:

Per agency, DTMB, and per the approval of the 8/16/2011 State Administrative Board.

INCREASE: $31,498,938.00

TOTAL REVISED ESTIMATED CONTRACT VALUE: $169,154,724.00