

Major Activity	Description	Phase
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
<b>Phase III Deliverables</b> <ul style="list-style-type: none"> <li>• UAT Results Report (State Deliverable)</li> <li>• Code Deployment to Production</li> </ul>		

### 2.5.2.1 Phase I – 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 Consumer Engagement Project. CNSI will conduct the formal project kickoff and deliver orientation for the project effort.

The major milestones associated with this activity are:

- Identifying the participants from the State of Michigan
- Conducting and completing the project kickoff meeting

#### Activity 2: Project Planning

During this activity, CNSI will develop the project schedule to track and monitor the progress of the Member Portal project. The project schedule outlines the list of all the activities that are needed by CNSI to fulfill the needs of the Member Portal project. CNSI will also take the responsibility of integrating DCH and DTMB tasks in the project schedule to make sure all the dependencies are identified and tracked accordingly. Once the integrated schedule is reviewed and approved by all the relevant stakeholders, it is baselined.

The milestone associated with this activity includes:

- Integrated Project Schedule

#### Activity 3: Requirements CAD Sessions

The goals of the Consumer Engagement Project have been defined at a high-level within this SOW. During this activity, CNSI will host CAD sessions to elicit and validate detailed functional and technical requirements. The CAD sessions will include the functional and technical SMEs of the State of Michigan and CNSI.

This will result in creating a requirements specification document which provides a clear, concise, and final definition of each requirement necessary to complete the Consumer Engagement Project. The approved requirements will be used during the design and development activities in Phase II.

The major milestones associated with this activity are:

- Delivering the functional requirements specification document.

#### **Activity 4 – Design CAD Sessions**

During this activity, CNSI will host CAD sessions to produce detailed design artifacts. Sessions will be organized and scheduled as per requirements and the solution’s technical architecture. CAD sessions will include functional and technical SMEs of the State of Michigan and CNSI.

This will result in final design artifact, 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 through 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 MDCH approval upon completion of all design sessions.

The major milestone associated with this activity includes:

- Delivery of the as-built DSDD

### **2.5.2.2 Phase II – Coding, and System Testing**

#### **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 requirements as defined in the as-built DSDDs for Member Portal, including system aspects, such as:

- Rendering Member portal on tablet devices
- Screens
- Functionality (use cases)
- Data Models
- Reports
- Interfaces
- Integration components

Finally, in 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. The UAT test scenarios and scripts are prepared by the State of Michigan. For the Consumer Engagement 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:

- Completing the system test preparation
- Completing the UAT preparation (State)

#### **Activity 4 – Implementation Planning**

During this activity, CNSI collaborates with the State and other stakeholders to coordinate the timing of the deployment of each phase of the system changes. Consumer Engagement Project will be incorporated into the regular 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. Milestones associated with this activity include:

- System test results report is delivered
- Code is deployed in the 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. The major milestone associated with this activity is the publishing of the UAT Results Report by the State.

#### **Activity 2 – Production Deployment**

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

The major milestone associated with this activity is::

- Deploying the code in the production environment

## Section 3: General Assumptions

This SOW is presented based on the following assumptions:

1. The solution only covers the design and implementation of the Member Portal application. It is assumed that through this project Member Portal application will only be integrated with CNSI's existing products myHealthButton and eFRM.
2. The ability to realize the full functional capabilities of eFRM is contingent on the availability of clinical information in CCD format and other dependent datasets.

## Section 4: Pricing

This section presents CNSI's fixed-price, overall labor cost for completing the Please refer Figure 4 – Project Work Plan below. 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 Error! Reference source not found.8. The total fixed-price labor cost for the Please refer Figure 4 – Project Work Plan below. Project is \$4,000,000.

## Section 5: Appendices

### 5.1 Appendix A: eFRM

eFRM™ - FUSION OF CLINICAL AND ADMINISTRATIVE DATA



## eFRM™

- Fuses clinical and administrative data sets
- Integration services with EHR systems
- Terminology standardization for disparate EHR systems
- CCD generation

### eFRM Overview

CNSI's electronic fusion repository management (eFRM™) and connected cloud services provides a patient's electronic comprehensive health record assembled from multiple sources.

To achieve the highest impact on patient safety, patient information from across the health care continuum must be integrated and presented to clinicians at the point of care. The Fusion Data Set supports creation of a Patient Health Record and leverages CNSI's eFRM and cloud-based integration services along with a master person index, recent locator service, and web viewer integrated into the platform. eFRM provides data where and when it is needed.



### Highlights

- Assimilates data elements from State Medicaid systems
- Comprehensively stores and analyzes fused clinical and administrative data
- Provides a summarized view of the clinical and administrative data of a patient
- Enables terminology standardization from diverse EHR systems

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To learn more about eFRM, please contact [eFRM@cnsi-inc.com](mailto:eFRM@cnsi-inc.com)



## 5.2 Appendix B: myHealthButton

ANNOUNCING A NEW MEDICAID MOBILE APP ON THE GO!

# CONSUMER ENGAGEMENT IN ONE TOUCH



**myHealthButton™**

- Extending mobility for eQuality in health care
- Nudging behavior for improved health care outcomes
- Managing security for personal health information

### myHealthButton™

As the ecosystem of health care becomes even more interconnected, greater cost efficiencies for Payers are being realized, as well as faster and improved health care management by Providers. Now there is a new mobile application that delivers better outcomes to Consumers – myHealthButton! This mobile app for the iPhone and Android gives beneficiaries real-time access, standards-based, to Medicaid benefits instantly and securely in the palm of your hand. [With myHealthButton, your state's Medicaid benefits can be just a tap away!](#)

The time has arrived for mobility in Medicaid and health care. As shown below, over 52% of consumers would use smart phones to monitor health information. myHealthButton delivers on this promise.

**Features in myHealthButton are:**

- View Member Details, such as Medicaid Health Card information
- View Member Benefits, such as Eligibility, Coverages, and more
- View Authorized Providers and Qualifying Diagnosis from state systems
- View Food Benefits Balance information for women, infant and children
- Find Medicaid Providers "Near Me" or by a customized search\*
- Flexible cloud-based API implementation with data stored securely in agency systems
- Based on a mobile platform for rapid deployment of additional apps
- Download Blue Button-formatted health information
- \* for Fee-For-Service Beneficiaries Only

### Extending Mobility for eQuality in Health Care

**Source of Data:**

1. Pew Research Center, "Smart Mobile Use: Trends, Expectations, and the Role of Smartphones," February 1, 2014
2. Active Technology Smart Trends across Demographic for Health Coverage, The Kaiser Commission on Medicaid and the Uninsured, December 2013
3. 2013 Survey of Health Care Consumers in the United States, MyHealthButton, October 2013
4. 2013 Survey of Health Care Consumers in the United States, MyHealthButton, October 2013

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## Section 5: Glossary

### Acronyms List:

Acronyms	Descriptions
eFRM	Electronic Fusion Repository Management
CCD	Continuity of Care Document
EHR	Electronic Health Record
SSL	Secured Socket Layer
SOW	Statement of Work
MDCH	Michigan Department of Community Health
MVC	Model-View-Controller
DSDD	Detailed System Design Document
DTMB	Department of Technology Management & Budget
UAT	User Acceptance Testing

# **New Third Party Liability Coverage Add Change Interface (TPL PA593 Initiative) Project Statement of Work**

**Prepared For:**

**State of Michigan  
Department of Community Health  
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Lansing, Michigan 48909**



**Prepared By:**

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**January 31, 2014**

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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 new third party liability coverage add change interface (TPL PA593 Initiative) project for the Michigan Department of Community Health (MDCH). CNSI proposes to complete the new third party liability coverage add change interface project under a fixed-cost agreement.

The new third party liability coverage add change interface project will replace CHAMPS present interface with the Third Party Electronic Data (TED) system incorporating new requirement for Michigan's Public Act 593<sup>1</sup>, the federal Affordable Care Act and extend the interface to include additional data elements to support requirements imposed by the Affordable Care Act and other evolutionary changes to MDCH's business. It will also establish a new real-time interface to allow the TED system to send updates for beneficiary coverage directly to CHAMPS as soon as they are detected.

### 1.1 Regulatory and Business Drivers for Change

Currently, CHAMPS sends a roster of Medicaid beneficiaries to Health Insurance Payers for comparison to their roster of insured individuals. The Health Insurance Payers respond with a list of those Medicaid beneficiaries who also have commercial insurance coverage from the Payer.

Public Act 593 requires Health Insurance Payers to provide Michigan with a roster file containing coverage information for every member that had active coverage in the last three years. CHAMPS does not currently compare this roster to the Medicaid beneficiaries on file nor does it record any reported TPL coverage for matched beneficiaries. The TED system has been designated as the inbound receipt point for information from other carriers. This statement of work addresses receipt of data from Michigan Blue Cross Blue Shield which is the State's largest commercial carrier.

In addition to the new requirements imposed by Public Act 593, MDCH has recently requested that we also add the ability for the TED system to transmit new and changed TPL coverage records directly to CHAMPS in a real-time mode using the same web service which Siebel CRM uses to send TPL updates to CHAMPS.

Together, these two changes to CHAMPS will improve the data available to the system when processing claims and reduce the need to recover payments made by Michigan Medicaid where beneficiaries have active third party coverage.

### 1.2 CNSI Capabilities

CNSI's approach to enhance CHAMPS to support the new third party liability coverage add change interface 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 the achievement of their desired business results and creating enterprise value. CNSI will employ its

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<sup>1</sup> (Act No. 593; Public Acts of 2012 2013)

## CNSI

### New Third Party Liability Coverage Add Change Interface (TPL PA593 Initiative) Project Statement of Work

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. 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, including the contractor supporting the TED system, 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 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 new third party liability coverage add change interface project and is confident in its ability to achieve that goal.

CNSI

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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.

## 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 New Third Party Liability Coverage Add Change Interface (TPL PA593 Initiative) Project 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 3-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.

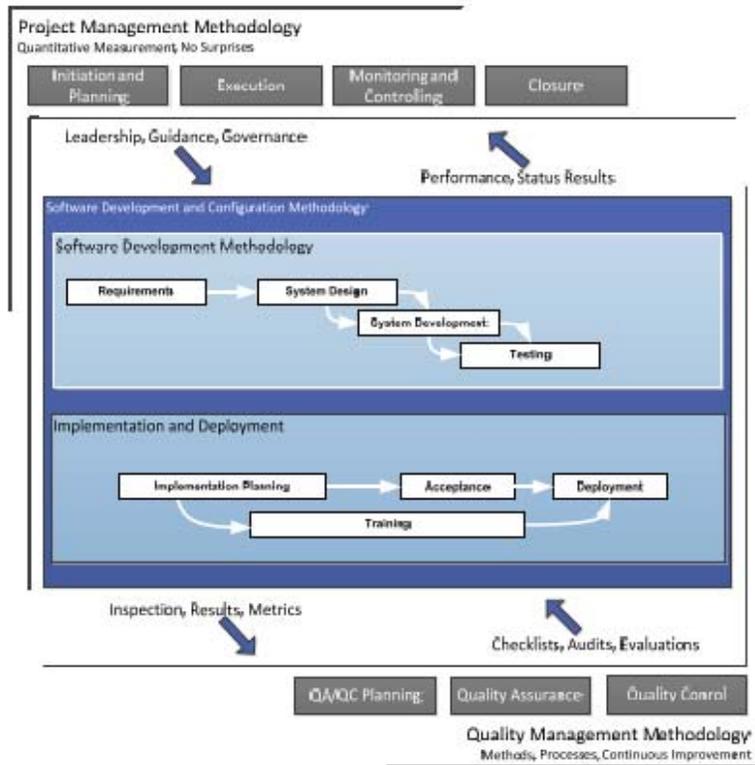


Figure 1. CNSI’s Project Management and Quality Management Framework

## CNSI

### New Third Party Liability Coverage Add Change Interface (TPL PA593 Initiative) Project Statement of Work

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 new third party liability coverage add change interface 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.

CNSI

New Third Party Liability Coverage Add Change Interface (TPL PA593 Initiative) Project Statement of Work

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 new third party liability coverage add change interface 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*.

## 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.

### 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.

## 2.4 Solution

This section will review CNSI's proposed new third party liability coverage add change interface project including technical and functional overviews. Business and technical requirements will be elicited and documented as a part of the first phase of the project.

### 2.4.1 Technical Overview

The new third party liability coverage add change interface project is expected to use existing technical channels. No new technical, architectural, or infrastructure requirements are anticipated. For the batch interface with TED, this project will replace an existing interface with an enhanced version of that same interface. Preexisting web service functionality between the Customer Relationship Management (CRM) subsystem and CHAMPS performs a very similar function as is needed for the real-time interface between TED and CHAMPS. CNSI will reuse and modify this existing web service to accomplish the necessary data exchange.

### 2.4.2 Functionality

CHAMPS will be modified to provide the following capabilities to MDCH:

- Accept a revised format of the inbound Blue Cross Blue Shield (BCBS) TPL coverage batch interface in the PA 593 file format.
- Consume TPL policy data provided by the TED system via real-time web service.
- Use matching criteria to identify beneficiaries received on the BCBS interface to apply updates to the beneficiary records in the CHAMPS TPL subsystem.
- Provide certain TPL match and update control reports as defined during design.
- Update selected screens in CHAMPS subsystems to accommodate new data elements.

Phase I is focused on the revisions to the batch interface with TED. Phase II is focused on the implementation of the web service and reporting.

## 2.5 Technical and Phased Approach Work Plan

CNSI has created an initial work plan and timeline for the new third party liability coverage add change interface project. This work plan describes the expected activities for the proposed phases and major activities. This information is presented in Figure 3 below. This project will be implemented over two releases coinciding with CHAMPS production releases 4.12 and 5.1. A detailed description of the major activities for this project is presented in *Section 2.5.2 Phased Approach Work Plan*.

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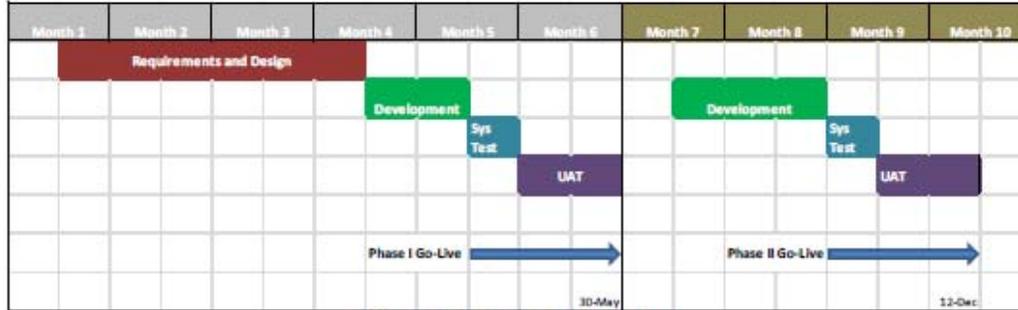


Figure 3. Initial Project Work Plan

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 new third party liability coverage add change interface 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 is currently undergoing CMMI certification which includes our SDLC. CNSI's SDLC processes have been adapted to address the specific needs of the project. This project will be divided into 3 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 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.

For the new third party liability coverage add change interface project, CNSI will integrate the new features through the standard CHAMPS operational release process. As soon as system testing is 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.

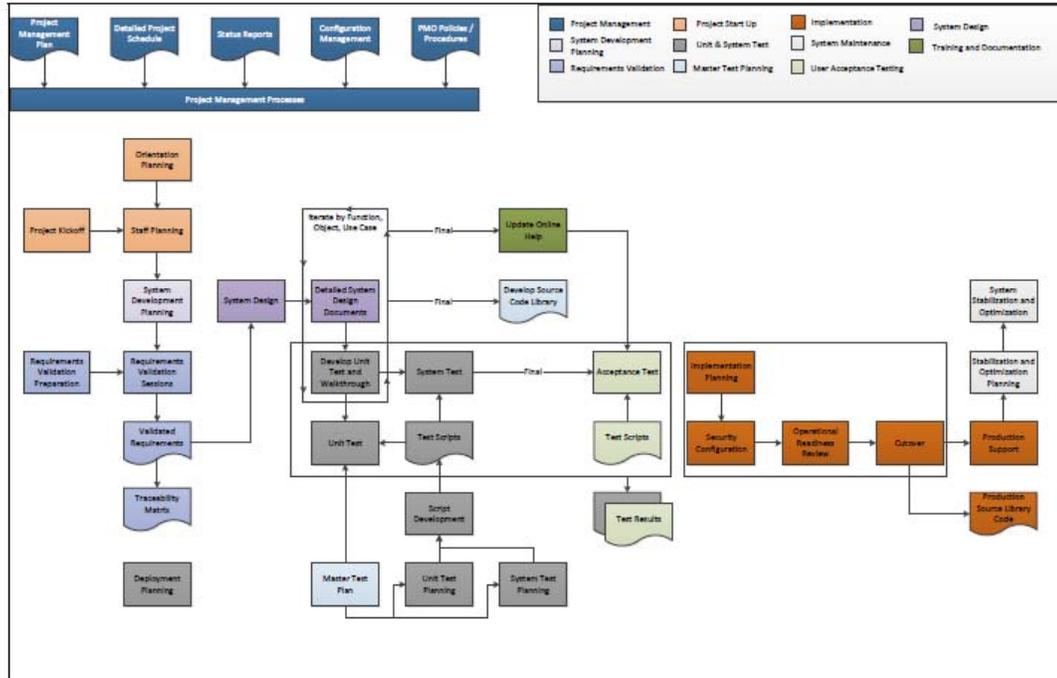


Figure 4. iVision360 Process Diagram

## 2.5.2 Phased Approach Work Plan

CNSI proposes an overlapping, three-phase approach to the new third party liability coverage add change interface project consisting of requirements elicitation and validation, design, development, and implementation.

The three phases are:

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

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

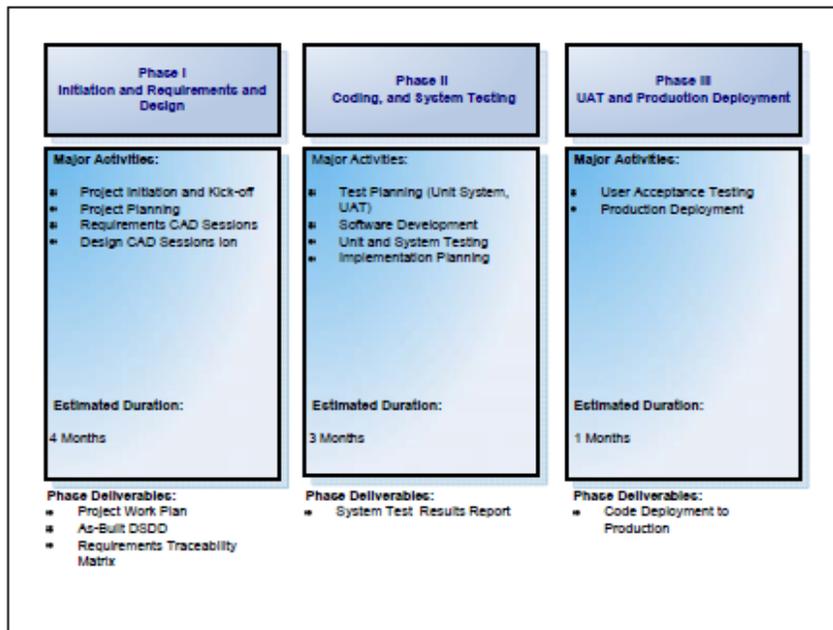


Figure 5. High-Level Project Phases and Activities

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
<b>Project Initiation</b>	Establish the project team structure, key stakeholders, and operating guidelines for team activity throughout the course of the project.	Phase I
<b>Project Planning</b>	Establish project schedules.	Phase I
<b>Requirements CAD Sessions</b>	Conduct CAD sessions to elicit and validate requirements for the affected CHAMPS subsystems.	Phase I
<b>Design CAD Sessions</b>	Conduct CAD sessions to document detailed system design changes for the affected CHAMPS subsystems	Phase I
<b>Phase I Deliverables</b> <ul style="list-style-type: none"> <li>• Project Work Plan</li> <li>• As-Built DSDDs</li> <li>• Requirements Traceability Matrix</li> </ul>		
<b>Test Planning</b>	Conduct detailed test planning for each phase of testing: Unit, System and UAT.	Phase II
<b>Software Development</b>	Software changes required to support the detailed functional design including: <ul style="list-style-type: none"> <li>• Screens</li> <li>• Functionality (driven by use cases)</li> <li>• Data Models</li> <li>• Reports</li> <li>• Interfaces</li> </ul>	Phase II
<b>Unit and System Testing</b>	Internal CNSI testing of developed functionality at the component, subsystem, and system level, including end-to-end (E2E) regression testing.	Phase II
<b>Implementation Planning</b>	Coordinate production installation of the system changes.	Phase II
<b>Phase II Deliverables</b> <ul style="list-style-type: none"> <li>• System Test Results</li> </ul>		
<b>UAT</b>	MDCH testing of all system changes using formal UAT test scripts.	Phase III