Operations and Maintenance (O&M) Proposal

Community Health Automated Medicaid Processing System

Prepared by:

CNSI
6465 Millennium Drive
Lansing, Michigan 48917

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Revision History

Revision Level	Date	Description	Change Summary	Changed By
Version 1.00	7/22/2013	Initial Document	Changes for 5 years extension	CNSI

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Section 1 – Project Identification

1.1 Background

The State of Michigan has required continued support for the CHAMPS operations and maintenance contract. This request will be implemented via a change of scope to CNSI's delivery requirements for the Transition Phase of the Community Health Automated Medicaid Processing System (CHAMPS) Project (ITB# 071B6200168).

The current CHAMPS operations support and maintenance contract (Change Order 9) expires September 30, 2013. This proposal contains a detailed scope of work for CNSI to continue operating CHAMPS for an additional five years as well as providing additional required services to support the operational needs of Michigan Department of Community Health (MDCH) and Illinois Health and Family Services (HFS). These efforts will be supported by information technology (IT) services from Michigan Department of Technology, Management & Budget (DTMB) and Illinois Central Management Services (CMS). To avoid confusion between the Illinois CMS department and the federal Centers for Medicare & Medicaid Services (CMS) agency, the Illinois CMS department will be referred to as ICMS throughout the rest of this document.

This change order includes a detailed explanation of the changes and the associated time extension, the value added services realized through CNSI's continued operations support of CHAMPS, along with the impact of cost, the allocation of labor, associated risks, and applicable state responsibilities. This includes expansion of operations to the multi-state model with the addition of Illinois Provider Enrollment and eMIPP support beginning in Fiscal Year 2014 and the full MMIS support in Fiscal Year 2017. This document contains the full scope of operations and supplemental services to support both Michigan and Illinois for the next five years.

The overall cost for undertaking the proposed five-year extension is presented in *Section 5 – Resource Model and Cost*. That cost includes the required tasks to support CHAMPS operations and maintenance for the states of Michigan and Illinois in addition to the supplemental services required from CNSI. Operational support for Illinois is introduced in Year 1 of the proposal with the eMIPP and Provider Enrollment implementations and expands to full Medicaid management information system (MMIS) operational support by Year 4. *Section 6 – State Responsibilities and Statements of Fact* identifies the state responsibilities for both Michigan and Illinois and the statements of fact that the proposal is based upon.

1.2 Overview of CHAMPS Project History

In April 2006, CNSI began a partnership project with the State of Michigan to replace the State's 25-year-old legacy MMIS with a new system that, not only facilitates business flexibility to accommodate the evolving landscape of Medicaid, but also utilizes state-of-the-art technology. The State appropriately named this project the Community Health Automated Medicaid Processing System (CHAMPS) Project.

The timeline for the implementation of the various components which are already in production is detailed below:

- Provider Web Portal in December 2006
- Document Management System in July 2007
- Provider Enrollment application and portal in March 2008.
- Managed Care and Fee for Service Processing in September, 2009
- Encounters Processing in June, 2010
- Electronic Health Record (EHR) Medicaid Incentive Payment Program (MIPP) in January 2011
- CMS Certification in August 2011
- Health Insurance Portability and Accountability Act (HIPAA) 5010 Upgrade in January 2012
- CHAMPS Hardware Refresh in January 2012
- CHAMPS eCAMS™ HealthBeat Business Activity Monitoring in June, 2012
- Affordable Care Act Primary Rate Initiative in September, 2012
- ClaimsSure in January, 2013
- Affordable Care Act (ACA) Provider Credentialing and Core Transactions Phase 1 in June, 2013
- Completed various operational initiatives, including TPL integration, Maternal Outpatient Medical Services (MOMS) eligibility consolidation, and Children's Special Health Care Services (CSHCS) eligibility integration, which were released as operational enhancements

In addition, there are multiple projects currently running in parallel to CHAMPS operations:

- **International Classification of Diseases, Tenth Edition (ICD-10), Remediation:** The State of Michigan has contracted CNSI to evaluate the impact of the proposed changes which shall be introduced by the federal mandate to accommodate ICD-10 code sets by October 1, 2014. CNSI successfully completed the enterprise-wide Medicaid assessment to identify the impact of ICD-10 on the State's Medicaid systems and processes in April 2012. CNSI is currently remediating CHAMPS to make it ICD-10-compliant and is in user acceptance testing (UAT) and parallel testing phase of the project.
- **eMIPP:** Beginning 2013, changes to Stage 1 Meaningful Use (MU) and new Stage 2 MU measures will be rolled out in multiple phases.
- **CHAMPS Medicaid Compliance Project (CMCP):** 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 of Michigan has contracted CNSI to evaluate the impact of the above mandate on CHAMPS. CNSI is currently remediating CHAMPS and is in development phase of the project.

- **Illinois eMIPP:** This project's objective is to ensure the State of Illinois complies with federal requirements to meet Stage 2 MU and the revised Stage 1 MU for any attestations starting 2013 and 2014.

  The eMIPP product implementation will be completed in two phases over the course of Calendar Year 2013. The scope of this statement of work is to implement a compliant MIPP for program years through 2014.

  Phase I will provide the functionality needed to administer MIPP with participating providers in any of the first three years of the program, including Stage 1 MU. Phase I will incorporate changes to Stage 1 MU and definitions of eligible encounters for the EHR as published by in September 2012. Most of these changes are effective in CMS Program Year 2013.

  Phase II will provide the Stage MU functionality needed to administer the program through 2014. Stage 2 will revise a number of current MU measures in addition to adding new measures.

- **Illinois Early Provider Enrollment (EPE)**: MDCH has reached an agreement to provide services to HFS by delivering CHAMPS through a cloud-based, Medicaid as a service (MaaS) initiative.

  The early implementation of the Provider Enrollment subsystem is the first step toward the full implementation of MaaS for the State of Illinois. Implementing Provider Enrollment early will require careful analysis of the functional, technical, architectural, and data differences between the two states. This implementation will include three phases and be conducted over the course of eight months

- **Illinois Service Implementation Assessment (SIA):** The SIA is the first step towards achieving MaaS. The key objective of SIA is to use CHAMPS as the baseline solution for MaaS and to assess MaaS' compatibility to the State of Illinois' needs. The assessment will be conducted in three tracks as mentioned below.

  - **Functional Assessment:** This will identify all functional fits and gaps between CHAMPS and the MaaS 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 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 approach which identifies the key components of the infrastructure required for the cloud solution, and lays out a path for bringing the solution to an operational state. The recommended infrastructure and operations solution will meet all applicable State of Michigan standards.

  The overarching goal of the collaboration between Michigan and Illinois is to reuse and apply the MDCH way of doing business to the Illinois Medicaid Program. Therefore, the SIA will focus on the statutory and programmatic differences that will require modification of the base CHAMPS system in order to accommodate the work done by both states' Medicaid programs.

- **Document Management Portal (DMP):** 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 CHAMPS and its document management application to review claims data and support documentation.

  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.

1.3 Current Status of Project

As of September 14, 2009, CNSI began maintaining operation of CHAMPS. CNSI has successfully performed the operations in an extremely stable manner while continuously expanding the scope, functionality, and complexity of the system.

See below for some facts about CHAMPS and details on the initiatives that have been completed since go-live and those that are in progress.

Some facts about CHAMPS processing:

- Total Amount Paid Since Go-Live: **$42B+**
- Fee-for-Service (FFS) Transactions Since Go-Live: **80M+**
- Encounters Transactions Since Go-Live: **100M+**
- Current Eligible Beneficiaries: **2M+**
- Current Active Providers: **95K+**

CHAMPS Operations Highlights

FY 2012 – FY 2013

- ✓ Received CMS Certification
- ✓ Implemented HIPAA 5010
- ✓ Achieved **zero** defects
- ✓ Completed refresh of hardware and several large software upgrades
- ✓ Implemented multiple ACA initiatives
- ✓ Implemented eCAMS™ HealthBeat business activity monitoring
- ✓ Implemented various large initiatives around TPL and eligibility.

All of these initiatives and more were completed without disruption to business operations

Key achievements since CHAMPS go-live:

- Maintained 24x7x365 uptime for application
- Met or exceeded all service level agreements

- Achieved **zero** defects through a focus of quality delivery and careful release planning
- Completed annual disaster recovery unit and system testing
- Performed seamless conversion and migration of encounters to the production system
- Seamlessly implemented new hardware for claims adjudication processing which improved processing throughput
- Successfully completed 190+ pay cycles
- Successfully completed calendar year-end processing
- Successfully completed fiscal year-end processing
- Performed four-to-five major production code releases per year
- Completed various operational initiatives, including TPL integration, MOMS eligibility consolidation, and CSHCS eligibility integration which were released as operational enhancements
- Completed reconciliation of CHAMPS data with Data Warehouse
- Upgraded all components to Internet Explorer 8 compatibility
- Successfully implemented a complete hardware refresh and consolidation of all CHAMPS environments with minimal downtime
- Implemented database compression in lower environments and backups saving the State 20% in database storage and 80% in backup storage
- Implemented database encryption in flight in all environments
- Implemented data masking in development and test environments to protect protected health information (PHI) data
- Successfully implemented the EHR MIPP program including multiple phases
    - The eMIPP EHR MIPP provides incentive payments to eligible providers (EPs) and eligible hospitals (EHs) that adopt, implement, and upgrade in their first participating year and then demonstrate MU of certified EHR technology throughout the remaining years of their participation in the EHR MIPP.
- Successfully implemented the 5010 transaction set in advance of the CMS compliance date
- Implemented ClaimsSure predictive modeling and improper billing detection and reporting
- Implemented ACA compliance
    - Primary Care Rate Initiative
    - Provider Credentialing
    - Core Operating Rules (first of multiple phases)

- Implemented eCAMS™ HealthBeat Business Activity Monitoring as an application available to State users through the State's Single Sign-On (SSO) and kiosks in State buildings
  - Provides 90 real-time business metrics
  - Provides operational visibility and transparency to CHAMPS users, management, and stakeholders
- Built Data Dictionary
  - Data Navigator (DNav) is a data lineage tool to provide a means to understand and document the movement of data. The tool is architected based on a node-based (hierarchical) model with support for both upstream/downstream (left-right) and drill-up/drill-down (top-down) navigation schemes. The intent of this initiative is to provide business/technical users with a tool to answer some of the common questions - "Where did the value come from?", "Where does the value go to?" or, "How is a specific field value (screen field/report field) calculated" - without involving the time and effort of the CNSI operational resources.

Due to the success and stability of CHAMPS as an MMIS platform, CHAMPS is in the process of evolving to a multi-state cloud platform. This contract extension includes operational support for CHAMPS as well as supporting Michigan and Illinois in the cloud model. See *Section 1.5 MMIS as a Service Initiative* for details on the multi-state cloud platform.

1.4 CHAMPS Current Architecture

CHAMPS is built on the highly configurable and Web-centric electronic Claims Administration and Management System (eCAMS™) platform. eCAMS™ has been designed to support solutions based on service-oriented architecture (SOA), and this is evident in the powerful portfolio of available technical, business, and infrastructure services ranging from call center integration and eligibility updates to interface processing. eCAMS™ is aligned closely with the Medicaid Information Technology Architecture (MITA) and supports the core principles of business, technical, and information architecture.

CHAMPS Architecture Highlights

- ✓ Designed and tuned specifically to meet the volume and performance requirements of large-scale claims processing applications.
- ✓ Built with a ready to use health dictionary to implement edits, audits and rules.
- ✓ Built on a mobile-ready architecture to integrate seamlessly with the health care digital ecosystem
- ✓ Flexible to adopt new reforms, payment models, and regulations.
- ✓ Designed to provide Real-time

CNSI's eCAMS™ is the proven, CMS-certified technology platform that ensures business drivers are coherently addressed in the overall technical and system architecture. eCAMS™ technology is the industry benchmark for MMIS operational efficiency, stakeholder satisfaction, and improved health outcomes. eCAMS™ provides business process area–centric services, standards-based data repositories, enhanced decision support and analytical capabilities, and efficient and secure information sharing across system platforms for all internal and external stakeholders.

CHAMPS is engineered for performance. Based on J2EE and XML-based Web services technologies, it will align with the Service-oriented Architecture (SOA) strategy. The claims

processing engine is optimized for performance and has been benchmarked by a third-party to process more than 336 million claims per year.

The CHAMPS architecture provides the following key attributes that together bind business processes, information needs, and delivery operations:

Adaptable. The infrastructure provides flexible and easily replaceable components that can readily adapt to regulatory changes at the same pace as the business of Medicaid and healthcare delivery in the State. For example, automated prior authorization (PA) decision making can be implemented by using an internal rules engine rule set or by plugging into external clinical decision-making tools.

Accessible. It facilitates the user's ability to obtain the right information in the desired form quickly and easily. It provides different options to satisfy the needs of the various stakeholders (e.g., providers, State staff, other agencies, and recipients). For example, eligibility information is available through online Web inquiry, an interactive voice response (IVR) system, a customer help desk, and standard reports and data feeds. The Web portal offers each stakeholder a tailored interface specific to their need.

Interoperable. The service-oriented architecture (SOA) of CHAMPS directly implements MITA SOA strategy for services interoperability. Hiding programmatic details and enforcing service interface contracts is at the core of MITA. The Enterprise Service Bus (ESB) integrates these business services.

Connected. The architecture uses Web services via the Internet, allowing for data interchange with external sources, partners, and agencies in an efficient and economical manner. For example, its Web services framework is leveraged to validate licensing data from external databases, such as those of State licensing boards.

Secure. The architecture promotes a security design philosophy at all levels of the technology stack that provides a secure environment for information management and protects against unwanted loss or disclosure of data. Authenticated access and role-based access control (RBAC) enforces security in CHAMPS. Access controls and an audit trail support HIPAA Security and Privacy.

Maintainable. It uses modular, readily available, proven, and cost-effective systems and components to provide a highly maintainable system. The use of a rules engine for driving Claims Adjudication and other business process areas ensures quick and efficient turnaround for system changes during operation and maintenance.

Standards Based. It makes extensive use of industry standards where relevant and applicable. For example, CHAMPS aligns with the Web services standards published by the World Wide Web Consortium (W3C) and the Organization for the Advancement of Structured Information Standards (OASIS). Our standards adoption is based on applicability, maturity, and industry acceptance for each given standard.

The following diagram in Figure 1, provides an overview of the current CHAMPS Architecture and the external COTS products seamless integration with eCAMS™ using the Enterprise Service Bus (ESB). The integration adoption includes the use of a metadata repository

(interface service repository) and a rules engine to address system and policy related rules. This strategy allows for providing a more seamless, end-to-end process management across the different applications and COTS products.

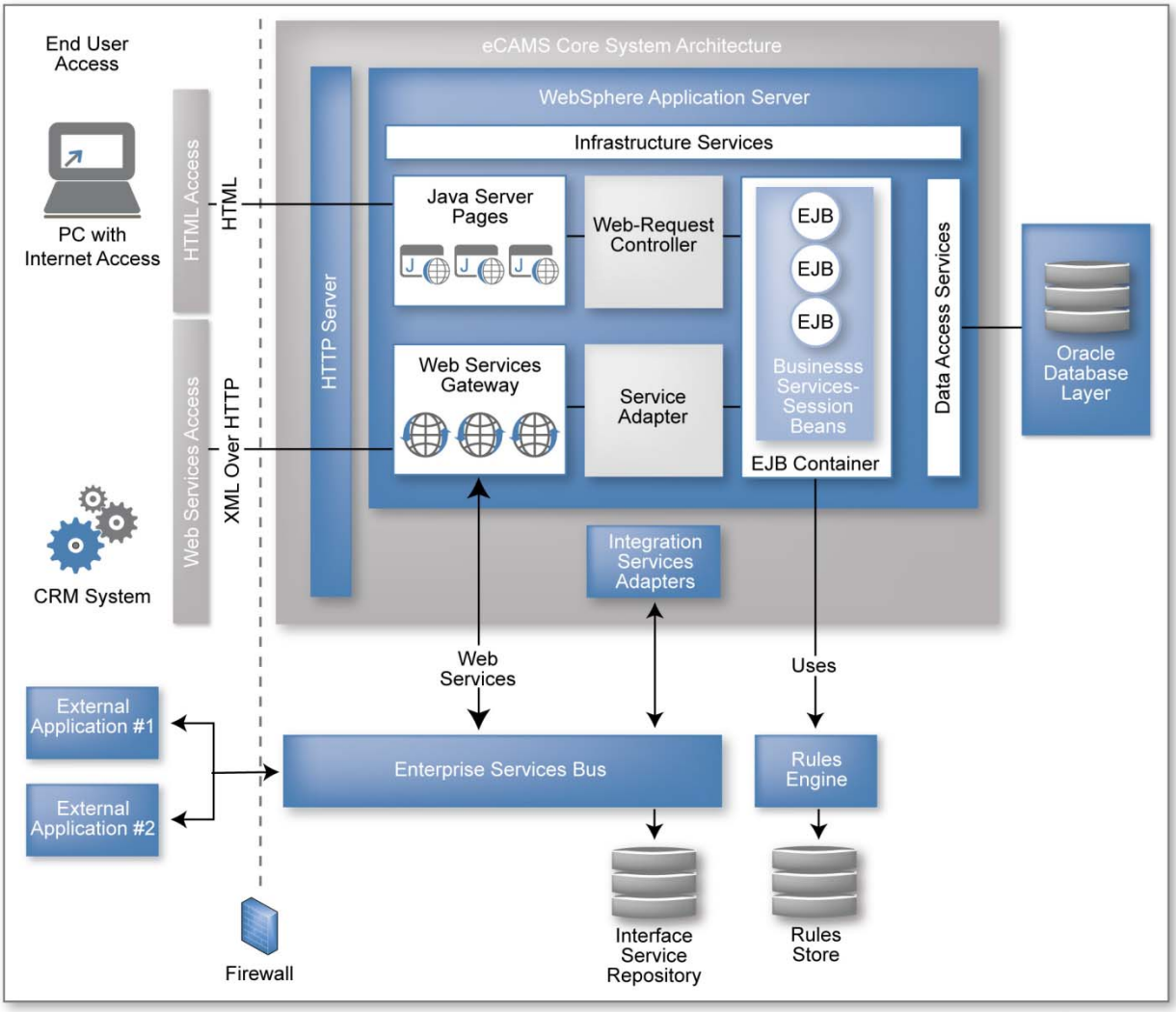

Figure 1 - Technical Architecture of CHAMPS.

1.4.1 COTS Integration

CHAMPS provides business process–centric services, standards-based data repositories, enhanced decision support and analytical capabilities, and efficient and secure sharing of information across system platforms and for all stakeholders. The Web-centric fully services-oriented platform seamlessly integrates with industry leading commercial off-the-shelf (COTS) products to leverage the value of existing applications. The key building blocks of the CHAMPS solution are comprised of the following COTS products that are integrated with eCAMS™. The description of usage below highlights the integration of these products with eCAMS™.

FileNet: FileNet, is used to implement the electronic document management system (EDMS), Images and documents are stored in the EDMS, and is linked and referenced directly from

within CHAMPS. Users will be able to access these from within CHAMPS, making FileNet completely hidden from the user perspective.

Siebel CRM: Siebel Customer Relationship Management (CRM) will power the relationship management functionality. This enables the call center team to work on individual calls and issues, track notes and follow-up etc. But more importantly they will be able to access MMIS information, stored within the eCAMS™ database, directly. Rather the CRM application pulls the MMIS data where required and presents this information to the user.

Doc1: Doc1 is a product suite to fulfill the correspondence and letter generation process within CHAMPS. Letter generation can be custom or pre-populated templates, both options available to the users, while working within eCAMS™.

Cognos: The suite of reporting and business intelligence (BI) tools including both a reporting and an analytical engine. Cognos provides the ability to quickly create report templates and assemble data required to prepare the report. This reporting engine is used within eCAMS™, to allow users access to their respective operational reports.

RuleIT Rules Engine: RuleIT a proprietary software built by CNSI, is a rules engine build specifically to address needs of the Medicaid space. RuleIT is used to address the needs of complicated decision making and also to host complex business rules. Within eCAMS™, RuleIT is used to adjudicate claims, manage Provider enrollment process

This current architecture for CHAMPS is expected to undergo some major upgrades as, DCH and DTMB prepare for the upcoming MMIS as a Service (MaaS) initiative.

1.5 MMIS as a Service Initiative

The MaaS implementation endeavor initiates a ground-breaking change in the way MMISs are developed, implemented, and delivered. The MaaS will present new challenges and opportunities, which will require technology enhancements, and an improved and robust architecture to manage the multi-tenant model. The MaaS implementation will become the first cloud-based MMIS solution.

MDCH has reached an agreement to provide services to HFS by delivering CHAMPS through the cloud-based MaaS initiative. The new system will enable the extension of CHAMPS to meet the needs of State of Michigan and Illinois. The architecture and design for MaaS will facilitate a cloud based MMIS offering, and thereby allowing the State of Michigan to share costs and improve return on investments, while improving service levels to all stakeholders.

The proposed architecture will leverage existing infrastructure and services currently offered by the State of Michigan in operating CHAMPS. The MaaS architecture will be built upon the same proven eCAMS™ architecture, leveraging the business process areas that are already fully developed and deployed, and demonstrated SOA that will help integrate the many different COTS products and solutions required to offer a full service MMIS. MaaS will enable the existing CHAMPS 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:

- Software as a Service (**SaaS**)
- Platform as a Service (**PaaS**)
- Infrastructure as a Service (**IaaS**)

Figure 2 depicts the proposed conceptual architecture for CNSI's MaaS cloud solution.

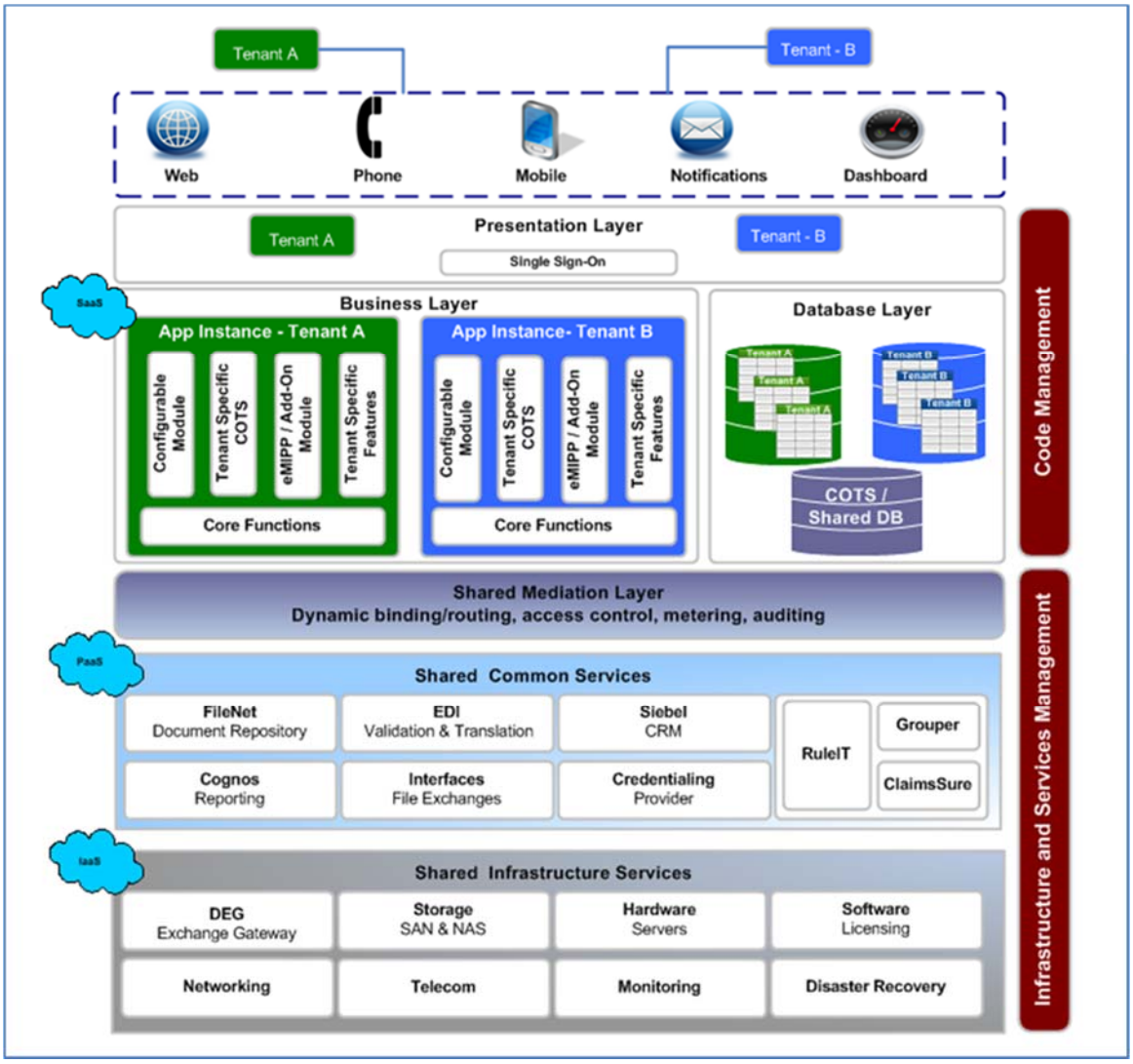

Figure 2. MaaS Proposed Architecture Conceptual Illustration

The model shown in Figure 2 is a conceptual illustration of technical architecture that will be supported under this operations and maintenance proposal. This architecture includes 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.

Software as a Service (SaaS): The SaaS layer includes the business components, databases, and the shared middleware that provide business features and their delivery mechanisms like the web, phone, and other mobile devices. The software components in the cloud model will be

instantiated for each tenant. However these applications services will be developed using the same software code base, reducing rework and duplication and thereby reducing maintenance and operational costs.

Platform as a Service (PaaS): The cloud architecture will provide certain key services that can be shared across the tenants in the cloud. The PaaS layer includes shared common platform services, 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. PaaS offerings facilitate the deployment of applications without the cost and complexity of buying and managing the underlying hardware and software and provisioning hosting capabilities. For example, web sphere will as the platform that servers the application instances serving multiple tenants.

Infrastructure as a Service (IaaS): The cloud architecture will provide a shared infrastructure services model, where the existing State of Michigan infrastructure components are leveraged. This will allow reduced investments and enable sharing of costs between the tenants in the cloud. The IaaS layer includes shared infrastructure services providing logical integration points for supplemental value added features as shown. The IaaS layer is designed to be scalable to facilitate adding newer features with time.

Presentation Layer: Each tenant will have access to a configurable interface, which will allow customization of the presentation layer to suit their tastes and needs. This will allow each tenant to believe they are acquiring a full blown MMIS, even as the internals are shared and or common as described previously.

Together, these layers comprise the logical elements of the MaaS cloud environment. This approach is 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.

MDCH will operate CHAMPS for HFS using the MDCH CHAMPS application software-base with separation of the underlying data in a shared infrastructure. This approach will greatly reduce the time and cost of the MaaS implementation for HFS. This is the essence of the cloud model. The successful implementation of MDCH's MMIS in the cloud model positions the State to consider operating CHAMPS as a service to other states.

The MaaS solution, which fully embraces the leverage conditions described in CMS's Enhanced Funding Requirements: Seven Conditions and Standards. The leverage conditions described in this CMS document emphasize:

- **Multi-state efforts** that are developed with the participation and contribution of more than one state. In this case, the solution pioneered by MDCH will be leveraged to support the needs of HFS and potentially other states in the future.
- **Availability for reuse** of components and solutions that can be reused by other states. In this case, the software application and business rules are components that will be reused by HFS.
- **Identification of open source, cloud-based, and commercial products** is proposed as a future state to be considered in the planning process. This effort positions MDCH

and HFS to move forward with the MaaS cloud-based solution in the subsequent MaaS implementation project.

- **Customization** is noted as a consideration in the context of transfer solutions. MDCH is going far beyond the concept of a transfer solution. The SIA effort will identify the extent to which customization may need to be considered. Because of the architecture of CHAMPS “customization” will be largely a function of configuration. Using the results of the assessment, MDCH will be able to evaluate and minimize changes through collaboration with HFS on a common application platform.
- **Transition and retirement plans** are noted in terms of reducing or eliminating duplicative systems. Through this multi-state collaboration, there is the potential to consolidate some technological components where the system requirements are fully met in the cloud-based MaaS solution.

In addition to the benefits described in the discussion of Seven Conditions and Standards above, the MaaS solution offers the following expected benefits.

Table 1. MaaS Benefits

Area	Description
Michigan's Contribution to CMS and Medicaid Transformation	Multi-State Governance Model Cloud Framework Business Reference Model for MMIS Cloud Implementation
Reduced Cost to Operate Michigan and Illinois' MMISs	Reduced infrastructure and operational costs; no tenant pays full price for ongoing operations of the MMIS. (estimated at a 20% reduction to Michigan) Reduced cost for future enhancements and implementation of federal mandates; each tenant pays part of the cost. (estimated at 50% for each instance) As future tenants are added, the cost of operating the system for each tenant goes down.
Intangible Benefits	Michigan further enhances its image as a Medicaid leader Michigan has the opportunity to become a national MMIS technology hub.

During the timeframe covered by this proposal, the MaaS initiative will migrate into the ongoing operations and maintenance environment in a series of incremental implementations.

Table 2. MaaS Implementation Timeline

Implementation Stage	Description	Operational Support Services Required	Timeline
Stage 1 – Shared Model	eMIPP Implementation – Stage 1 Meaningful Use	eMIPP Application Support Operations Support Infrastructure Support Operations Management	Early Third Quarter 2013
	eMIPP Implementation – Stage 2 Meaningful Use	eMIPP Application Support Operations Support Infrastructure Support Operations Management	Early First Quarter 2014
	Early Provider Enrollment Implementation	Provider Enrollment Application Support Operations Support Infrastructure Support Operations Management	Last First Quarter 2014
Stage 2 – MaaS Cloud Model 1.0	Full MMIS Implementation in multi-tenant cloud infrastructure.	Full MMIS Application Support Operations Support Infrastructure Support Operations Management	2016
Stage 3 – MaaS Cloud Model 2.0	Full MMIS Implementation with enhanced shared features.	Full MMIS Application Support Operations Support Infrastructure Support Operations Management	2017

Operational support and maintenance for MaaS begins with the first planned implementation in 2013. During the time covered under this agreement, infrastructure and operational support will also evolve to achieve the shared cost benefits previously described.

1.6 CNSI Value Proposition

CNSI provides value for the State of Michigan through the continued operation of CHAMPS in a variety of tangible and intangible ways. This value proposition is a result of CNSI's staff's intimate knowledge of the intricacies of the architecture and workings of eCAMS™ and CHAMPS. Through this knowledge, CNSI has been able to streamline the operation of CHAMPS and establish an operations team that maximizes this knowledge. In addition, the CHAMPS operations team has absorbed large increases in functionality from operational enhancements and initiatives, such as HIPAA 5010 and ACA while keeping within the operations resources plan. This could only be accomplished through careful coordination during the transition to operations of each change and adherence to established operational processes. Moreover, as presented in *Section 5 – Resource Model and Cost* of this proposal, CNSI has identified areas and processes over the past four years while supporting CHAMPS that allow CNSI to efficiently and effectively define the optimum staff resources required to continue operating CHAMPS over the proposed five-year timeframe. This could only be realized by CNSI through its intimate knowledge of CHAMPS and the tasks needed to ensure an efficient implementation of the required operational processes.

CNSI Value Proposition

- ✓ Streamlined and efficient operations structure and processes
- ✓ Emphasis on continuous improvement
- ✓ High quality delivery resulting in few defects
- ✓ Excellent SLA compliance track record
- ✓ Strong Systems integration skills enabling integration with other state systems and technologies
- ✓ Strong infrastructure architecture, management, and execution expertise leading to efficient use of hardware resources
- ✓ Bias for technical innovation positioning CHAMPS to move to a multi-state cloud platform

With the introduction of the multi-state model in 2014, the emphasis on an efficient structure and mature processes continues in order to keep staffing and costs aligned with budgetary constraints. CNSI has designed a multi-state operations model that will support both Michigan and Illinois without doubling or tripling the staffing levels. In fact CNSI's operations staffing levels will increase by 47% from Fiscal Year 2014 to Fiscal Year 2018 while expanding to both states and supporting an aggregate four-to-five times the number of transactions and users. In addition, CNSI will be supporting state staff from both Michigan and Illinois and large increases in functionality developed and deployed during the five-year period.

Figure 3 represents a graphic illustration of how CNSI plans to support both Michigan and Illinois through the rollout of the MaaS initiative.

Figure 3. Combined Core Operations Staffing Trend

The following sections detail the benefits that CNSI provides to the states of Michigan and Illinois.

1.6.1 Quantifiable Benefits to the State of Michigan

Table 3 demonstrates how, through its processes and efficiency, CNSI has produced value for the State of Michigan. This section provides a summary of some of the benefits provided by CNSI's operation of CHAMPS.

Table 3. Quantifiable Benefits

Measurement Area	Benefits Provided	Validation
Paper Claim Processing	Streamlining of State staff since CHAMPS has reduced the need for providers to submit paper claims Paper claims have been reduced to less than .5% of claims	Paper Claims Count Trend See Figure 4. Paper Claims Count Trend
Claims Suspension	Reductions in State staff required to address suspended claims Increase provider satisfaction through lower claims suspension rate Claims suspension rates have remained at or below benchmark levels	Claims Suspension Count Trend See Figure 5. Claims Suspension Count Trend Claims Suspension Percentage Trend See Figure 6. Claims Suspension Percentage Trend

Measurement Area	Benefits Provided	Validation
Application Defects	Reductions in State staff time spent on defects Defect counts were reduced to **zero** in December 2012 and have remained caught up in each maintenance release	Defect Count Trends See Figure 7. Outstanding Defect Count Trend
Application Enhancements	Reductions in enhancements lower the total cost of ownership of CHAMPS for the State Enhancement trends have remained at consistent levels	Enhancement Count Trends See Figure 9. Outstanding Enhancements Count Trend
CRM Service Requests	Reductions in State staff for the CRM area Service request growth has remained proportionate to growth in provider and beneficiary populations	Service Request Count Trend See Figure 11. Total CRM Service Requests Count Trend MI Enrolls Service Request Count Trend See Figure 12. MI Enrolls CRM Service Requests Count Trend
Combined Claim and Encounter Processing	CHAMPS processes both claims and encounters which eliminates the need for a separate system for encounter processing as existed in the legacy system	CHAMPS has processed over 100 million encounters since it went live.
Eligibility Inquiry	Reductions in State staff to support manual eligibility inquiry 270/271 transaction volumes have climbed steadily as providers take advantage of the automated system	270/271 Response Trend See Figure 14
Systems Consolidation	Lower maintenance, support, and staffing costs	CHAMPS has brought in the functionality of several previously standalone systems including MOMS and BMP.

Measurement Area	Benefits Provided	Validation
Systems Integration	Efficiencies in processes spanning multiple systems	CHAMPS integrated previously separate TPL systems leading to automated, integrated processes for cost avoidance and recovery. Tighter integration with CSHCS led to improved enrollment processes into managed care plans for CSHCS beneficiaries.
UAT Support	Reductions in State staff to manage and support the UAT testing environment	CNSI has managed UAT for 4-5 major releases per year since CHAMPS went live.
Training and Provider Outreach Environments Support	Reductions in State staff to manage and support the training and provider outreach environments	CNSI has managed the training and provider outreach environments since prior to CHAMPS going live.
Process Automation	Many system processes have been automated in the early stages of CHAMPS operations, resulting in lower operations staffing levels required to run the system.	Operations Staffing Trend See Figure 15
Process Tuning	Many system processes have been tuned for improved performance which has resulted in lower operations staffing levels and reduced hardware resource consumption.	Operations Staffing Trend See Figure 15
Hardware / Software Planning	CNSI and DTMB collaborated on the hardware and software planning effort which saved the State time and cost it would have otherwise have spent on outside consulting services.	CHAMPS Hardware and Software Upgrade plan was published in 2010 and has been updated to reflect additional requirements over time to support new projects. The upgrade was complete in 2012 and is on track to provide the full five years of capacity growth that was planned
Siebel Upgrade	CNSI upgraded from Siebel 7.5 to 8.1. This was a major	Reduced annual maintenance costs for Siebel on current version

Measurement Area	Benefits Provided	Validation
	undertaking performed by CNSI at no cost.	
Database Compression	Reduced storage costs	Compression of backups have resulted in a 80% reduction in backup storage and a 20% reduction in data storage across all environments

The following sections provide updated metrics to serve as validation for the benefits described in *Section 1.6.1 Quantifiable Benefits to the State of Michigan*.

1.6.1.1 Paper Claims Count Trend

Figure 4 represents the trend of paper claims volume over the last 12 months.

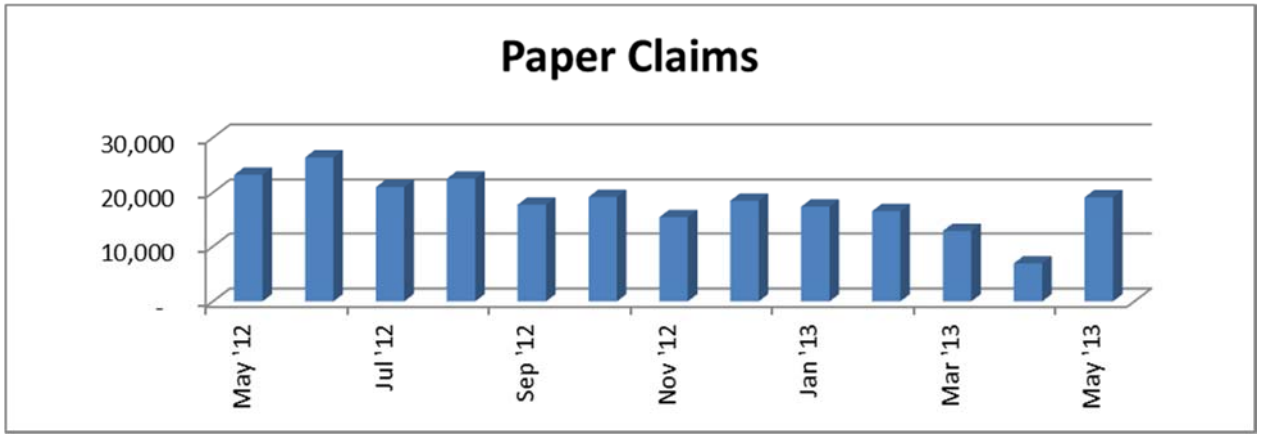

Figure 4. Paper Claims Count Trend

The above chart demonstrates that the Paper Claims volume has steadily declined to less than .5% of claims volume. This represents significant cost savings to the state as the cost to process paper claims is much higher than electronic claims.

1.6.1.2 Claims Suspension Count Trend

Figure 5 represents the trend of suspended claims volume over the last 12 months.

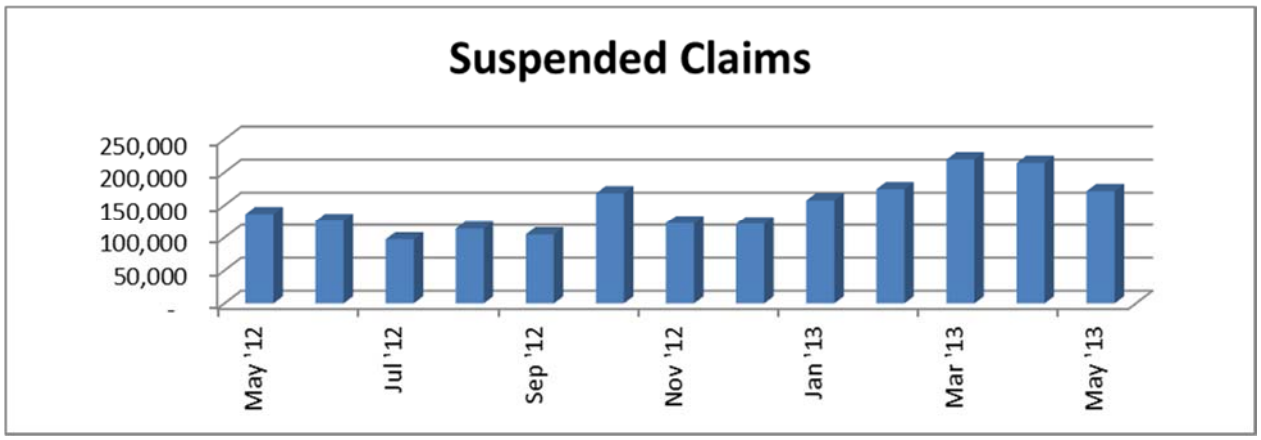

Figure 5. Claims Suspension Count Trend

The above chart demonstrates that the Suspended Claims trends have remained within the benchmarks established for CHAMPS. This drives Prompt Pay percentage which is a key CMS compliance metric.

1.6.1.3 Claims Suspension Percentage Trend

Figure 6 represents the trend of claims suspension percentage over the last 12 months.

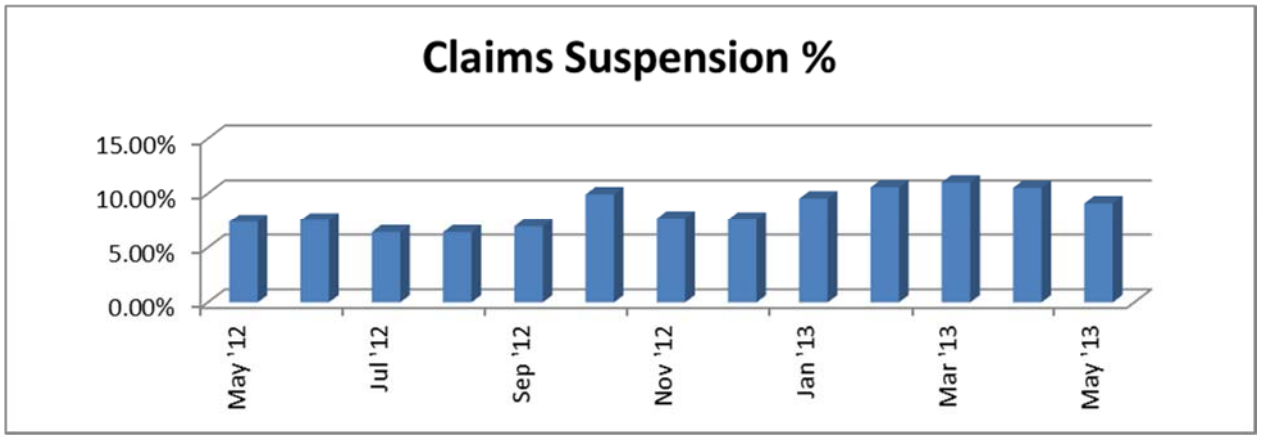

Figure 6. Claims Suspension Percentage Trend

The above chart demonstrates that the Suspended Claims trends have remained within the benchmarks established for CHAMPS. This drives Prompt Pay percentage which is a key CMS compliance metric.

1.6.1.4 Defect Count Trend

Figure 7 represents the trend of outstanding defects over the last 12 months.

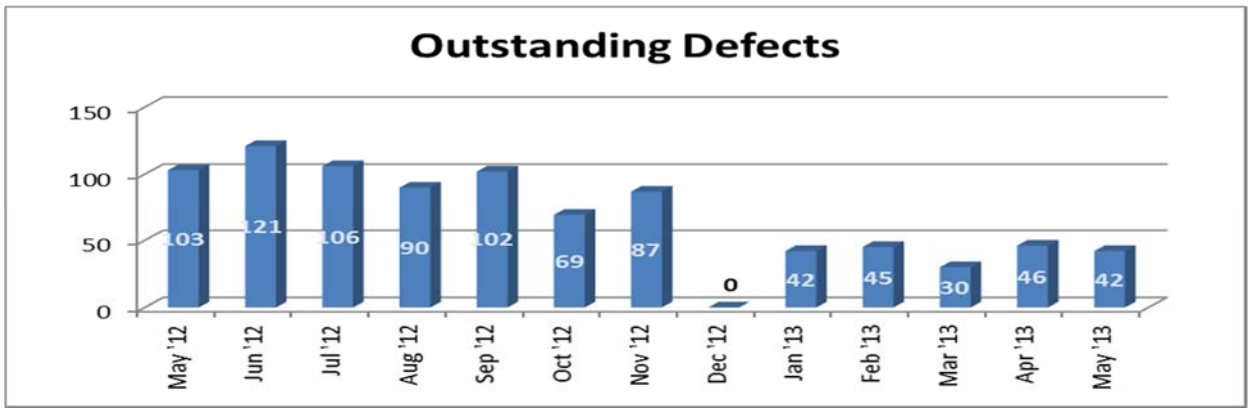

Figure 7. Outstanding Defect Count Trend

The above chart demonstrates that CHAMPS defects have steadily declined to reach a steady state resulting in no backlog of system defects,

Figure 8 represents the trend of new defects opened over the last 12 months.

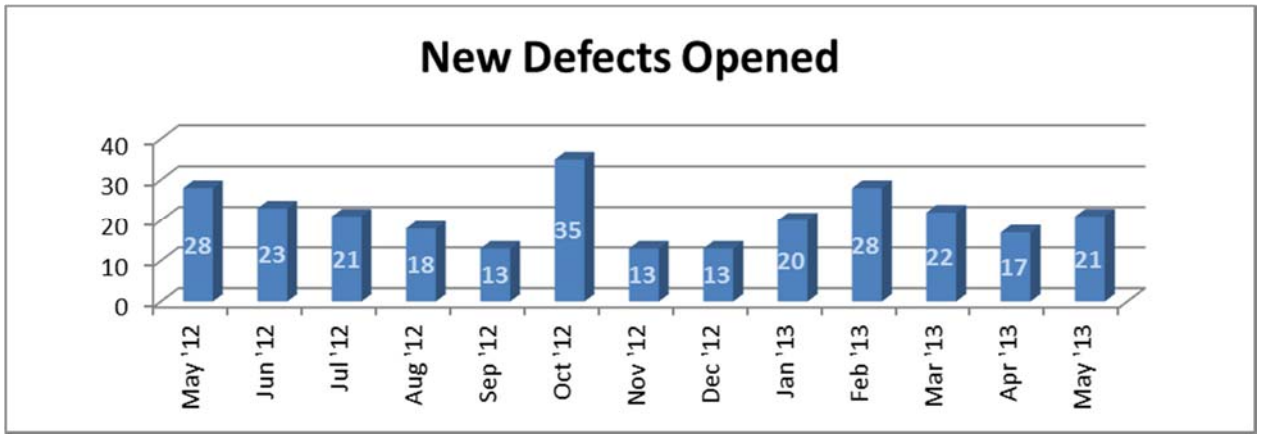

Figure 8. New Defect Count Trend

The above chart demonstrates that the reporting of new defects continues to remain at a low and stable count which are easily accommodated in each maintenance release.

1.6.1.5 Enhancements Count Trend

Figure 9 represents the trend of outstanding enhancements over the last 12 months.

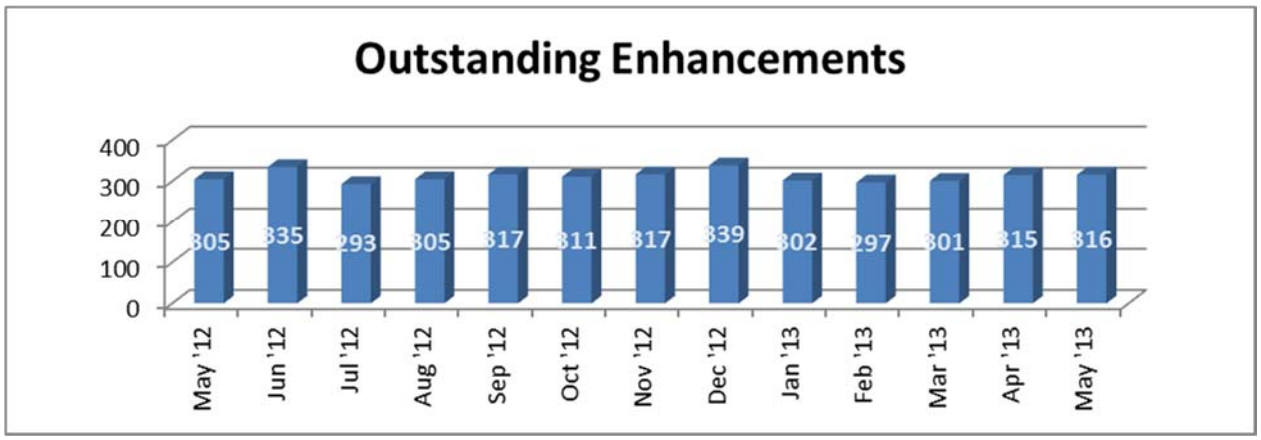

Figure 9. Outstanding Enhancements Count Trend

Figure 10 represents the trend of new enhancements opened over the last 12 months.

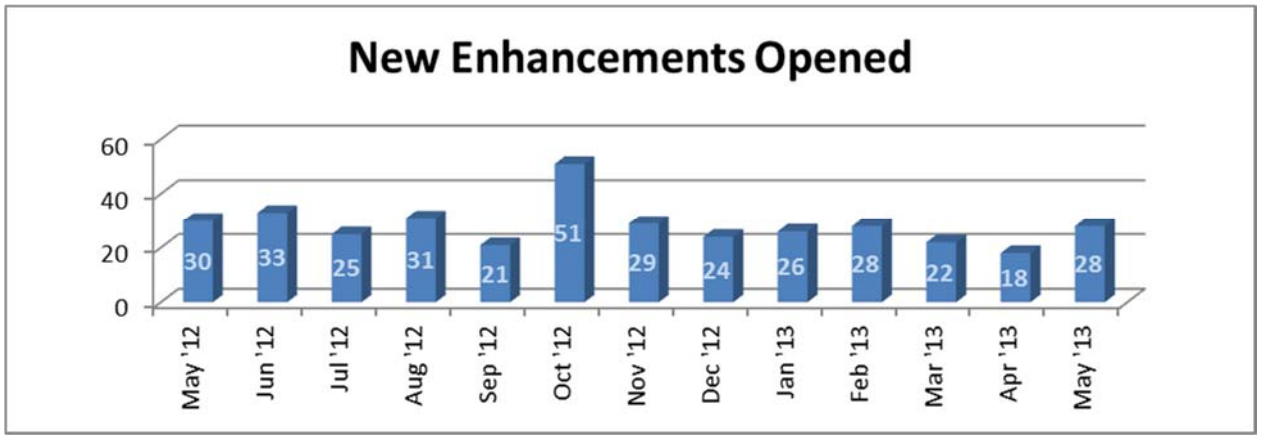

Figure 10. New Enhancements Count Trend

The above charts indicate a steady flow of enhancement requests from state users reflecting the recognition of the value of enhancing CHAMPS with new features.

1.6.1.6 Total CRM Service Requests Count Trend

Figure 11 represents the trend of CRM Service Requests over the last 12 months.

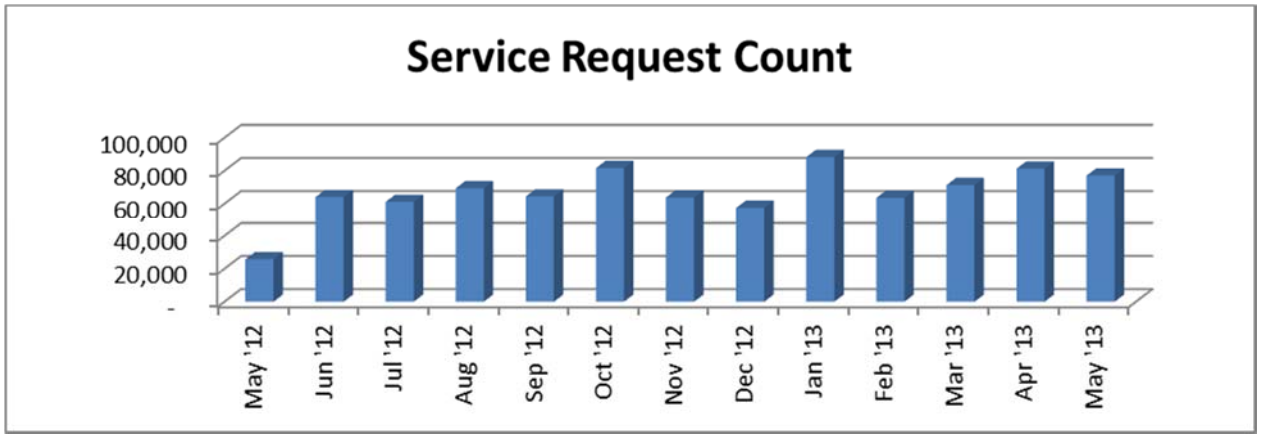

Figure 11. Total CRM Service Requests Count Trend

The above chart demonstrates that the CRM system continues to be highly utilized supporting mission critical areas for the state.

1.6.1.7 MI Enrolls CRM Service Requests Count Trend

Figure 12 represents the trend of MI Enrolls Service Requests over the last 12 months.

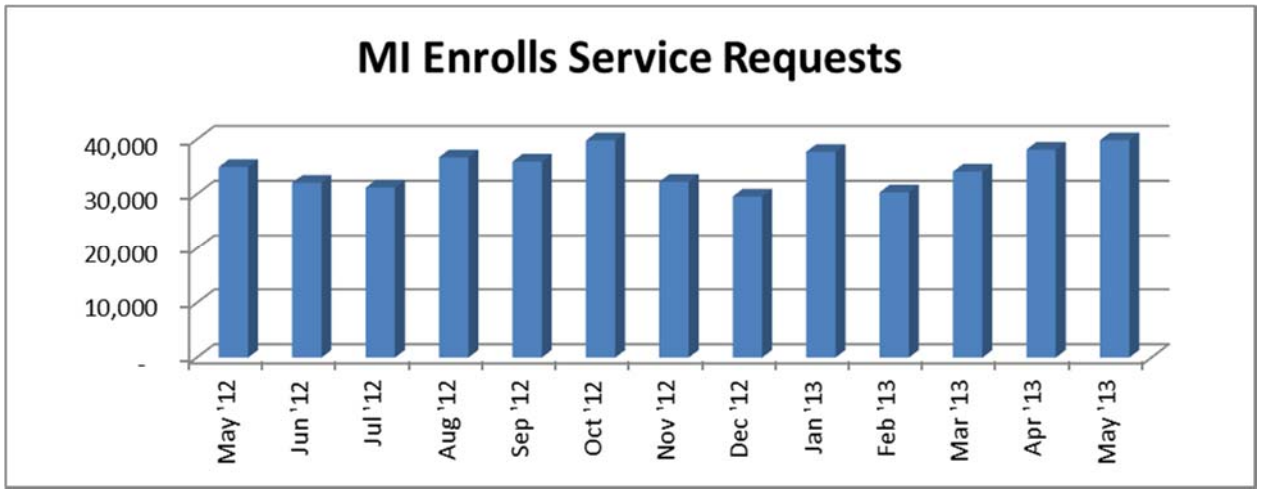

Figure 12. MI Enrolls CRM Service Requests Count Trend

The above chart demonstrates the continued high volume of enrollment requests serviced by the CRM system.

1.6.1.8 270/271 Transaction Count Trend

Figure 13 represents the trend of 270/271 real-time eligibility inquiry volume over the last 12 months.

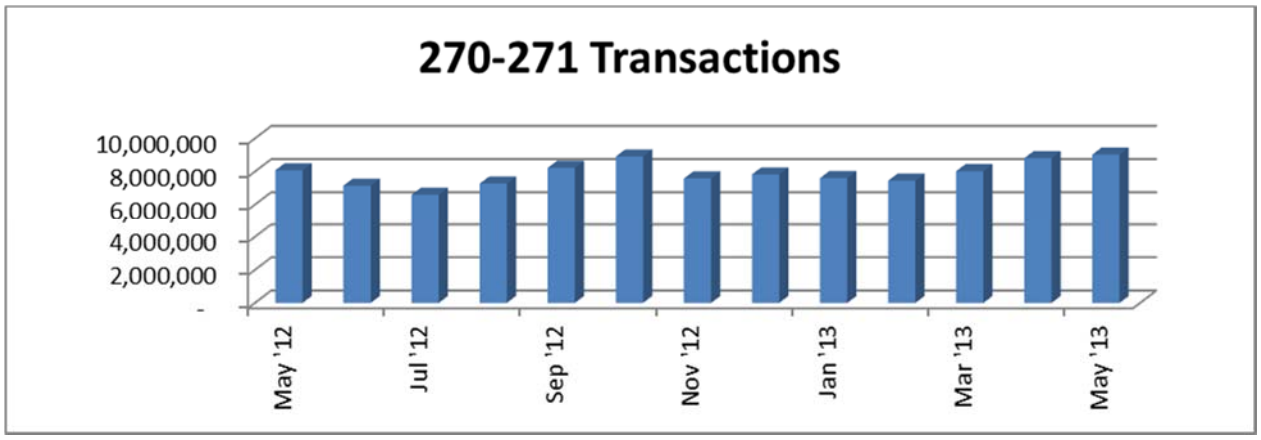

Figure 13. 270/271 Transaction Count Trend

The above chart demonstrates the increased volume of real-time eligibility transactions supported by CHAMPS.

1.6.1.9 270/271 Response Rate Trend

Figure 14 represents the trend of 270/271 real-time eligibility inquiry response rate over the last 12 months.

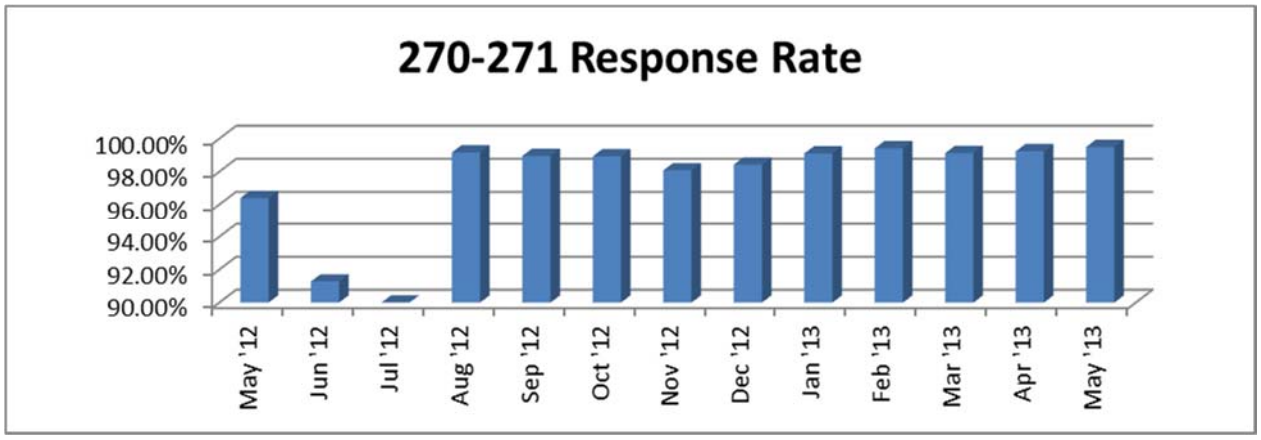

Figure 14. 270/271 Response Rate Trend

The above chart demonstrates the maintenance of high response rates for real-time eligibility transaction requests even at increased volumes. This demonstrates the scalability of the CHAMPS architecture and infrastructure. Note that decreased response times were experienced from May 2012 to July 2012 due to state network and telecommunications issues which were resolved by August 2012.

1.6.1.10 Operations Staffing Trend

Figure 14 represents the trend of Core Operations Staffing over the last 4 fiscal years

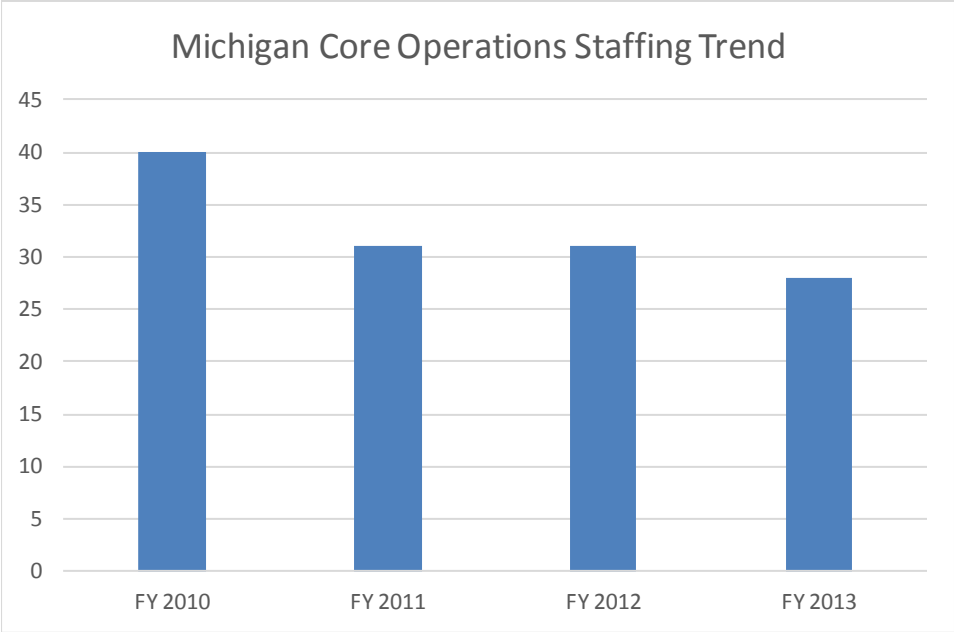

Figure 15. Michigan Core Operations Staffing Trend

The above chart demonstrates that the streamlining of operations has resulted in reduced core operations resource levels. This represents a 25% decrease in core operations resources from Fiscal Year 2010 to Fiscal Year 2013.

1.6.2 Additional Benefits to the State of Michigan

Table 4 lists the additional benefits that the State of Michigan has realized through CNSI's managing of CHAMPS operations.

Table 4. Additional Benefits

Area	Benefit
Operational Reporting	CHAMPS operational reporting provides daily and weekly metrics and provides a base for trends analysis. eCAMS™ HealthBeat provides real-time operational reporting with over 90 business metrics available through a single sign on application and at kiosks within state buildings
Disaster Recovery Readiness	CHAMPS has successfully completed disaster recovery unit and system testing annually.
Commercial Off-the-Shelf (COTS) Product Upgrades	COTS products, including Siebel, Oracle Financials, UNC, and COGNOS were upgraded to new versions at no cost to the State. The Siebel upgrade was a major upgrade from Version 7 to Version 8 which provided new functionality and reduced the State's maintenance costs for the software.
Service Level Agreement Compliance	CNSI has operated CHAMPS within the defined service level agreements and has also met many informal service level agreements.
Capacity Planning	CNSI has been proactive in performing regular system and application capacity utilization checks and has communicated and escalated capacity constraints to State management as appropriate. CNSI has annual purged large volumes of transaction history in order to reduce storage costs.
OTRS Ticket Management and Reporting	CNSI has worked with the State to make the OTRS Ticket System a very effective tool for communication, tracking, and report of system requests and issues. In addition, CNSI has integrated the DTMB's Remedy ticket system in the operational processes so that any requests or issues for DTMB staff are also tracked.
Pay Cycle Processing	CHAMPS has completed every pay cycle since Go Live on time, without exception.

Area	Benefit
System Uptime	CHAMPS maintained maximum system uptime possible. The only system downtime was for planned maintenance, planned releases, and DTMB infrastructure outages.
Database Management	CNSI DBAs have proactively managed databases across two dozen logical environments while implementing new initiatives, such as network encryption, data compression, and data masking.

1.6.3 Benefits of the MaaS Operations Model

Beginning in Fiscal Year 2014, CHAMPS will be rolled out to the State of Illinois and begin joint operations with the State of Michigan. Combined operations will result in substantial benefits to Michigan, Illinois, and CMS. Table 5 outlines the benefits for the participating entities:

Table 5. MaaS Operations Benefits

Entity	Benefits	Financial Impact
CMS	1. Combined operational efficiencies resulting in lower operational and compliance costs for Michigan and Illinois, which are primarily funded by CMS. 2. Streamlined oversight of MMISs. 3. First implementation of a multi-state cloud MMIS which aligns with CMS' strategic direction.	Estimated at a $196M (51%) savings in operational costs over 5 years
Michigan	1. Shared infrastructure costs. 2. Shared enhancement costs. 3. Shared operational support costs. 4. Positions Michigan as a technology hub.	Estimated at a $8M (20%) savings in operational costs over 5 years
Illinois	1. Shared infrastructure costs. 2. Shared enhancement costs. 3. Shared operational support costs. 4. Faster path to compliance.	Estimated at a $57M (64%) savings in operational costs over 5 years

The operational benefits described here are in addition to the substantial benefits gained by CMS and Illinois in the MMIS implementation.

1.7 Rationale and Purpose of Change Order

The current operations and support change order (Change Order 9) expires on September 30, 2013. The State and CNSI have jointly realized that with the implementation of ICD-10, ACA, CMCP, and expansion to the multi-state model, that additional operational support would be required by CNSI to ensure a smooth transition to operations for these initiatives as well as stable ongoing operations.

Therefore, we have jointly acknowledged that an additional five years of CHAMPS operation and support will be required. This additional proposed period would extend CHAMPS current operation from October 1, 2013 through September 30, 2018.

During the extended operation and support timeframe, the following tasks will be undertaken:

- Continue operations of CHAMPS, including the addition of ICD-10, ACA, CMCP, and multi-state cloud support.
- Maintain high customer service levels.
    - **Application Support:** The application support teams are deployed on the ground to support the end users. These teams are organized around key operational processes and are mandated to provide a high-level of support while adhering to the approved processes.
    - **Subject Matter Experts:** Provide functional experts in key areas to assist end users.
- Achieve maximum efficiency through continuous improvement initiatives.
    - **Automation:** Automation of manual processes with a focus on those which are repetitive and resource intensive.
    - **Streamlining of Processes:** Elimination of redundant processes and consolidation of key processes.
    - **Consolidated Organization:** The CHAMPS operations team has evolved in phases since CHAMPS went live. The original structure based on functional subsystems has been transformed to a structure based on operational areas and groupings of functionality. The development organization has become the application support group, which serves the dual purpose of supporting production operations while maintaining and enhancing the application. This organization will transform again to support multiple states in operations.
    - **Lessons Learned:** As the system stabilizes and matures, the operations teams takes lessons learned from operations and builds new and improved processes.
- Provide the ability for CNSI to perform additional services outside of the day-to-day operations required by both Michigan and Illinois. These services apply to both Michigan

and Illinois and are discussed in detail in *Section 4 – Supplemental Services* of this proposal.

- Hardware / Software Acquisition Support
- COTS Product Upgrades
- Data Warehouse Support
- System Documentation Development
- COGNOS Training
- ERP(OFIN) Support
- eMIPP Support
- DMP Support
- Data Dictionary Support

- System Enhancements as Defined and Prioritized

1.8 CHAMPS Operations and Maintenance Scope

The scope of CHAMPS operations and maintenance is defined in terms of application areas and Information Technology Infrastructure Library (ITIL) process areas. The scope has evolved throughout the course of the project and has been solidified during the last two years' operations period.

The ITIL process area scope for CNSI are:

- Asset Management – Development Environment only
- Facilities Management - Development Environment only
- Application Support – All environments
- Availability Management – All environments
- Business Continuity Management – Production environment
- Capacity Management – All environments
- Change Management – All environments
- Configuration Management – All environments
- Database Administration – All environments
- Incident Management – Production Environment
- Operational Reporting – Production Environment
- Release Management – All environments
- Security Management - Development Environment only

- Service Level Management – Production Environment
- System Administration – All environments

1.8.1 In Scope

In planning for extending the operational support for CHAMPS for Michigan and Illinois for an additional five years, we have examined and reviewed how we conducted the operation for the past 4 years to identify what would be required for the continued support. Moreover, during CNSI's review, it detailed and documented the applications depicted in Table 6 that will be supported by CNSI for the proposed five-year operation extension.

Table 6. CHAMPS Application Support

CHAMPS Application Support (Michigan and Illinois)
CNSI Products eCAMS™ Base Product (HIPAA 5010) RuleIT eMIPP DMP ClaimsSure ICD-10 Toolkit
COTS Products Siebel CRM Oracle Financials EDIFECS (including Core Operating Rules) COGNOS Reporting HSS Grouper Doc1 Correspondence Pitney Bowes Address Verification/Correction Lexis-Nexis Provider Credentialing
Data Warehouse Extracts
Interfaces
Web Services

Furthermore, Table 7 documents the ITIL operational processes that fall within the purview of CHAMPS operations. These process areas apply to Michigan and Illinois and will be further detailed in *Section 2– Operations Team Organization*.

Table 7. CHAMPS Operational Processes

CHAMPS Operational Processes
Application Support
Asset Management
Availability Management
Business Continuity Management
Capacity Management
Change Management
Configuration Management
Database Administration
Facilities Management
Incident Management
Operational Reporting
Release Management
Security Management
Service Level Management
System Administration

The application and process support depicted in the tables above represent what CNSI perceives as integral for day-to-day CHAMPS operations.

However, some activities and tasks related to CHAMPS support are not considered part of the day-to-day operations by CNSI. These activities are depicted in Table 8.

Table 8. Activities Outside of Day-to-Day Operations

Activities Outside of Day-To-Day Operations
Asset Management outside of CNSI Assets
Desktop Support
Facility Management outside of CNSI Facilities

Activities Outside of Day-To-Day Operations
Network Management outside of CNSI Facilities
Security Management outside of CNSI Facilities
Storage Management
System Administration outside of CNSI Facilities

The tasks and activities presented in Table 8 are currently undertaken by DTMB and are considered not in scope of the five-year extension proposed by CNSI. In addition, Illinois' HFS and CMS departments will be responsible for specific infrastructure components. The division of responsibilities between MDCH, DTMB, HFS, ICMS, and CNSI is described in *Section 1.9 Roles and Responsibilities*.

1.9 Roles and Responsibilities

In *Section 1.7 Rationale and Purpose of Change Order*, we presented what CNSI perceived to be the day-to-day operational activities for maintaining and supporting CHAMPS. In this section, we document the roles and responsibilities for the operational process areas.

Table 9 below defines the roles and responsibilities for the operational process areas. See *Section 3 – CHAMPS Operations* for details of the operational process areas. The matrix was derived from the tasks that are currently owned by CNSI, MDCH, DTMB, HFS, and ICMS. Since some infrastructure is managed by CNSI, both CNSI and DTMB have responsibilities in these process areas, but it is segregated by environment.

The roles and responsibilities have evolved during the course of the project as it has transitioned from the design, development, and implementation phases to the operations phase. CNSI has built formalized processes that align with the ITIL process areas described in detail in *Section 3 – CHAMPS Operations* of this document. The matrix below provides an overview of the process areas and depicts the roles which each organization plays in those areas.

The key for the matrix is:

P Primary responsibility for the area

H Helps with the tasks in the area

A Approves tasks in the area

Table 9. Roles and Responsibilities

Process Area	CNSI	MDCH	DTMB
Application Support	P		
Asset Management	P*		P*

Process Area	CNSI	MDCH	DTMB
Availability Management	P		H
Business Continuity Management	P	A	H
Capacity Management	P	H	H
Change Management	P	A	
Configuration Management	P		
Database Administration	P		
Desktop Support			P
Facilities Management	P*		P*
Incident Management	P	A	H
Network Administration	P*		P*
Operational Reporting	P	A	
Release Management	P	A	
Security Management	P*		P*
Service Level Management	P	A	A
Storage Management			P
System Administration	H		P

* Denotes primary responsibilities split between CNSI and DTMB based on hosting environment.

With the introduction of the multi-state model in Fiscal Year 2014, the roles and responsibilities will be extended to include the State of Illinois. This introduces two new entities in the project:

- **IL - HFS – State of Illinois Health and Family Services:** Business owner for the MMIS applications with local IT support
- **IL - ICMS – State of Illinois Central Management Services:** Enterprise level IT support

Table 10 lists the modified roles and responsibilities, including Illinois. Note that this is limited to the scope of the Illinois functionality in operations at the time.

Table 10. Roles and Responsibilities including Illinois

Process Area	CNSI	MI - MDCH	MI - DTMB	IL – HFS	IL - ICMS
Application Support	P				
Asset Management	P*		P*		
Availability Management	P		H		
Business Continuity Management	P	A	H	A	
Capacity Management	P	H	H	H	
Change Management	P	A		A	
Configuration Management	P				
Database Administration	P				
Desktop Support			P*	P*	
Facilities Management	P		P*	P*	
Incident Management	P	A	H	A	
Network Administration	P*		P*		P*
Operational Reporting	P	A		A	
Release Management	P	A		A	
Security Management	P		P*		P*
Service Level Management	P	A	A	A	

Process Area	CNSI	MI - MDCH	MI - DTMB	IL – HFS	IL - ICMS
Storage Management			P		
System Administration	H		P		

* Denotes Primary Responsibilities split between entities based on hosting environment or facility.

Section 2– Operations Team Organization

2.1 Teams

During the four years that CNSI has operated CHAMPS, we have developed a mature and streamlined operations model. In reviewing the staff needs anticipated to support the additional five years proposed, we have relied on the experience CNSI gained during the past four years to determine how CNSI could streamline the operations and apply the lessons learned. Moreover, CNSI wanted to exhibit to the State that CNSI has over the past four years gained valuable experience to become more efficient and cost-effective in delivering these services to the State, even as the operational scope and functionality has grown dramatically. In mapping our operations staff needs to support CHAMPS over the coming five fiscal years, we formulated an organization that depicts the streamlining and experience by CNSI while accounting for the expansion of scope to the multi-state model to support the State of Illinois. Our proposed organization chart to support CHAMPS day-to-day operation presented in Section 2.2 - Figure 16 (CHAMPS Operations Team Organization) shows how we have defined the operations organization to support the multi-state model.

The Application Support team is composed of members from the CHAMPS subsystem development teams. The subsystem teams have been consolidated into these areas:

- Payment Subsystems (CE, ClaimsSure, BA, CM(Payments Portion))
- Foundational Subsystems (PE, PA, CC)
- Member Subsystems (EE, CM(Contract and Rates Portion), CRM, Consumer Engagement)
- eMIPP
- DMP
- Reporting
- EDI Operations (HIPAA)
- Back End Technology (PL/SQL,JCAPS,COGNOS,DW)

Each application support area has a pool of resources which have responsibility for production support as well as warranted defect support and day-to-day issue resolutions. Backend technology resources are combined into a cross-functional pool for great efficiency and consistency across subsystems.

The multi-state CHAMPS Operations Team consists of the following teams as represented in Table 11.

Table 11. Operations Team Structure

Team	High Level Responsibilities
Functional	• Understand MDCH and HFS business needs.

Team	High Level Responsibilities
	• Work with MDCH and HFS Staff to identify application change requirements. • Build Change Log documents for application changes. • Update As Built DSDD documents to reflect changes. • Assist with testing of application changes. • Assist Application Support teams in resolution of production issues.
Operations Support	• Provide Operational Reporting • Manage Operational Transaction Processing Capacity Planning and Utilization • Maintain Operations Manual • Manage Production Schedules • Manage OTRS Tickets • Serve as liaison between State staff and technical teams.
Application Support	• Support Production operation • Manage OTRS tickets • Develop application changes for warranted Defects and issue resolutions • Support testing processes Application Support Areas are: • Payment Subsystems • Foundational Subsystems • Member Subsystems • Reporting • Back End Technology (PL/SQL,JCAPS,COGNOS) • EDI Operations • eMIPP • DMP

Team	High Level Responsibilities
Infrastructure	• Manage Databases • Manage Web and Application Servers • Assist with Server Administration • Monitor all system components • Interact with DTMB Infrastructure staff
Management	• Manage all aspects of CHAMPS Operations. • Interact with State and CNSI staff.
Testing	• Perform System Testing • Perform QA Testing • Support UAT Testing

2.2 Team Organization Chart

The CHAMPS Operations Team Organization has evolved from the team that supports Michigan operations to a team that supports multiple projects and states as part of the Midwest Region. CNSI's Midwest Region organization model reflects the shift from single projects to multiple projects across states.

Based on experience with multiple states and other shared-services models, CNSI's Midwest management team developed a structure that would provide the best combination of quality delivery to the customer, technical innovation, and operational efficiency. The region is comprised of three groups which all report to the regional head. The groups are:

- **Delivery** – Focused on the delivery of projects on-time, on-budget, with exceptional quality. This group is composed of project managers, functional experts, testers, and all key project dedicated resources. This group owns the delivery of all projects and is tasked with ensuring that all groups, whether dedicated or shared, meet the delivery requirements.
- **Technical** – Focused on technical innovation and building quality technical solutions to be delivered to the projects. This group is composed of development managers, architects, technical leads, and developers. The technical resources are shared across projects in order to maximize the use of domain and technical knowledge and optimize development iteration time and quality.
- **Operations and Infrastructure** – Focused on managing operations and providing infrastructure and backend systems support to all projects and operations. This group is further divided into four areas managed by the Operations Management Team –

Application Support, Operations Support, Infrastructure Support, and Back End Systems. Application Support is composed of function experts, application support leads, and application support developers. Operations Support is composed of operations support analysts and network operations center engineers. Infrastructure Support is composed of managers and experts from CNSI's Database Administration, Configuration Management, and System Administration Teams. Back End Systems is composed of technical leads and developers with expertise in data warehousing, data conversion, PL/SQL, and COGNOS.

Even though the groups are shared by all projects and operations, within each of these regional groups are teams and resources that are dedicated to specific projects for the duration of those projects. For example, a project such as CMCP would have a project manager, development manager, business analysts, SMEs, developers, and testers dedicated to the project. In addition, they are augmented and supported by shared resources from Technical, Integration, Back End, Infrastructure, and Application Support Teams. All of these resources and tasks are coordinated and managed by the Delivery group to ensure successful delivery of the project.

Figure 16 displays the CHAMPS Organization Chart which shows the team structures and reporting relationships:

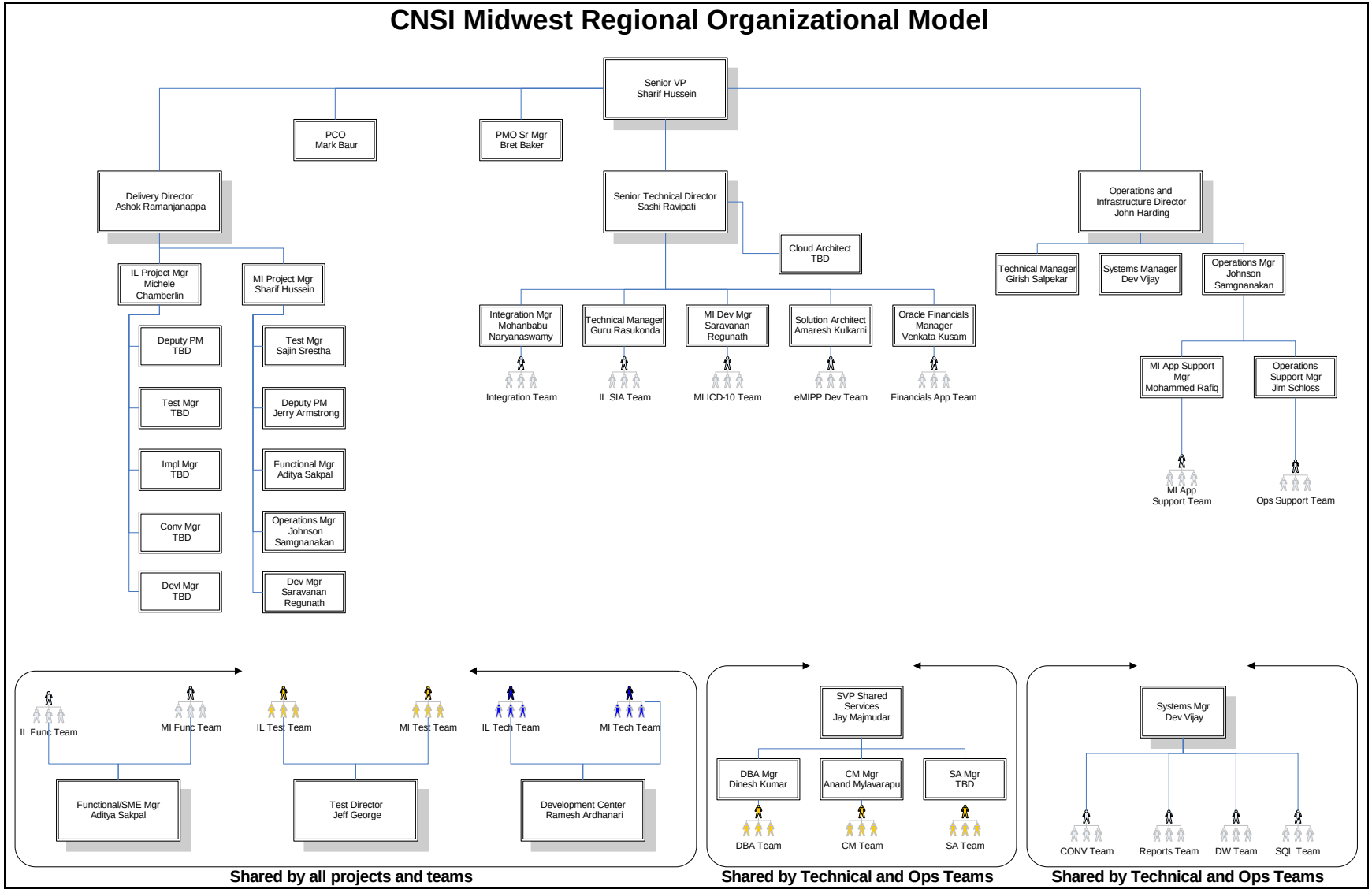

Figure 16. CHAMPS Operations Team Organization

Table 12 provides a high level description of the teams depicted in the organization chart.

Table 12. Team Descriptions

Team	Description
Functional	A single functional organization supporting multiple development projects as well as operations for Michigan and Illinois
Operations Support	Joint team to support operations of Michigan and Illinois. Oversees the NOC to ensure alignment with Operations objectives
Application Support	Teams consolidated by areas of expertise but supporting both Michigan and Illinois at the team level
Back End Systems	PL/SQL. COGNOS, and Data Warehouse teams supporting multiple development projects as well as operations for Michigan and Illinois
Infrastructure	CM Team, DBA Team, and Sys Admin Team supporting all projects and operations for Michigan and Illinois
Management	Single management team for managing Operations for Michigan and Illinois
Testing	A single testing organization supporting multiple development projects as well as operations for Michigan and Illinois
Technical	A single technical organization supporting multiple development projects as well as operations for Michigan and Illinois. This includes the Integration team which has evolved from supporting only interfaces to supporting all application integration functionality for projects and operations
Integration	Interfaces and SOA integration team supporting all projects and operations for Michigan and Illinois

2.3 Team Composition

Table 13 details the team positions required for operations and maintenance of CHAMPS. This team composition only represents the required staff to provide operation and support to

CHAMPS. Staffing levels by year and service layer are provided in detail in *Section 5 – Resource Model and Cost*.

Table 13. Team Composition

Team	Position
Functional	Subject Matter Expert
	Functional Analyst
Testing	Test Lead
	Tester
Operations Support	Support Lead
	Support SME
Application Support	Technical Lead
	Data Warehouse Support Lead
	Java Developer
	Back End Developer (PL/SQL, COGNOS, SeeBeyond, COTS)
Technical	Architect
	Java Developer
	Integration Developer
	Technical Lead

Team	Position
Infrastructure Support	CM Lead
	CM Specialist
	Operations Center Lead
	Operations Center Support
	Database Administrator
	System Administrator
Management	Senior Vice President
	Deputy Project Manager
	Operations Manager
	Functional Manager
	Technical Services Manager
	Development Manager
	Facilities Manager / Project Control

Section 3 – CHAMPS Operations

CHAMPS operations consists of the following areas:

- Core Operations
- Project/Team Management
- Subject Matter Expertise (SME)
- Issue Resolution

These areas will be detailed in the following sections.

3.1 Core Operations

The CHAMPS Core Operations structure is modeled off the ITIL standard. The below sections outline the operational process areas within Core Operations.

All below operational process areas apply to the following environments:

- Development
- System Test
- User Acceptance Test
- Quality Assurance Test
- Business To Business
- Regression (Production Patch)
- Training
- Outreach

Governing documents for the below process areas reside in the following locations:

- As-One (Project Document Repository)
- MDCH Shared Folders
- Operations Manual: The CHAMPS Operations Manual is maintained using a web-based content management tool in order to keep the manual up-to-date with changing technical, infrastructure, and business needs.

3.1.1 Application Support

The following table provides the details of the ITIL process area including the definition of the area, the process owners, objectives, and responsibilities.

Table 14. Application Support Process Details

Definition Application Support provides day to day Production support as well as develops changes to the application to correct system defects or provide enhanced functionality.
Process Owners CNSI
Objectives • Meet or exceed service level agreements. • Deploy changes to the system in accordance with the change management and release management processes. • Ensure compliance with the Incident Management Plan. • Employ continuous improvement techniques to improve efficiency and accuracy. Methods of improvement include: o Automation of manual processes. o Implementation of system exception handling processes for commonly encountered errors. o Implementation of real time or near real time monitoring for key system processes. o Capturing critical metrics for historical trend analysis.
CNSI Responsibilities Below is a diagram that shows an overview of Claims Processing within CHAMPS and its relation to other key areas.

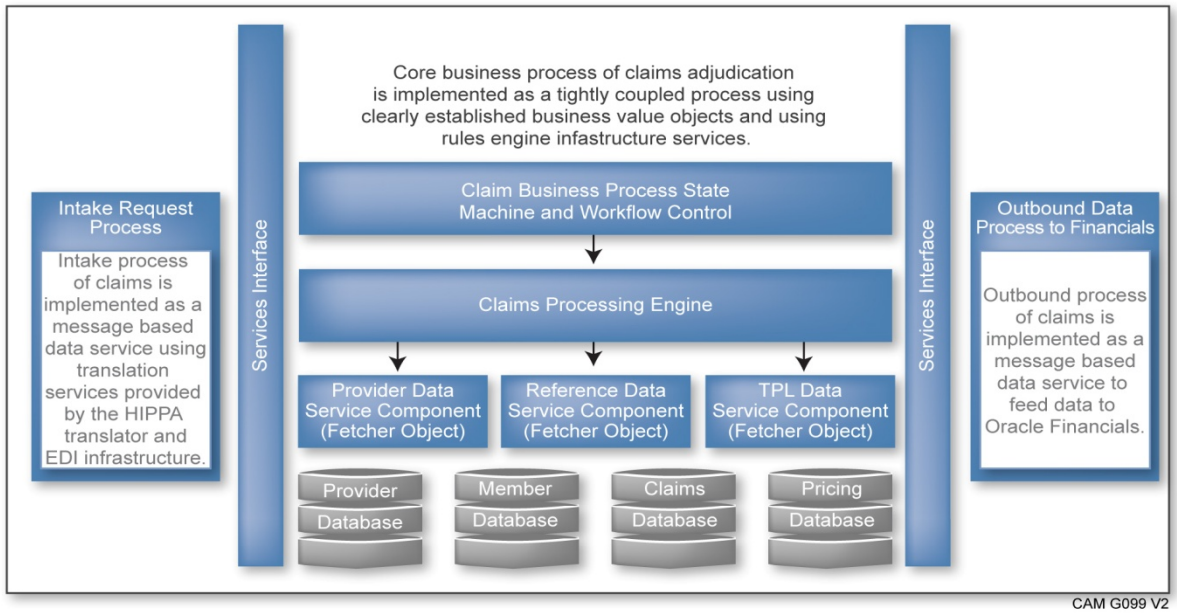

Figure 17. Internal Architecture of eCAMS™

CHAMPS Operations Application Support involves managing a diverse set of activities and priorities. The below diagram illustrates what a typical day in CHAMPS Operations might look like:

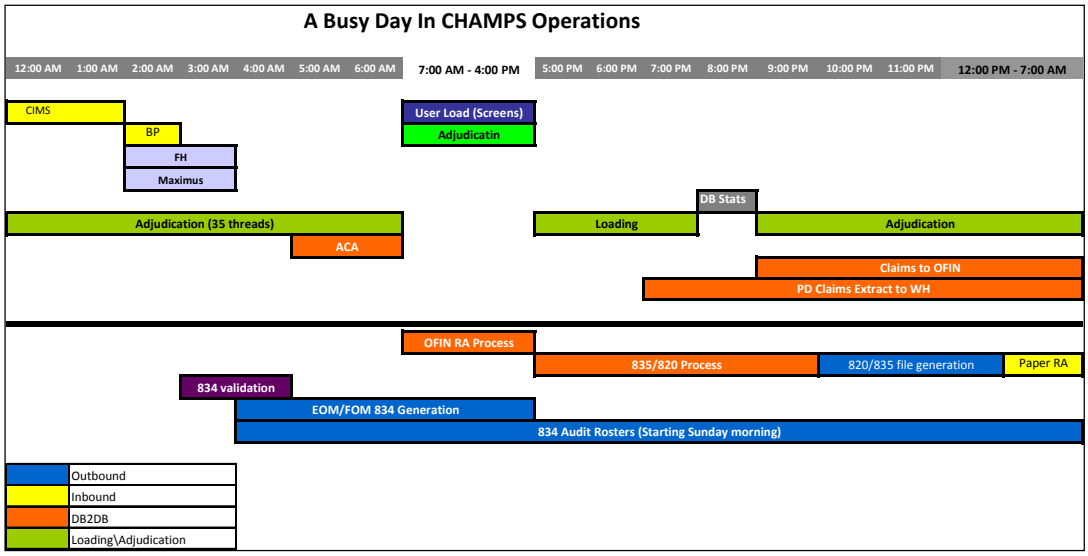

Figure 18. A Busy Day in CHAMPS Operations

Daily Operations Call

Daily operations call attended by representatives from:

- Application Support
  - Payment Subsystems
  - Foundational Subsystems
  - Member Subsystems
  - Interfaces
  - Data Warehouse
  - CRM (Siebel)
  - eMIPP
  - DMP
- Payment Operations
- EDI Operations
- Infrastructure Support
  - CM Team
  - DBA Team
  - System Admin Team

OTRS Ticket Management

- Respond to OTRS tickets filed by State staff.
- Analyze OTRS tickets and take action including:
  - Create ClearQuest defects and enhancements
  - Request CHAMPS RFCs according to the RFC process defined in the CHAMPS Operations Manual.
  - Create DTMB Remedy tickets for issues or systems that are outside the scope of CHAMPS operations.
  - Request OTRS tickets for closure once the issue is resolved.
  - Escalate urgent tickets to Operations Management for emergency actions as necessary.

Production Scheduling

- Manage CHAMPS RFC Process
  - RFC Requests can be of the following types:
    - Interface Schedule Change

- DB2DB Job Schedule Change
- Data Warehouse Extract Schedule Change
- Processing Queue Schedule Change
- Data Script

- RFC Requests logged by Application Support staff in Clearquest.
- Weekly meeting conducted by Operations Management to review and approve RFC requests.
- Approved RFC requests are tracked through to completion in ClearQuest.

Production Support

- Perform tasks at direction of Operations Management team to support system operation.

Queue Management

- Manage queues for processing of HIPAA and non-HIPAA transactions.
- Queue processing schedules are pre-defined and available in the CHAMPS Operations Manual.
- Queue schedules can be modified on an as needed basis by request from the Operations Functional Team or Operations Manager.

Interface Management

- Manage interface schedule.
- Review interface job results.
- Identify interface job exception conditions and follow established procedures as defined in the CHAMPS Operations Manual.

DB2DB Job Management

- Manage DB2DB job schedule.
- Review DB2DB job results.
- Identify DB2DB job exception conditions and follow established procedures as defined in the CHAMPS Operations Manual.

Payment Operation

- Manage the Payment processes:
  - Claims RA Outbound
  - Managed Care Payments
  - OFIN Processing (Claims, Managed Care, Cash Receipts)
  - Claims RA Inbound
  - Managed Care RA Inbound

- Outbound Payments Generation and Delivery
- Paper RA Generation and Delivery to Print Central and DMS

EDI Operation

- Manage the EDI processes:
  - 837
  - 276/277, 277U, 835, 820
  - 834
  - 270/271
  - Core Transactions

Defect Resolution

- Resolve defects as per Issue Resolution process defined in *Section 3.3 Issue Resolution*.

Build Enhancements

- Resolve Enhancements as per Enhancements process defined in *Section 4.1.1 Enhancements*.
- Perform unit testing.

UAT Support

- Work with UAT team to resolve any issues discovered during the UAT phase.
- Resolve issues found in UAT and release through the CHAMPS Release Management process.

Governing Documents

- CHAMPS Right Sizing III SLA Addendum (Contract Attachment)
- CHAMPS Incident Management Plan (As-One - CHAMPS INCIDENT MANAGEMENT RESPONSE V8.doc)
- CHAMPS Production Support Plan (As-One - MIMMIS-CIP-R4PSP-01-02.doc)
- Project Governance Organization and Processes (As-One - MIMMIS-PGOP-02-01.doc)
- Operations Manual Section 3 – Scheduled System Availability
- Operations Manual Section 4 – Performance Management
- Operations Manual Section 5 – Scheduled Process Management
- Operations Manual Section 6 – Processing Queue Management
- Operations Manual Section 12 – Incident & Change Management
- Operations Manual Section 13 – Service Level Management

State Responsibilities • Availability of Infrastructure maintained by DTMB with required levels of access to hardware and software assets.
Statements of Fact • N/A

3.1.2 Asset Management

The following table provides the details of the ITIL process area including the definition of the area, the process owners, objectives, and responsibilities.

Table 15. Asset Management Process Details

Definition Hardware and Software Asset Management is the practice of integrating people, processes and technology to allow software licenses and usage to be systematically tracked, evaluated and managed.
Process Owners CNSI DTMB HFS ICMS
Objectives • Reduce IT expenditures, human resource overhead and risks inherent in owning and managing hardware and software assets. • Provide centralized access to asset information.

CNSI Responsibilities • Maintain hardware warranties • Maintain asset locations • Track cost analysis for project equipment and uses • Maintain software license compliance • Track inventory and software asset use • Maintain standard policies and procedures surrounding definition, deployment, configuration, use, and retirement of assets.
Governing Documents • CNSI Hardware and Software Control Procedures
State Responsibilities • DTMB will manage assets located in Michigan State facilities. • HFS and ICMS will manage assets located in Illinois State facilities
Statements of Fact • N/A

3.1.3 Availability Management

The following table provides the details of the ITIL process area including the definition of the area, the process owners, objectives, and responsibilities.

Table 16. Availability Management Process Details

Definition Availability Management ensures information technology services are available when the customer needs them. This function includes ensuring that the uptime requirements of the system are met, monitoring services, and proactively responding to projected system demands. Monitoring also provides capacity trending, allowing proactive system modifications or planning for upgrades. This process can make use of a variety of methods to optimize availability.
Process Owners CNSI DTMB

Objectives

- Maintain 24x7x365 system availability with specifically defined exceptions for:
  - Monthly Maintenance Outages
  - Year-End Maintenance Outage
  - Application Code Releases
  - Hardware Failures
  - Network Failures
- Meet defined service level agreements with users, partners, and agencies.
- Identify issues before they affect system availability by implementing multiple layers of monitoring and capacity planning.
- Comply with DTMB standards for outage notification.

CNSI Responsibilities

- Capacity Planning – See Section 3.1.5 for details
- Outage Planning
  - Conduct outage planning session(s) monthly to identify tasks, timing, and dependencies for the 12-hour outage window.
  - Publish Outage Plan to Application Support, Infrastructure Support, and Management Teams.
- Monthly Maintenance Outages
  - Conduct monthly maintenance outages including coordination and communication.
  - Coordinate with DTMB staff for all infrastructure tasks scheduled during the outage.
- Monitoring
  - Server Monitoring
    - Use State-designated monitoring tools:
      - CA Unicenter
      - Vantage
      - Oracle Enterprise Manager
    - Create DTMB Remedy tickets for issues found on the servers or with the monitoring tools.
    - Monitoring is 24x7x365 by CNSI Network Operations Center (NOC) staff.
  - Application Monitoring
  - Queue Monitoring – Perform monitoring of all processing queues. Notify Operations Management for all exception conditions encountered.

- Interface Monitoring – Perform monitoring of all inbound and outbound interfaces. Notify business and technical owners for all exception conditions encountered.
- DB2DB Job Monitoring – Perform monitoring of DB2DB jobs. Notify Application Support teams for all exception conditions encountered.
- Operations Dashboard Monitoring – Perform continuous monitoring of Operations Dashboard. Notify Operations Management for all exception conditions encountered.
- Monitoring is 24x7x365 by CNSI NOC staff.

Governing Documents

- CHAMPS Right Sizing III SLA Addendum (Contract Attachment)
- CHAMPS Incident Management Plan (As-One - CHAMPS INCIDENT MANAGEMENT RESPONSE V8.doc)
- CHAMPS Production Support Plan (As-One - MIMMIS-CIP-R4PSP-01-02.doc)
- Project Governance Organization and Processes (As-One - MIMMIS-PGOP-02-01.doc)
- Configuration Management Plan (As-One - MIMMIS-CMP-01-02.doc)
- Operations Manual Section 3 – Scheduled System Availability
- Operations Manual Section 4 – Performance Management
- Operations Manual Section 5 – Scheduled Process Management
- Operations Manual Section 6 – Processing Queue Management

State Responsibilities

- System availability will be limited by availability of hardware, storage, and networks managed by DTMB.

Statements of Fact

- N/A

3.1.4 Business Continuity Management

The following table provides the details of the ITIL process area including the definition of the area, the process owners, objectives, and responsibilities.

Table 17. Business Continuity Management Process Details

Definition Business (Service) Continuity Management encompasses disaster recovery (DR) and continuity of operations planning (COOP). The purpose of Service Continuity Management is to support the overall Business Continuity Management process by ensuring that the required IT technical and services facilities (including computer systems, networks, applications, telecommunications, technical support and service desk) can be recovered within required and agreed-upon business timescales. For further details, refer to the BCCP for this application.
Process Owners CNSI MDCH HFS DTMB
Objectives • To ensure that critical and sensitive systems needed to support mission essential functions continue to be operational when a major or minor interruption or a large-scale disaster occurs. Preparedness is the key. The planning process should minimize the disruption of operations and ensure some level of organizational stability and an orderly recovery after a disaster. • Provide for the safety and well-being of people on the premises at the time of a disaster. • Continue critical business operations. • Minimize the duration of a serious disruption to operations and resources (both information processing and other resources). • Minimize immediate damage and losses. • Establish management succession and emergency powers. • Facilitate effective co-ordination of recovery tasks. • Reduce the complexity of the recovery effort. • Identify critical lines of business and supporting functions. • Provide a sense of security. • Minimize risk of delays. • Guaranteeing the reliability of standby systems. • Provide a standard for testing the plan. • Minimize decision-making during a disaster.

CNSI Responsibilities

- Determine vulnerability to significant service interruptions in the Data Center and business facilities and define preventive measures that may be taken to minimize the probability and impact of interruptions.
- Identify and analyze the economic, service, public image and other implications of extended service interruptions in the Data Center and other business facilities.
- Determine immediate, intermediate and extended term recovery needs and resource requirements.
- Identify the alternatives and select the most cost effective approaches for providing backup operations capability and timely service restoration.
- Develop and implement contingency plans that address both immediate and longer-term needs for the Data Center and other business facilities.
- Perform annual DR testing with DTMB and MDCH and remediate any issues found during the testing. Produce a report detailing the results of the test.

Governing Documents

- CHAMPS BCCP (As-One - MIMMIS-BCCP-DDP-01-02.doc)
- MIMMIS CHAMPS DR Procedures (As-One - MIMMIS CHAMPS DR Procedures.doc)

State Responsibilities

- The facilities where the Michigan MMIS staff will perform their mission are located in Lansing, Michigan. All references to “Personnel” being either lost or otherwise unavailable or “Facilities” becoming inaccessible refer to Michigan MMIS staff and the Lansing facilities in which they perform the bulk of their missions.
- The IT facilities that support CHAMPS are located in the Michigan DIT dual hosting facilities. The primary hosting center is located in the Secretary of State complex southwest of Lansing, commonly called “Lake Superior.” The secondary hosting center is located in the Austin Building in downtown Lansing, commonly called “Traverse Bay.”
- The telecommunication lines that connect the IT facilities with the Michigan MMIS staff are of two types and redundant - one line of telecommunication is subsurface, the other is aerial.
- In the event that the IT resources supporting CHAMPS at the primary hosting center are incapacitated for a period longer than four (4) hours, the support of CHAMPS will be switched to the secondary hosting center.
- If one hosting center is totally incapacitated, the backup hosting center will be available for normal service until the incapacitated hosting center is reconstituted.

Statements of Fact
N/A

3.1.5 Capacity Management

The following table provides the details of the ITIL process area including the definition of the area, the process owners, objectives, and responsibilities.

Table 18. Capacity Management Process Details

Definition
Capacity Management ensures all current and future IT capacity and performance aspects of the business requirements are provided cost effectively. Furthermore, the goal of Capacity Management is to plan and implement the appropriate IT capacity while ensuring that the IT services achieve expected levels of performance. Capacity Management encompasses three (3) sub-processes, Resource Capacity Management, Service Capacity Management, and Business Capacity Management. Resource Capacity Management defines resources as hardware, software, facilities, or organization (people). The process focuses on the management of individual components of the infrastructure through monitoring, measurement, analysis, and reporting. Service Capacity Management defines service as one or more IT processes that enable a business process. The process focuses on the management of the performance of IT services through monitoring, measurement, analysis, and reporting. Business Capacity Management is responsible for ensuring that both current and future, and strategic and tactical business requirements for IT services capacity are considered, planned, and implemented.
Process Owners
CNSI MDCH HFS DTMB
Objectives • Ensure Processing Capacity meets MDCH and HFS business capacity needs. • Identify and plan future storage capacity requirements before available capacity reaches critically low levels. • Implement capacity upgrades (Processing and Storage) with minimal disruption to regular operations.

CNSI Responsibilities

- Create monthly capacity utilization reports for servers and databases.
- Manage weekly transaction capacity planning process for claims, managed care, and encounters processing:
  - Conduct Capacity Planning Meeting
  - Publish Capacity Plan
  - Publish Actual Utilization versus the Plan
- Request additional disk capacity from DTMB through the Remedy ticketing system.
- Perform long range planning for Hardware Upgrades based on projected business needs.

Governing Documents

- Pay Cycle Capacity Plans
- Operations Manual Section 9 – Capacity Management

State Responsibilities

- DTMB will manage hardware, network, and storage capacity.

Statements of Fact

- System capacity is constrained by budgets, hardware, and facilities.

3.1.6 Change Management

The following table provides the details of the ITIL process area including the definition of the area, the process owners, objectives, and responsibilities.

Table 19. Change Management Process Details

Definition Change Management ensures that standardized, documented, and repeatable methods and procedures are used for efficient and prompt handling of all changes, in order to minimize the impact of change-related incidents upon service quality, and consequently to improve the day-to-day operations of the organization. The Change Management process ensures that changes are recorded, evaluated, authorized, prioritized, planned, tested, implemented, documented, and reviewed in a controlled manner. The customer may establish a Change Control Board to review and approve changes. Preferred practice is to use an automated system to enter, approve, and track all change orders. No changes will be made to the system without an approved change order being entered into the CHAMPS Change Management System.
Process Owners CNSI MDCH HFS
Objectives • Ensure a controlled change process is followed. • Enable timely deployment of changes to meet business needs. • Minimize production incidents and impacts from changes.

CNSI Responsibilities

Below is a diagram of the CCB Tier structure:

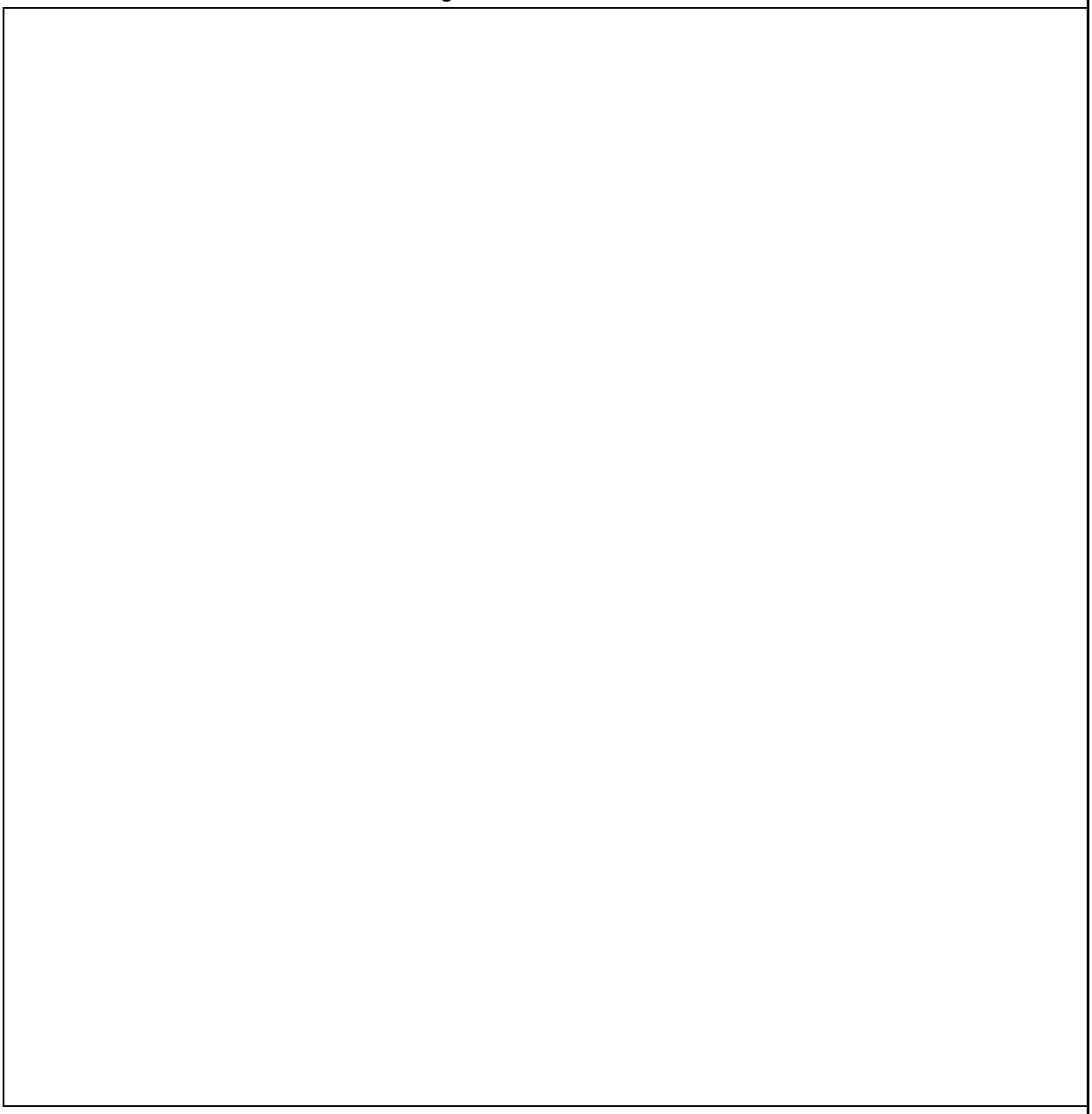

Figure 19. CCB Tier Structure

Below is a Swimlane diagram of the CCB process:

Figure 20. CCB Swimlane View

- Enhancements that are found by the CHAMPS end users are logged into the OTRS system for CNSI to review. CNSI reviews the enhancements in the Tier-1 CCB and logs a Clear Quest ticket for the valid enhancements and rejects the invalid ones.
- Two weeks prior to the content freeze of the next release, the CNSI subsystem team or developer lead submits a list of enhancements and defects that had been prioritized in Tier 1 to CNSI Functional Manager (FM). The FM compiles the list sets the Assign Release field in ClearQuest to the next release. Once the field is populated, FM generates a report and delivers the list to Michigan and Illinois State Management.
- Meanwhile, the CNSI Team Leads creates a change log document, effort estimate spread sheet, and updated use cases wherever applicable and mails them to the respective team leads for review and approval. In addition to this, change logs are submitted to Johnson to evaluate the impact on Data Warehouse.
- The State team lead has until the content freeze date to review and submit a signed Approval Form or sign on the line provided within the change log. If the State team lead has not signed

the change log by the content freeze date, the enhancement will not be included in the next release. However, State Management reserves the right to ask for more time to review.

- State Management reviews and updates the list for those enhancements that are approved, as well as indicating which items are rejected or possibly pushed to a future release. The State forwards the updated list to FM. Those items that have been rejected or moved to another release are updated in the ClearQuest. The updated list is distributed to the CNSI team by the FM. Once the updated list is distributed, CNSI team leads and the developers start developing the change logs.
- Once the approval is received from the State subsystem team lead, the CNSI subsystem team lead or functional analyst (FA) e-mails the change log documentation (change log, hours estimate, and scanned approval) to the application support manager. The Application Support Manager maintains a spreadsheet of all enhancements for each release to track the documentation received. The subsystem's FA uploads the change log documentation into As-One. If there are any attachments outside of the change log documentation, for example updated use cases, those are to be sent to the subsystem FA for upload into As-One. If the change log documentation is not received by close of business of the content freeze date, the designated FA contacts the CNSI team leads for a change log status and reports those to FM and DPM. The designated FA will also provide a list to the CNSI subsystem team or developer lead for those change logs with documentation outstanding.
- Once all the documentation has been collected for the release, the designated FA notifies the DPM, financial specialist (FS) and FM. FS begins his invoicing once State / UAT support team completes the UAT and CNSI deploys all the enhancements for a particular release into the production environment. If a change log is determined to be a no-cost enhancement, this decision must be made by CNSI management and not in Tier.
- The scope of the enhancement has to be frozen before the development starts. If there is any change in the scope, during development and/or UAT, it has to be brought to the notice of the CNSI management.
- The CCB structure and process will be aligned with the CHAMPS multi-state operational structure once the Illinois projects move into operations and will continue to integrate development projects such as CMCP and ICD10. As these changes occur, CNSI, MDCH, and HFS will work together to update the CCB structure to match the current project structure.

Governing Documents

- Project Governance Organization and Processes (As-One - MIMMIS-PGOP-02-01.doc)
- MI-IL Alliance Governance Organization

State Responsibilities

- State will provide staff for requesting and approving system changes.

Statements of Fact
• Work on change logs is constrained by available budgets.

3.1.7 Configuration Management

The following table provides the details of the ITIL process area including the definition of the area, the process owners, objectives, and responsibilities.

Table 20. Configuration Management Process Details

Definition
Configuration Management defines and controls the components of services and infrastructure (Configuration Items) and maintains accurate configuration records. (ITIL v3 calls this Service Asset Configuration Management, SACM.)
Process Owners
CNSI
Objectives
• Ensure controlled deployment of application components in accordance with the Production Release process. • Maintain consistent configurations across environments. • Provide a central location for all CM information. • Systematically control changes to the configuration.
CNSI Responsibilities

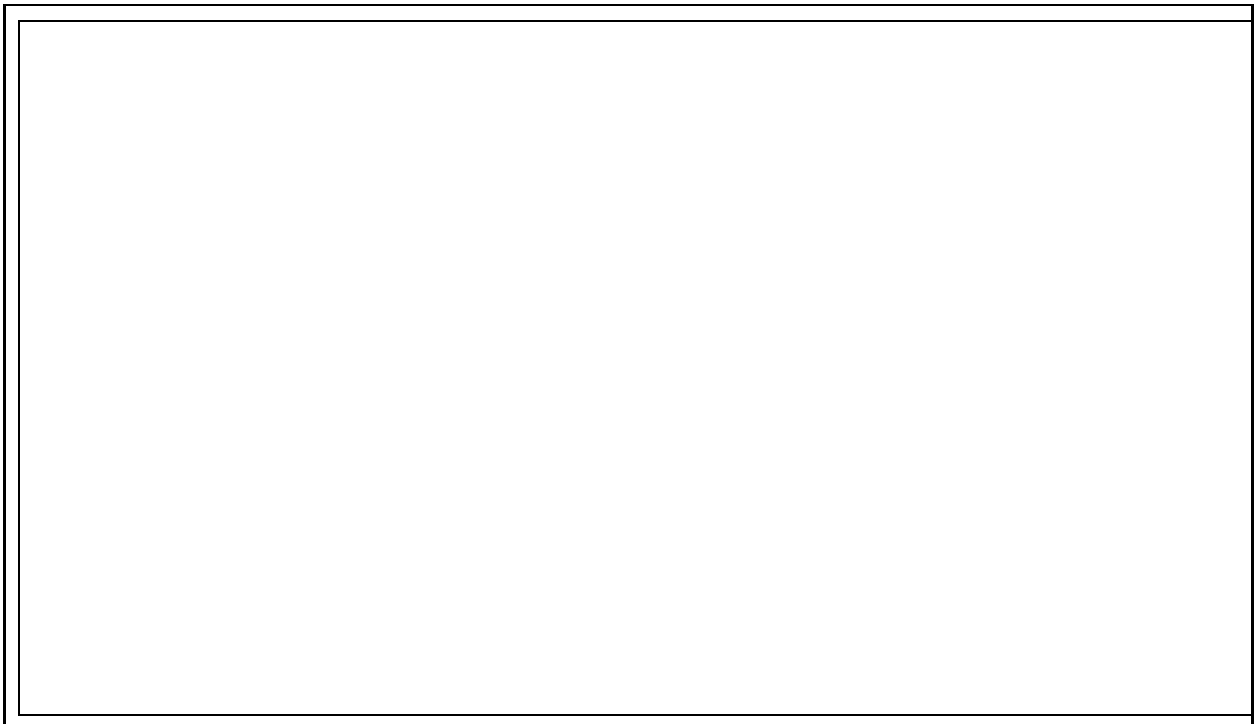

Figure 21. Configuration Management Process Overview

- Configuration identification of artifacts/work products used or developed by a project.
- Configuration change control of information, including the impact of changes to organizations, management practices, schedules, budgets, technical or assurance activities, testing or retest requirements, and project status.
- Status accounting of artifacts/work products used in the development, release, and maintenance of a project.
- Configuration reviews and audits that assess the status and acceptability of products controlled or released by CM.
- Project delivery and release management procedures and the capability to monitor the status of project information.
- Establishing a software development library (SDL) and maintaining the integrity of the work products placed under CM control to ensure repeatability of the products and baselines.
- Identifying the configuration of the software, hardware, and documents at given points in time.
- Maintain the integrity and traceability of the configuration throughout the life cycle of the project.
- Develop status reports on current product identification and change data available to the project team.
- Make this information available for review or audit.

Governing Documents • CHAMPS Configuration Management Plan (As-One - MIMMIS-CMP-01-02.doc)
State Responsibilities • The Configuration Management Team will be granted full access rights to all servers containing system software components.
Statements of Fact • N/A

3.1.8 Database Administration

The following table provides the details of the ITIL process area including the definition of the area, the process owners, objectives, and responsibilities.

Table 21. Database Administration Process Details

Definition Database engineering/management involves the design, security, administration, and problem resolution for all database functionality.
Process Owners CNSI
Objectives • Ensure optimal performance through tuning and maintenance of databases. • Provide a high level of support to application support teams. • Identify and plan future capacity requirements before available capacity reaches critically low levels. • Ensure compliance with DTMB database standards.
CNSI Responsibilities • Stop and start database services as part of routine or emergency shutdown and restart. In the event of a DR scenario, this will entail starting the databases in the DR site using the SRDF copies of production databases. • Manage database RAC clusters including addition and removal of servers from the clusters as necessary.

• Monitor performance of database servers using Oracle Enterprise Manager and other tools as appropriate. • Perform patching of database software • Perform tuning of databases to maintain performance levels. • Perform database capacity utilization analysis and request additional disk space from DTMB as necessary using Remedy tickets. • Perform monthly database maintenance activities. • Perform annual data purging activities as defined by data retention policies. • Implement database management initiates related to performance improvement, security, and auditing as jointly agreed between CNSI and the states.
Governing Documents • Operations Manual Section 3 – Scheduled System Availability • Operations Manual Section 4 – Performance Management • Operations Manual Section 5 – Scheduled Process Management • Operations Manual Section 6 – Processing Queue Management • Operations Manual Section 11 – Backup & Recovery Management • Operations Manual Section 13 – Service Level Management • Disaster Recovery Procedures (As-One MIMMIS CHAMPS DR Procedures.doc)
State Responsibilities • Database availability and performance are constrained by server and network availability and performance.
Statements of Fact • N/A

3.1.9 Desktop Support

The following table provides the details of the ITIL process area including the definition of the area, the process owners, objectives, and responsibilities.

Table 22. Desktop Support Process Details

Definition Desktop Support involves the installation, configuration, and support of desktop computers used by end users of the application.
Process Owners DTMB HFS ICMS
Objectives • N/A
CNSI Responsibilities • This area is the responsibility of DTMB for Michigan state users and HFS and ICMS for Illinois state users
Governing Documents • N/A
State Responsibilities • This process area is completely managed by DTMB, HFS, and ICMS.
Statements of Fact • N/A

3.1.10 Facilities Management

The following table provides the details of the ITIL process area including the definition of the area, the process owners, objectives, and responsibilities.

Table 23. Facilities Management Process Details

Definition Facilities Management provides management of the physical facilities that house system hardware and networks.

Process Owners CNSI DTMB HFS ICMS
Objectives • Provide effective and efficient facility management.
CNSI Responsibilities • CNSI will manage CNSI facilities. • DTMB will manage Michigan state facilities. • HFS and ICMS will manage Illinois state facilities.
Governing Documents CHAMPS Facility and Data Security Plan (As-One - MIMMIS-FDSP-02-02.doc)
State Responsibilities • DTMB will manage Michigan state facilities. • HFS and ICMS will manage Illinois state facilities.
Statements of Fact • N/A

3.1.11 Incident Management

The following table provides the details of the ITIL process area including the definition of the area, the process owners, objectives, and responsibilities.

Table 24. Incident Management Process Details

Definition Incident Management restores normal service operation as quickly as possible and minimizes the adverse impact on business operations, thus ensuring that the best possible levels of service quality and availability are maintained.

Process Owners

CNSI

MDCH

HFS

DTMB

Objectives

- Respond to OTRS tickets within the SLA.
- Minimize scope and duration of system incidents through effective incident resolution and escalation procedures.
- Provide high levels of communication about incidents to MDCH, HFS, and DTMB stakeholders using established MDCH, HFS, and DTMB communication protocols.
- Measure OTRS ticket performance through operational reporting.

CNSI Responsibilities

Below is a diagram of the Incident Management Process Model:

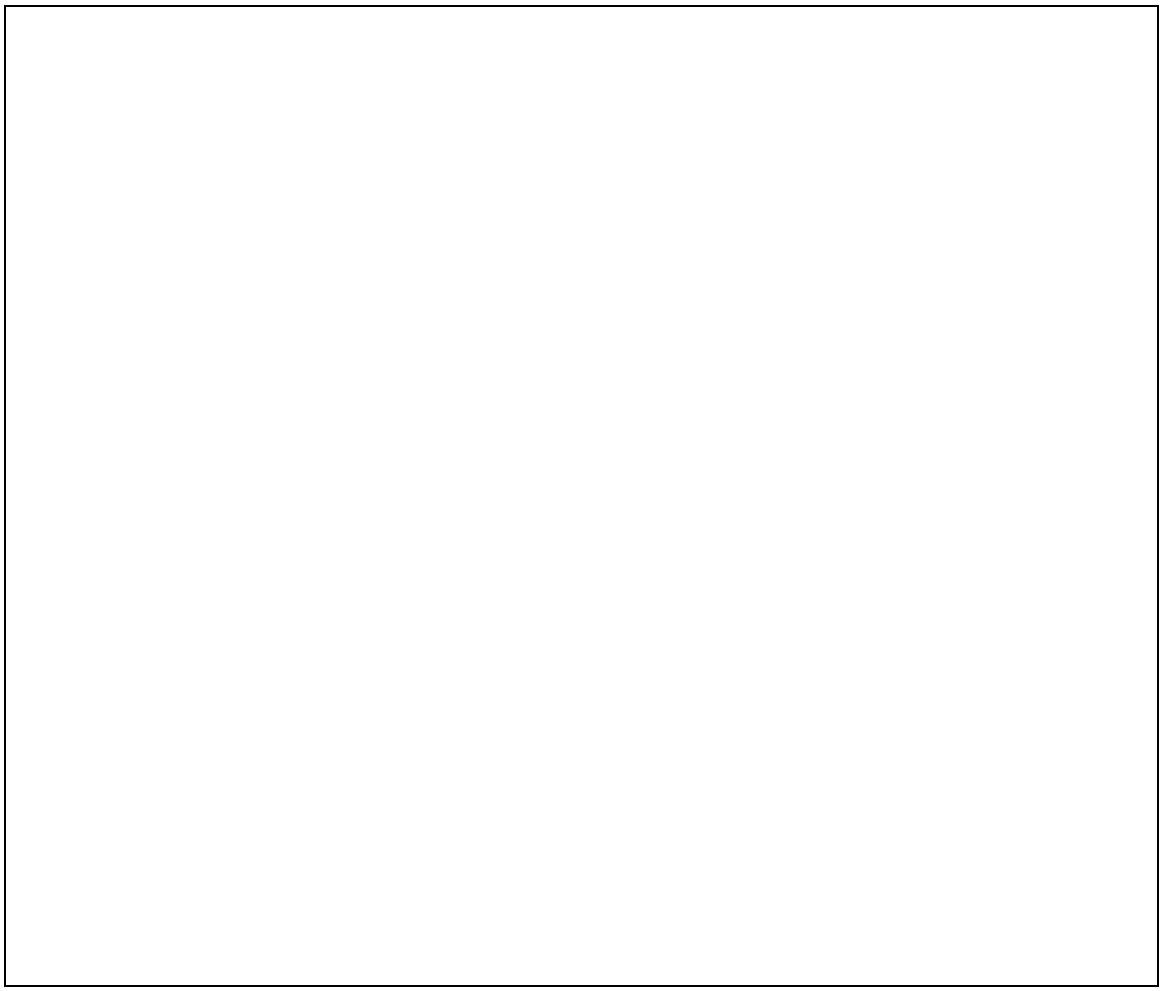

Figure 22. Incident Management Process Model

- Manage the OTRS Ticket Process.
- NOC will perform initial triage of OTRS tickets to assist in routing to the appropriate areas.
- Create ClearQuest tickets for defects or enhancements.
- Create DTMB Remedy tickets when incidents reside in DTMB infrastructure areas
- Incidents may become changes that will be governed by the Change Management area and released to environments as part of Release Management.

Governing Documents

- CHAMPS Incident Management Plan (As-One - CHAMPS INCIDENT MANAGEMENT RESPONSE V8.doc)

State Responsibilities • DTMB will take the lead role for Incidents originating within DTMB infrastructure areas.
Statements of Fact • N/A

3.1.12 Network Administration

The following table provides the details of the ITIL process area including the definition of the area, the process owners, objectives, and responsibilities.

Table 25. Network Administration Process Details

Definition Network Administration implements and maintains the voice and data communications infrastructure utilized by the application.
Process Owners CNSI DTMB HFS ICMS
Objectives • Provide effective and efficient facility management.
CNSI Responsibilities • CNSI will Manage Networks within CNSI Facilities.
Governing Documents • N/A
State Responsibilities • DTMB will manage networks within Michigan state facilities. • HFS and ICMS will manage networks within Illinois state facilities.

Statements of Fact
• N/A

3.1.13 Operational Reporting

The following table provides the details of the ITIL process area including the definition of the area, the process owners, objectives, and responsibilities.

Table 26. Operational Reporting Process Details

Definition
Operational Reporting provides a set of reports from production data which measure the business and technical performance of the system.
Process Owners
CNSI
Objectives
• Provide timely reporting for measuring business and technical performance. • Provide information to application support teams to aid in decision making.
CNSI Responsibilities
• Produce operational reports on frequencies approved by operations management. • Maintain archives of operational reports for historical analysis. • Produce quarterly operation support report for MDCH and HFS. • Produce reports for IPMO (Integrated Project Management Office), as requested. • Produce weekly operations newsletter with transactional data from the current pay cycle. • Perform ad-hoc reporting on as needed basis to assist with application support issue resolution.
Governing Documents
• Operations Manual Section 7 Reporting Management
State Responsibilities
• N/A

Statements of Fact
• Operational Reporting is not intended for CHAMPS end users as end user reporting is done through COGNOS reports. Operational Reporting is intended for operations management as well as State and CNSI Project Management teams.

3.1.14 Release Management

The following table provides the details of the ITIL process area including the definition of the area, the process owners, objectives, and responsibilities.

Table 27. Release Management Process Details

Definition
Release Management ensures the planned and controlled deployment of hardware and software into the production environment. Process activities include ensuring that testing and verification are complete, that assets are available for deployment, and that necessary configuration items are included in the build. Release Management also ensures that necessary training is provided to users and support personnel and that information about the release and its status is communicated to stakeholders.
Process Owners CNSI MDCH HFS
Objectives • Ensure tight integration with Change Management and Configuration Management. • Provide timely communication of release contents and status.

CNSI Responsibilities

Below is a diagram of the logical environments for CHAMPS in Michigan. Note that this will expand once Illinois code streams are introduced into Operations and will eventually merge back together once the full MMIS supporting both Michigan and Illinois is in place.

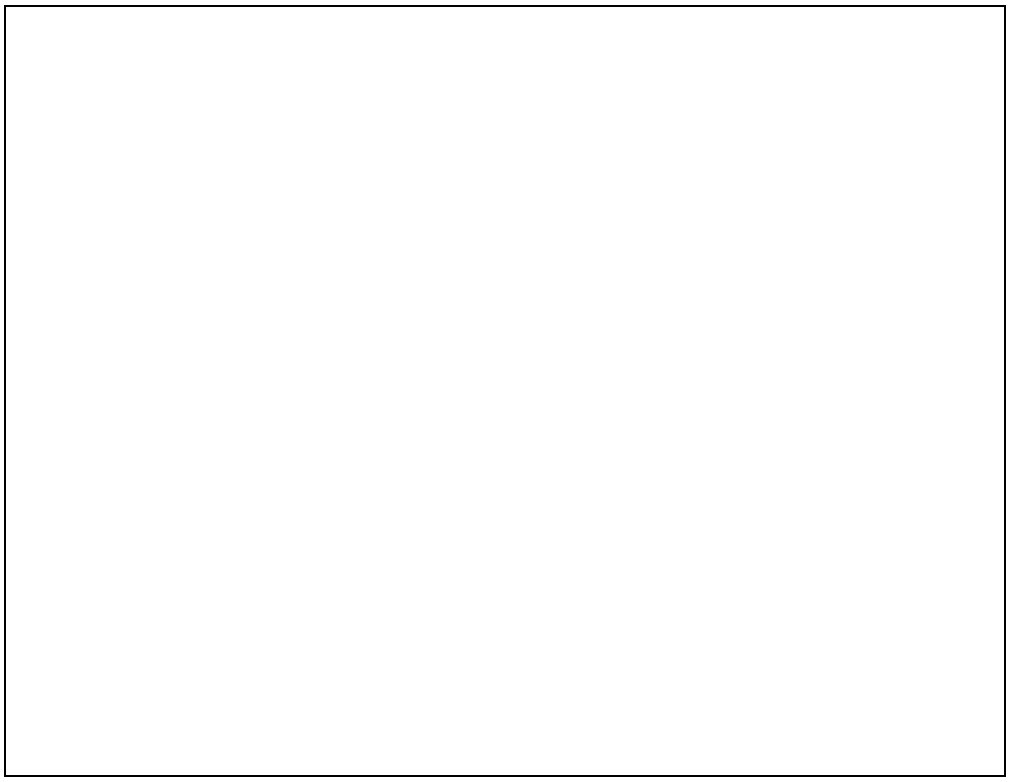

Figure 23. Logical Environments

Releases are classified as follows:

- Major Release
- Service Pack
- Patch

A service or patch follows the CNSI 'Technical Release Numbering Scheme.' Example: MIMMIS_1.2.21.3.Zip, where the number 3 represents the third patch to build 21 of the MIMMIS product version 1.2.

A service or patch can be requested for any phase or phases of the release schedule and can be applied to any of the test or production environments after appropriate testing. However, the policy at CNSI is that any patch will be included in the next major release and patched to all preceding test environments at deployment time.

Example:

If a patch is scheduled for the current production code base, then the current development code base will be patched. The patch will also be applied to Unit Test, System Test, and UAT.

If a patch is scheduled for UAT, then the current development code base will be patched. The patch will also be applied to Unit Test and System Test.

Major Release

CNSI defines a major release as the full set of functionality as defined by a baseline set of requirements (e.g., Provider Enrollment, Complete MMIS). It may also represent a significant set of changes grouped together as a feature or enhancement made to the product within the scope of the current baseline. The following holds true for a major release:

- A major release is a scheduled event.
- A major release receives full regression testing.
- A major release includes schedule and deployment authorized by the CCB/IPMO.

Patch

CNSI defines a patch as an emergency fix to repair a defect to the production system. Patches will only be used to correct the software when a defect prevents the accomplishment of a CHAMPS operational or mission essential capability, or when the defect jeopardizes safety, security, or other requirement designated as "critical." Patches will be applied to the staging system, which will be the replica of the production system, bypassing system testing and UAT. Once the patch passes a certain level of regression testing, that patch will be applied to the production system. All patch changes will become embedded in the next major release or service pack. The following holds true for a patch:

- A patch is an unscheduled, emergency event.
- The change list is agreed upon by the IPMO via an emergency CCB.
- Change requests are individually verified.
- A patch receives only a certain level of regression testing.

• The patch schedule and deployment must be authorized by the CCB. • Deployment of the patch may be made solely by CNSI, if the State team is not available; the CCB must approve this before CNSI deploys the patch. • Production patches must be applied to the staging system within 24 hours from the time the defect occurred.
Governing Documents • Project Governance Organization and Processes (As-One - MIMMIS-PGOP-02-01.doc)
State Responsibilities • N/A
Statements of Fact • Release Management is dependent on Change Management.

3.1.15 Security Management

The following table provides the details of the ITIL process area including the definition of the area, the process owners, objectives, and responsibilities.

Table 28. Security Management Process Details

Definition Security Management protects information from harm due to failures of confidentiality, integrity, and availability; meets security requirements of the business (documented in SLAs and external requirements); and provides a basic level of security (security baseline). Security Management assesses identified vulnerabilities to determine the potential impact of the risk to the IT environment and advises IT management or customer representatives of the recommended mitigation or remediation options.
Process Owners CNSI DTMB HFS ICMS

Objectives

- Ensure compliance with all DTMB Security Standards.
- Ensure compliance with all HFS and ICMS Security Standards
- Ensure compliance with HIPAA Privacy Standards.

CNSI Responsibilities

- Facility Security.
- Application Security.
- Data Security.
- Security Awareness training plans and schedules.
- Revocation of access.
- Security staff designations, roles, and responsibilities.
- Network interconnection and remote access.
- Change Management (plan review, authorization, testing).
- Incident reporting and response.
- The above responsibilities apply to CNSI facilities only.

Governing Documents

- CHAMPS Facility and Data Security Plan (As-One - MIMMIS-FDSP-02-02.doc)

State Responsibilities

- DTMB will have responsibility for physical security within Michigan state facilities.
- HFS and ICMS will have responsibility for physical security within Illinois state facilities.

Statements of Fact

- N/A

3.1.16 Service Level Management

The following table provides the details of the ITIL process area including the definition of the area, the process owners, objectives, and responsibilities.

Table 29. Service Level Management Process Details

Definition Service Level Management provides the business with the agreed service targets and the required management information to ensure that those targets have been met. This includes implementation of improvement measures for the level of service delivered.
Process Owners CNSI MDCH HFS DTMB
Objectives • Meet or exceed defined Service Level Agreements. • Anticipate risks to SLA compliance through monitoring and planning as detailed in Availability Management, Capacity Management, and Change Management sections. • Ensure established processes for remedial action are followed when SLA deviations occur.

CNSI Responsibilities

- SLAs are classified by Areas and Severity and the details are provided below:

Area	Severity
270/271	1-Urgent
Claims Submission / Loading	2-High
Claims Adjudication	2-High
Payment Processing (820, 835, Paper RA, MAIN Interfaces)	2-High
Critical Interfaces - Inbound Eligibility, MC Authorization - Outbound FirstHealth, Maximus	2-High
Critical Screens - (DDE, Claims Resolution, PA Entry, CRM, Provider Portal)	2-High
Web Services	3-Medium
Non-Critical Screens	3-Medium
Non-Critical Interfaces	3-Medium
Operational Reports	3-Medium
Mass Adjustment Entry/Processing	3-Medium
COGNOS Reporting	3-Medium
Data Warehouse Interfaces	3-Medium
Functional Defects / Enhancements	4-Low

SLA Response Times and Resolution Targets are defined below by Severity:

Severity	Trigger	Initial Response Time	Resolution Target
1-Urgent	Slow / Unavailable	30 Minutes	4 Hours
2-High	Slow / Unavailable	2 Hours	24 Hours
3-Medium	Slow / Unavailable	4 Hours	72 Hours

4-Low	OTRS Ticket Entered	72 Hours	Variable based on Release Calendar

If Initial Response Times are not met, the issue will be Escalated to CNSI and State Management for further action.

If Resolution Target Times are not met, the issue will be Escalated to CNSI and State Management for further action.

Governing Documents

- CHAMPS Right Sizing III SLA Addendum (Contract Attachment)

State Responsibilities

- N/A

Statements of Fact

- Service Level Agreements can be modified at any time based on mutual agreement between CNSI, MDCH, HFS, and DTMB.

3.1.17 Storage Management

The following table provides the details of the ITIL process area including the definition of the area, the process owners, objectives, and responsibilities.

Table 30. Storage Management Process Details

Definition

Storage Management describes the function and processes responsible for management of storage and maintenance of data through its lifecycle. CHAMPS storage is implemented using SAN and NAS technology maintained by DTMB.

Process Owners

DTMB

Objectives

- N/A

CNSI Responsibilities

- This area is the responsibility of DTMB

Governing Documents • N/A
State Responsibilities • This process area is completely managed by DTMB.
Statements of Fact • N/A

3.1.18 System Administration

The following table provides the details of the ITIL process area including the definition of the area, the process owners, objectives, and responsibilities.

Table 31. System Administration Process Details

Definition System Administration performs the ITIL-based processes that directly relate to hardware and operating systems. Systems Administration involves the installation and maintenance of one or more computer systems and associated peripherals, internal hardware components, the operating system, and associated utility programs. Systems Administration ensures machines are updated with the latest security patches, upgrades, and encryption. To ensure this process is properly managed, the customer agrees to abide by all established server administration processes and procedures as well as granting appropriate administrative rights to servers and peripherals.
Process Owners CNSI DTMB
Objectives • Ensure servers and software are maintained on supported patch levels and configurations. • Provide a managed implementation process for new hardware and software acquisitions.
CNSI Responsibilities Below is a diagram of the current CHAMPS Infrastructure supported by CNSI and DTMB:

Figure 24. CHAMPS Production Infrastructure Diagram

As part of the evolution to the multi-state cloud platform, CNSI envisions a modified infrastructure platform built on the following principles:

- High Performance to meet challenging SLAs for all states on the cloud
- High Availability to minimize downtime
- Data Isolation to separate data specific to states
- Heavy use of virtualization
- Vertically and horizontally scalable to support expanded functionality and additional states
- Leverage existing infrastructure wherever feasible to reduce risk and cost

See below for information about the infrastructure architecture approach for the cloud platform:

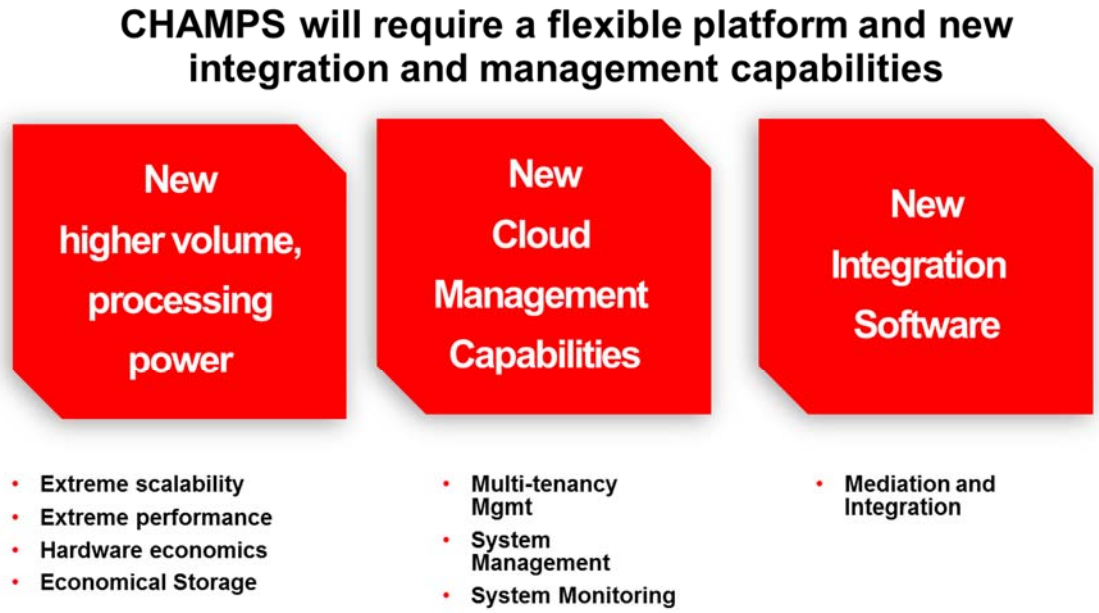

Figure 25. Cloud Infrastructure Approach

The evolution to the cloud will occur in phases with the overriding principle from the beginning being maintaining a single code base. The phases can be described as:

- Shared Model – In late 2013, Michigan will begin hosting Illinois applications as separate application instances from Michigan with separate data but the same code on the same servers used by Michigan.
- Cloud 1.0 – In 2016, Michigan will host a cloud MMIS solution for both Michigan and Illinois utilizing common code in a shared infrastructure environment. A SOA mediation layer will be introduced to route requests within the application and between the COTS products. Significant hardware upgrades to engineered systems are envisioned to meet the performance requirements of the two states. Current estimates are that Illinois will require 3-4 times the capacity of Michigan
- Cloud 2.0 – in 2018, the next generation cloud platform will be released which includes more advanced configuration capabilities in preparation for expansion to additional states

CNSI tasks:

- Analyze and recommend hardware and software upgrades as appropriate.
- Architect infrastructure solutions to align with application architecture
- Report system issues and make system requests to DTMB infrastructure staff through Remedy Ticketing system.
- Assist DTMB staff with hardware and software installation and patching.

• Weekly TPMO (Technical Project Management Office) meetings are held to facilitate communication of system administration and related technical issues. • Attend Weekly DTMB LCB (Local Change Board) meetings to identify potential impacts to CHAMPS from external systems or infrastructure changes.
Governing Documents • Illinois SIA Infrastructure and Operations Plan
State Responsibilities • DTMB has primary responsibility for day to day System Administration. .
Statements of Fact • CNSI will assist with installation and maintenance of servers in accordance with DTMB policies.

3.2 Project/Team Management

Project/Team Management provides management oversight for all areas mentioned in the CHAMPS Operations and Maintenance proposal within CNSI responsibilities.

3.3 Issue Resolution

CNSI will provide support to address all defects that arise after the warranty period agreed upon in the statement of work of each initiative that is deployed to CHAMPS. This would cover ICD-10, CMCP, the Illinois projects, and any other large initiative implementations. During the 90 days all defects that have been identified as a result of the implementations will be logged and prioritized by the states. Depending on the size of the initiative, CNSI will allocate an appropriate number of FTEs to address all defects over the six-month period provided for defect fixes. These resources will not be charged to the State and will be staff that CNSI will provide outside the defined required staff to the support the five-year operation and support extension.

On the 91st day, post-warranty, all defects become issues that are addressed as part of the supplemental services offered by CNSI within the scope of this contract extension. CNSI has identified specific staff needs to address the issues that will arise and provide resolutions. Moreover, the staff assigned to the issue resolutions will also participate and support the UAT tasks prior to every release to ensure that the proper environment is available for state staff to conduct their testing prior to every planned release.

3.4 SME

The subject matter expert (SME) role performs the following functions:

- Provide subject matter expertise in specific areas relating to CHAMPS operations and act as liaison between MDCH staff, HFS staff, and CNSI technical staff to better articulate the required business needs.
- Translate business requirements into system requirements.
- Write and update project requirements and design documents for approved changes.
- Address new legislative healthcare requirements and interpretations of policy changes to ensure proper definition into system requirements.

Section 4 – Supplemental Services

In defining the scope of tasks and activities required from CNSI during the proposed extended maintenance and support of operations for CHAMPS, the State and CNSI agreed that the day-to-day operational requirements for CHAMPS should be presented separately from the additional supplemental services that will be undertaken by CNSI to support both Michigan and Illinois.

In *Section 1.8 CHAMPS Operations and Maintenance Scope*, we have presented what CNSI perceives to be the tasks and activities for supporting CHAMPS operation and the streamlined expected staff requirements.

This section addresses additional services outside the standard day-to-day operations, which the states of Michigan and Illinois require CNSI to include within the extended operation and support for CHAMPS. One of the chief supplemental services discussed will be to provide support to the many Federal and State initiatives anticipated during the five year extension. We have detailed these supplemental services and provided CNSI's understanding of the tasks required to support them.

4.1 Supplemental Services – Billable to State

The following sections detail the Supplemental Services which are billable to the State:

4.1.1 Enhancements

There are many factors driving changes to the CHAMPS system including:

- Federal regulatory compliance
- State legislative compliance
- Security and audit compliance including the Governor's initiatives on data encryption
- Medicaid program objectives
- Operational objectives such as systems consolidation, optimization of business processes, and expansion of services
- Replacement of the JCAPS interfaces subsystem which be out of extended support by the end of 2014

These feature/functionality requests are identified and required by the State to incorporate into CHAMPS in the form of enhancements.

Man-hours have been allocated by the State to address known enhancements and future anticipated enhancements. These enhancements would be authorized and prioritized by the State for implementation during scheduled system releases. The hours to address these enhancements would be approved by the State toward change orders and payable to CNSI upon delivery of the change order functionality to the UAT environment.

Since CHAMPS went live there have been multiple categories of Enhancements, each deserving their own budget, prioritization, and authorization processes. With this in mind, the following annual budgets (in hours) have been setup for the below enhancement categories:

Table 32. Enhancement Categories

Category	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
CHAMPS Enhancements	20,000	20,000	20,000	20,000	12,000
Legislative Enhancements	10,000	12,000	12,000	10,000	10,000
MSA Enhancements	10,000	12,000	12,000	10,000	10,000

The State and CNSI will monitor the planned use of these hours on a quarterly basis. Should the State elect not to utilize the total hours allocated, the remaining line item budget balance would then revert back to the State. The change orders will be billed to the State as per the standard CHAMPS practice:

> When approved and allocated, compensation for these change orders will be billed at 33% when the change order and design is approved to start, 33% when the change order is delivered to UAT, and 34% when the change order is deployed to production. If the State chooses to defer or cancel the production deployment then the remaining amount would be billable as of the date of that decision.

4.1.2 Data Warehouse/Data Dictionary Support

CNSI has supported the Data Warehouse throughout the Development, Testing, and Operations phases of CHAMPS. CNSI will continue supporting the Michigan Data Warehouse within the scope defined below. Since the Illinois Data Warehouse is also managed by OptumInsight, it is anticipated that operational support for the Illinois Data Warehouse will be consistent with that required for Michigan.

In addition, CNSI is required to assist MDCH and OptumInsight in building a comprehensive Data Dictionary. This Data Dictionary will provide a reference of data elements including a mapping between HIPAA transactions, screens, and Data Warehouse Extracts.

CNSI Responsibilities are:

- Create and update Data Warehouse Extract layouts for warranted defects and approved enhancements.
- Create and update Data Warehouse Extract layouts for major development implementations (EHR, ICD10, CMCP).
- Respond to Data Warehouse OTRS tickets created by MDCH and HFS users; notify OptumInsight of tickets and resolution plan.
- Respond to Data Warehouse issues communicated by OptumInsight. These issues may not rise to the level of defects/enhancements and may be questions or concerns raised by end users of the Data Warehouse.

- Participate in regular Data Warehouse CCB meetings with OptumInsight, MDCH, HFS, and DTMB.
- Explain Data Warehouse Extract syntax to OptumInsight, upon request.
- Explain CHAMPS Data Model relationships to OptumInsight as they relate to Data Warehouse extracts, upon request.
- Explain CHAMPS application data update behavior to OptumInsight, upon request.
- Implement Data Warehouse Extract changes for warranted defects, issues raised, and approved enhancements in accordance with CHAMPS release schedules.
- Monitor production Data Warehouse Extracts. Perform remedial action for production issues and notify OptumInsight of the issues and resolution plan.
- Monitor Production Data Warehouse reconciliation results. Resolve issues identified by the reconciliation wherever possible. Refer application issues to appropriate application support teams for resolution. Notify OptumInsight of the resolution plan.
- Produce special extracts as needed, to update the Data Warehouse with data that is missing or incorrect due to issues with the extracts.
- Provide mapping between transactions and CHAMPS data elements for those transactions implemented in CHAMPS.
- Provide mapping between CHAMPS screens and database tables and columns.
- Provide updated mappings on a quarterly basis.

The Statements of Fact are:

- Data Warehouse Extracts for subsystems not currently extracted from CHAMPS are not part of this effort.
- Mapping of systems other than CHAMPS is not part of this effort.

4.1.3 COGNOS Training

CNSI has provided extensive COGNOS training to MDCH staff during the last two years. This training has greatly increased the MDCH knowledge and use of COGNOS tools.

Since the MDCH staff has now been fully trained on COGNOS, future training efforts will be directed at Illinois staff once the system is in production. HFS will be asked to identify a set of users to be trained in COGNOS. This applies to power users who need the more advanced reporting capabilities of COGNOS.

CNSI Responsibilities are:

- Perform initial end user training by COGNOS Ad Hoc Subsystem.
- Perform annual end user refresher training by COGNOS Ad Hoc Subsystem.
- Conduct regular COGNOS User Group meetings on a mutually agreed upon schedule.

The Statements of Fact are:

- Training on subsystems that currently do not have COGNOS Ad Hoc support is not part of this effort.
- Training groups are limited to 10 people per session. CNSI has planned for a maximum of 5 groups to attend the session series.

4.1.4 ERP (OFIN) Support

CNSI will provide support for the full Oracle Financials ERP including the Accounts Payable, Accounts Receivable, and General Ledger modules. Currently, Michigan does not use the full ERP features of OFIN. This ERP support will be provided to Illinois who will use the full ERP features of OFIN for the currently licensed AP, AR, and GL modules.

CNSI Responsibilities are:

- Upgrade OFIN to the current supported version.
- Perform initial end user training for OFIN modules.
- Support OFIN modules in all environments.
- Perform required maintenance of OFIN modules.

The Statements of Fact are:

- Training, maintenance, and support on OFIN modules other than AP, AR, and GL are not included.

4.1.5 eMIPP Support

CNSI will provide ongoing support to ensure that the eMIPP module continues to function properly, including maintenance, defect resolution, enhancement support, and semi-annual MU upgrades and changes. This support is for both Michigan and Illinois as both states will be using a common solution.

CNSI Responsibilities are:

- Support for the Core eMIPP product code including updates to code.
- Support to resolve defects, including research, design sessions as required and development and testing.
- Support to implement enhancements.
- Support for UAT processes.
- Support for approximately 10 daily federal interfaces and 3 weekly interfaces.
- Support to resolve unexpected CMS data conditions.
- Implementation of expected CMS mandates.
- Implementation of unexpected CMS mandates (averaging 6 per yr.)

- Ongoing user technical support for state users.
- Third party support to provide technical assistance for providers as requested by state users.
- System stabilization support for the semi-annual releases required to keep eMIPP up to date with Meaningful Use changes.

The Statement of Fact are:

- eMIPP operations support does not include provider training or training materials.
- eMIPP operations support does not include user training or training materials.
- Unless specified in the current eMIPP product contract, all enhancements and unknown CMS mandates are handled through the normal CHAMPS change management processes.

4.1.6 DMP (Document Management Portal) Support

CNSI will provide ongoing support to ensure that the DMP module continues to function properly, including maintenance, defect resolution, enhancement support, and maintenance upgrades and changes. This support is for both Michigan and Illinois as both states will be using a common solution.

CNSI Responsibilities are:

- Support for the DMP product code including updates to code.
- Support to resolve defects, including research, design sessions as required and development and testing.
- Support to implement enhancements.
- Support for UAT processes.
- Support for Filenet integration.
- Ongoing user technical support for state users.
- Third party support to provide technical assistance for providers as requested by state users.

The Statement of Fact are:

- DMP operations support does not include provider training or training materials.
- DMP operations support does not include user training or training materials.
- Unless specified in the current DMP product contract, all enhancements and unknown CMS mandates are handled through the normal CHAMPS change management processes.

4.2 Supplemental Services – No Cost to State

The following sections detail the supplemental services which CNSI performs at no cost to the State:

4.2.1 Hardware/Software Acquisition

MDCH and DTMB have requested assistance from CNSI in the past to acquire hardware and software for the project. CNSI will continue to offer the support service for acquisition of hardware/software.

CNSI Responsibilities are:

- Provide price quotes for CHAMPS-related hardware and software based on specifications provided by DTMB.
- Purchase hardware and software on the behalf of the State, subject to mutually agreed upon payment and delivery terms.

The State Responsibilities are:

- Hardware Installation and operating system configuration.

4.2.2 COTS Product Upgrades

Since CHAMPS uses a variety of COTS Products to support both Michigan and Illinois, it is important that these products be upgraded periodically in order to operate effectively in a fully supported manner.

CNSI Responsibilities are:

- Perform software upgrades to COTS products and underlying software as necessary for the following reasons:
    - To remain at standard or supported software versions according to DTMB Enterprise Architecture standards.
    - To remain on a supported version level with the software vendor.
    - To remain compliant with HIPAA standards governing the CHAMPS system.

The State Responsibilities are:

- Upgrades to COTS products not supported within CHAMPS.
- Upgrades to COTS products for reasons not specified in the above CNSI Responsibilities.

The Statement of Fact are:

- In the event that the COTS upgrade involves large changes in functionality, customizations, or infrastructure, CNSI reserves the right to consider additional enhancements associated with the upgrade.

- In the event that the Illinois projects require additional COTS products that are not currently part of CHAMPS, CNSI reserves the right to consider additional enhancements associated with upgrades to these products.

4.2.3 System Documentation

CNSI will continue to update CHAMPS documentation. The documentation will be periodically updated to reflect changes from application releases. The documents to be updated include:

- DSDD (Detailed System Design Document)
- IDD (Integrated Design Document)
- Help Pages
- Operations Manual

4.2.4 Additional Testing Environment Support

CNSI will continue to support additional testing environments which are not directly used for CHAMPS Operations. The environments include:

- Training
- Outreach
- Business to Business (B2B) Testing

These environments will be maintained and refreshed on a mutually agreed upon frequency.

4.2.5 Advanced Database Support

CNSI's DBAs have demonstrated their advanced capabilities by supporting a 12 terabyte production database with hundreds of billions of rows of data along with dozens of test and development environments. In addition, they have implemented advanced technologies including data compression, data masking, and network encryption.

During this next contract extension, CNSI DBAs will advance to the next level with the following planned initiatives:

- Upgrade to Oracle 12c cloud database server.
- Upgrade to Oracle Enterprise Manager 12c Cloud Control.
- Implementation of Oracle's Audit Vault database security and auditing software.

These initiatives will enable CHAMPS to support the multi-state cloud operating model in a secure fashion.

4.2.6 Additional Support

In addition to the operational support defined in the sections above, CNSI supports the state in various other ways including:

- Support for audits from the Office of the Auditor General
- Support for security audits
- Support for provider technology issues who use broader technology than that supported by the state. For example, the state uses ie8 as its browser standard while many providers have upgraded to ie9 or ie10.

This support often involves extensive resources from CNSI which is in addition to the operational and supplemental services provided by the resources.

Section 5 – Resource Model and Cost

This section of the proposal presents our fixed price cost estimate for extending the current CHAMPS Maintenance and Support contract for an additional five years, from October 1, 2013 through September 30, 2018.

The proposed cost was derived based on the expected effort required, as presented throughout the proposal, for the tasks CNSI is expecting to perform under the day-to-day operations of CHAMPS and for the supplemental services required by the State to be incorporated under the proposed contract extension.

For ease of reference, we have detailed the cost of each line item to provide the State with a better understanding of the associated cost for operation and support tasks related specifically to CHAMPS, and the additional supplemental services required by the State. Moreover, we have presented and detailed the cost savings extended to the State as a result of streamlining CHAMPS operation and exhibiting CNSI's apperception for being considered as a trusted technology and business partner with the State.

5.1 Service Areas

CNSI Resources are allocated to functions based on the groups of tasks they perform. The groups of tasks are organized around the level of services described throughout the proposal, while delineating the cost for undertaking CHAMPS operation and support tasks from the supplemental services offered. All services are applied to both Michigan and Illinois with the exception of COGNOS Training and ERP(OFIN) Support which are currently planned only for Illinois.

Table 33. Service Areas

Service Areas	Tasks
Core Operations	Basic Operation of the system • Infrastructure support (Production environment only) • Operations support (Limited to maintaining schedules and basic monitoring) • Application support (Limited to responding to issues requiring immediate resolution) • Payment operations • EDI operations (Including Core transactions) • ClaimsSure operations • Provider Credentialing operations

Service Areas	Tasks
	• Provide operational reporting • Manage operational transaction processing, capacity planning, and utilization • Maintain operations manual • Serve as liaison between State staff and technical teams • Perform continuous improvement upgrades to the system for increased efficiency and performance through automation, business process re-engineering, and performance tuning • Perform COTS product upgrades • Support hardware/software acquisition • Management Functional • Review OTRS tickets for warranted defects and issues • Support testing of warranted defect fixes and issues Application Support • Review OTRS tickets for warranted defects and issues • Develop defect fixes • Support testing of defect fixes • Support deployment of defect fixes Testing • Perform system testing of defect fixes • Support UAT of defect fixes Infrastructure Support • Support all non-Production environments (Development, Testing, Staging) • Perform release deployments in all non-Production environments (Development, Testing, Staging) Operations Support • Manage OTRS Tickets
Project/Team Management	• Manage all aspects of the Project, Operations, and Teams

Service Areas	Tasks
Issue Resolution	Functional • Review OTRS tickets for issues • Support testing of issue fixes Application Support • Review OTRS Tickets for Issues • Develop issue fixes • Support testing of issue fixes • Support deployment of issue fixes Testing • Perform system testing of issue fixes • Support UAT of issue fixes
SME	• Provide subject matter expertise in specific areas relating to CHAMPS operations and act as liaison between MDCH, HFS, and CNSI staff to better articulate the required business needs • Translate business requirements into system requirements • Address new legislative healthcare requirements and interpretations of policy changes to ensure proper definition into system requirements

Service Areas	Tasks
Enhancements	Functional • Review OTRS tickets for enhancements • Build change log documents • Update DSDDs Application Support • Review OTRS tickets for enhancements • Develop enhancements • Support testing of enhancements • Support deployment of enhancements Testing • Perform system testing of enhancements • Support UAT of enhancements.
Data Warehouse/Data Dictionary Support	• Support CHAMPS Data Warehouse and Data Dictionary projects
COGNOS Training	• Build COGNOS user training manuals • Perform COGNOS end user training • Lead COGNOS user group
ERP (OFIN) Support	• Upgrade OFIN to current supported version • Perform initial end user training for OFIN modules • Support OFIN modules in all environments • Perform required maintenance of OFIN modules

Service Areas	Tasks
eMIPP Support	• Support for the Core eMIPP product code including updates to code • Support to resolve defects, including research and design sessions, as required, and development and testing • Support to implement enhancements • Support for UAT processes. • Support for approximately 10 daily federal interfaces and 3 weekly interfaces • Support to resolve unexpected CMS data conditions • Implementation of expected CMS mandates • Implementation of unexpected CMS mandates (averaging 6 per yr.) • Ongoing user technical support for state users and • Third party support to provide technical assistance for providers as requested by state users • System stabilization support for the semi-annual releases required to keep eMIPP up to date with Meaningful Use changes
DMP Support	• Support for the DMP product code including updates to code. • Support to resolve defects, including research, design sessions as required and development and testing. • Support to implement enhancements. • Support for UAT processes. • Support for Filenet integration. • Ongoing user technical support for state users. • Third party support to provide technical assistance for providers as requested by state users.

5.2 Resource Allocation Per Service Area

To provide a detailed presentation of the resource requirement to undertake the CHAMPS Core Operation tasks and Supplemental Services offered, we are providing in the table below the breakdown of required resources by service area.

In addition, for comparison purposes, we are also including in the table the actual resource count that was utilized to support the CHAMPS operation during the current operations contract. These resource counts reflect the increased resources required to support the additional functionality added to CHAMPS through enhancements and large initiatives such as eMIPP, ClaimsSure, ICD-10, and the multi-State model. The resource allocations have been split between Michigan and Illinois to show incremental resources associated with supporting Illinois. **Note that this is not intended as a chargeback model to the State of Illinois, but is provided as a reference point for resource changes.**

Table 34 provides the estimated resource allocations for each service layer by fiscal year and state. A subtotal for operations and supplemental services shows the grouping of those resources along with overall totals. A growth factor column is provided which shows the percentage of growth in resource counts from fiscal year 2014 through fiscal year 2018.

Table 34. Resource Allocations

Year	FY 2013	FY 2014		FY 2015		FY 2016		FY 2017		FY 2018		Growth Factor 2014 - 2018 (% increase)
Service Layer	**MI**	**MI**	**IL**	**MI**	**IL**	**MI**	**IL**	**MI**	**IL**	**MI**	**IL**	
Core Operations	28	30	2	30	2	30	2	30	18	30	16	44%
Issue Resolution	4	4	1	5	2	5	2	5	3	5	3	60%
Project / Team Management	7	7	0	7	0	7	0	4	4	4	4	14%
SME	4	4	1	4	1	4	1	4	6	4	6	100%
Subtotal Operations	**43**	**45**	**4**	**46**	**5**	**46**	**5**	**43**	**31**	**43**	**29**	**47%**
*CHAMPS Enhancements	8	8	2	8	2	8	2	5	5	3	3	*N/A
*Legislative Enhancements	0	5	0	6	0	6	0	3	2	3	2	*N/A
*MSA Other Enhancements	0	5	0	6	0	6	0	3	2	3	2	*N/A
Data Warehouse / Data Dictionary Support	2	2	0	2	0	2	0	2	1	2	1	50%
COGNOS Training	2	0	0	0	0	0	0	0	1	0	1	
ERP(OFIN) Support	0	0	0	0	0	0	0	0	2	0	2	
eMIPP Support	0	1	1	1	1	1	1	1	1	1	1	0%
DMP Support	0	1	0	2	0	2	0	1	1	1	1	100%
SubTotal Supplemental Services	**12**	**22**	**3**	**25**	**3**	**25**	**3**	**15**	**15**	**13**	**13**	4%
Total	**55**	**67**	**7**	**71**	**8**	**71**	**8**	**58**	**46**	**56**	**42**	**32%**

* Enhancements are a fixed budget which will be split between Michigan and Illinois. Thus a growth factor cannot be calculated as there is no net change in total resources.

The above table demonstrates that despite adding full support for Illinois and the other initiatives deployed during the five year extension, CNSI resource counts for operations are expected to increase by only 47% while overall resource counts are expected to increase by 32%. This is attributed to the streamlined and efficient organization structure and processes as CNSI operations extend to both Michigan and Illinois.

5.3 Cost Per Service Area

This section provides the breakdown of the cost by service area presented in the proposal by fiscal year, comprising the five-year extension with associated supplemental services.

In factoring our cost, we have taken into account the operational efficiency that should be passed onto the State and the reduction in resource requirements for providing the proposed

services. The following are the service area blended hourly rates for the proposed five-year extension, which formed the basis for deriving to the total project cost:

Table 35. Discounted Blended Rate

Hourly Rates by Fiscal Year (FY)	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Core Operations Retail Rate	$146.76	$146.76	$146.76	$155.00	$155.00
Core Operations Discount Rate	$120.34	$120.34	$120.34	$127.10	$127.10
Services Discount Rate*	$146.76	$146.76	$146.76	$155.00	$155.00

* Note that the Services Discount Rate has remained constant at $146.76 for all CHAMPS projects for the five year period, from Fiscal Year 2012 through Fiscal Year 2016.

CNSI is able to reduce the cost to the State by achieving reductions in resources through greater operating efficiencies. In addition, CNSI has applied discounts to Core Operations Services to further reduce the cost.

On the following pages we will be presenting our cost for undertaking the proposed five-year CHAMPS operation and support extension with supplemental services. We are presenting the proposed cost for each Fiscal Year for Michigan, Illinois, and the two states combined according to the resource requirements presented in

Table 34 (Resource Allocations) and the discounted cost offered to the state in Table 35 (Discounted Blended Rate).

5.3.1 Cost Summaries by Fiscal Year for the State of Michigan

The tables below depict the costs for each of the five fiscal years to undertake the services and tasks presented throughout the proposal. The tables present the full cost for the service and the discounted cost offered by CNSI. Please note that enhancements are subject to State approval and only the hours associated to approved enhancements will be billed to the State according to the schedule described in detail in *Section 4.1.1 Enhancements*.

Table **36** provides the retail and discounted price by service layer for Fiscal Year 2014 with subtotals for Operations, Supplemental Services, Operations and Maintenance, and Licensing, along with the grand total.

Table 36**. FY 2014 Cost Basis and Discounts**

MI Cost Summary		
Service Layer	**Retail Price**	**Discount Price**
Core Operations	$9,157,824	$7,509,416
Issue Resolution	$1,221,043	$1,221,043
Project / Team Management	$1,892,617	$1,892,617
SME	$1,221,043	$1,221,043
Subtotal Operations	**$13,492,527**	**$11,844,119**
CHAMPS Enhancements	$2,442,086	$2,442,086
Legislative Enhancements	$1,526,304	$1,526,304
MSA Other Enhancements	$1,526,304	$1,526,304
Data Warehouse / Data Dictionary Support	$610,522	$610,522
COGNOS Training	$0	$0
ERP(OFIN) Support	$0	$0
eMIPP Support	$305,261	$305,261
DMP Support	$305,261	$305,261
SubTotal Supplemental Services	**$6,715,738**	**$6,715,738**
Total Operations & Maintenance	**$20,208,265**	**$18,559,857**
RuleIT	$125,791	$125,791
HealthBeat	$150,000	$150,000
ClaimsSure	$350,000	$350,000
CM Toolkit	$100,000	$100,000
LexisNexis	$480,000	$480,000
SubTotal Licensing	**$1,205,791**	**$1,205,791**
Total	***$21,414,056***	***$19,765,648***

Table **37** provides the retail and discounted price by service layer for Fiscal Year 2015 with subtotals for Operations, Supplemental Services, Operations and Maintenance, and Licensing, along with the grand total.

Table 37**. FY 2015 Cost Basis and Discounts**

MI Cost Summary		
Service Layer	**Retail Price**	**Discount Price**
Core Operations	$9,157,824	$7,509,416
Issue Resolution	$1,526,304	$1,526,304
Project / Team Management	$1,892,617	$1,892,617
SME	$1,221,043	$1,221,043
Subtotal Operations	**$13,797,788**	**$12,149,380**
CHAMPS Enhancements	$2,442,086	$2,442,086
Legislative Enhancements	$1,831,565	$1,831,565
MSA Other Enhancements	$1,831,565	$1,831,565
Data Warehouse / Data Dictionary Support	$610,522	$610,522
COGNOS Training	$0	$0
ERP(OFIN) Support	$0	$0
eMIPP Support	$305,261	$305,261
DMP Support	$610,522	$610,522
SubTotal Supplemental Services	**$7,631,520**	**$7,631,520**
Total Operations & Maintenance	**$21,429,308**	**$19,780,900**
RuleIT	$125,791	$125,791
HealthBeat	$150,000	$150,000
ClaimsSure	$350,000	$350,000
CM Toolkit	$100,000	$100,000
LexisNexis	$480,000	$480,000
SubTotal Licensing	$1,205,791	$1,205,791
Total	***$22,635,099***	***$20,986,691***

Table 38 provides the retail and discounted price by service layer for Fiscal Year 2016 with subtotals for Operations, Supplemental Services, Operations and Maintenance, and Licensing, along with the grand total.

Table 38. FY 2016 Cost Basis and Discounts

MI Cost Summary		
Service Layer	**Retail Price**	**Discount Price**
Core Operations	$9,157,824	$7,509,416
Issue Resolution	$1,526,304	$1,526,304
Project / Team Management	$1,892,617	$1,892,617
SME	$1,221,043	$1,221,043
Subtotal Operations	**$13,797,788**	**$12,149,380**
CHAMPS Enhancements	$2,442,086	$2,442,086
Legislative Enhancements	$1,831,565	$1,831,565
MSA Other Enhancements	$1,831,565	$1,831,565
Data Warehouse / Data Dictionary Support	$610,522	$610,522
COGNOS Training	$0	$0
ERP(OFIN) Support	$0	$0
eMIPP Support	$305,261	$305,261
DMP Support	$610,522	$610,522
SubTotal Supplemental Services	**$7,631,520**	**$7,631,520**
Total Operations & Maintenance	**$21,429,308**	**$19,780,900**
RuleIT	$125,791	$125,791
HealthBeat	$150,000	$150,000
ClaimsSure	$350,000	$350,000
CM Toolkit	$100,000	$100,000
LexisNexis	$480,000	$480,000
SubTotal Licensing	$1,205,791	$1,205,791
Total	***$22,635,099***	***$20,986,691***

Table **39** provides the retail and discounted price by service layer for Fiscal Year 2017 with subtotals for Operations, Supplemental Services, Operations and Maintenance, and Licensing, along with the grand total.

Table 39**. FY 2017 Cost Basis and Discounts**

MI Cost Summary		
Service Layer	**Retail Price**	**Discount Price**
Core Operations	$9,672,000	$7,931,040
Issue Resolution	$1,612,000	$1,612,000
Project / Team Management	$1,289,600	$1,289,600
SME	$1,289,600	$1,289,600
Subtotal Operations	**$13,863,200**	**$12,122,240**
CHAMPS Enhancements	$1,612,000	$1,612,000
Legislative Enhancements	$967,200	$967,200
MSA Other Enhancements	$967,200	$967,200
Data Warehouse / Data Dictionary Support	$644,800	$644,800
COGNOS Training	$0	$0
ERP(OFIN) Support	$0	$0
eMIPP Support	$322,400	$322,400
DMP Support	$322,400	$322,400
SubTotal Supplemental Services	**$4,836,000**	**$4,836,000**
Total Operations & Maintenance	**$18,699,200**	**$16,958,240**
RuleIT	$201,266	$201,266
HealthBeat	$240,000	$150,000
ClaimsSure	$560,000	$350,000
CM Toolkit	$160,000	$100,000
LexisNexis	$480,000	$480,000
SubTotal Licensing	$1,641,266	$1,281,266
Total	***$20,340,466***	***$18,239,506***

Table **40** provides the retail and discounted price by service layer for Fiscal Year 2018 with subtotals for Operations, Supplemental Services, Operations and Maintenance, and Licensing, along with the grand total.

Table 40**. FY 2018 Cost Basis and Discounts**

MI Cost Summary		
Service Layer	**Retail Price**	**Discount Price**
Core Operations	$9,672,000	$7,931,040
Issue Resolution	$1,612,000	$1,612,000
Project / Team Management	$1,289,600	$1,289,600
SME	$1,289,600	$1,289,600
Subtotal Operations	**$13,863,200**	**$12,122,240**
CHAMPS Enhancements	$967,200	$967,200
Legislative Enhancements	$967,200	$967,200
MSA Other Enhancements	$967,200	$967,200
Data Warehouse / Data Dictionary Support	$644,800	$644,800
COGNOS Training	$0	$0
ERP(OFIN) Support	$0	$0
eMIPP Support	$322,400	$322,400
eMIPP Support	$322,400	$322,400
SubTotal Supplemental Services	**$4,191,200**	**$4,191,200**
Total Operations & Maintenance	**$18,054,400**	**$16,313,440**
RuleIT	$201,266	$201,266
HealthBeat	$240,000	$150,000
ClaimsSure	$560,000	$350,000
CM Toolkit	$160,000	$100,000
LexisNexis	$480,000	$480,000
SubTotal Licensing	$1,641,266	$1,281,266
Total	***$19,695,666***	***$17,594,706***

5.3.2 Total Costs by Fiscal Year for the State of Michigan

Table 41 below depicts the total cost for the State of Michigan to undertake the services and tasks presented throughout the proposal. Table 41 presents the full cost for the service and the discounted cost offered by CNSI per Fiscal Year.

The total cost presented includes the required effort to undertake the CHAMPS operations support and maintenance tasks in addition to the supplemental services required from CNSI.

Table 41. Cost Basis and Discounts by Fiscal Year

Fiscal Year	Retail Price	Discount Price
FY2014	*$21,414,056*	*$19,765,648*
FY2015	*$22,635,099*	*$20,986,691*
FY2016	*$22,635,099*	*$20,986,691*
FY2017	*$20,340,466*	*$18,239,506*
FY2018	*$19,695,666*	*$17,594,706*
Total	*$106,720,385*	*$97,573,241*

5.3.3 Cost Summaries by Fiscal Year for the State of Illinois

The tables below depict the costs for each of the five fiscal years to undertake the services and tasks presented throughout the proposal. The tables present the full cost for the service and the discounted cost offered by CNSI. Please note that enhancements are subject to State approval and only the hours associated to approved enhancements will be billed to the State according to the schedule described in detail in *Section 4.1.1 Enhancements*.

Table **42** provides the retail and discounted price by service layer for Fiscal Year 2014 with subtotals for Operations, Supplemental Services, Operations and Maintenance, and Licensing, along with the grand total.

Table 42**. FY 2014 Cost Basis and Discounts**

IL Cost Summary		
Service Layer	**Retail Price**	**Discount Price**
Core Operations	$610,522	$500,628
Issue Resolution	$305,261	$305,261
Project / Team Management	$0	$0
SME	$305,261	$305,261
Subtotal Operations	**$1,221,043**	**$1,111,149**
CHAMPS Enhancements	$610,522	$610,522
Legislative Enhancements	$0	$0
MSA Other Enhancements	$0	$0
Data Warehouse / Data Dictionary Support	$0	$0

COGNOS Training	$0	$0
ERP(OFIN) Support	$0	$0
eMIPP Support	$305,261	$305,261
DMP Support	$0	$0
SubTotal Supplemental Services	**$915,782**	**$915,782**
Total Operations & Maintenance	**$2,136,826**	**$2,026,932**
RuleIT	$0	$0
HealthBeat	$0	$0
ClaimsSure	$0	$0
CM Toolkit	$0	$0
LexisNexis	$0	$0
SubTotal Licensing	**$0**	**$0**
Total	***$2,136,826***	***$2,026,932***

Table 43 provides the retail and discounted price by service layer for Fiscal Year 2015 with subtotals for Operations, Supplemental Services, Operations and Maintenance, and Licensing, along with a grand total.

Table 43. FY 2015 Cost Basis and Discounts

IL Cost Summary		
Service Layer	**Retail Price**	**Discount Price**
Core Operations	$610,522	$500,628
Issue Resolution	$610,522	$610,522
Project / Team Management	$0	$0
SME	$305,261	$305,261
Subtotal Operations	**$1,526,304**	**$1,416,410**
CHAMPS Enhancements	$610,522	$610,522
Legislative Enhancements	$0	$0
MSA Other Enhancements	$0	$0
Data Warehouse / Data Dictionary Support	$0	$0
COGNOS Training	$0	$0
ERP(OFIN) Support	$0	$0
eMIPP Support	$305,261	$305,261
DMP Support	$0	$0
SubTotal Supplemental Services	**$915,782**	**$915,782**
Total Operations & Maintenance	**$2,442,086**	**$2,332,193**
RuleIT	$0	$0
HealthBeat	$0	$0
ClaimsSure	$0	$0
CM Toolkit	$0	$0
LexisNexis	$0	$0
SubTotal Licensing	**$0**	**$0**
Total	***$2,442,086***	***$2,332,193***

Table **44** provides the retail and discounted price by service layer for Fiscal Year 2016 with subtotals for Operations, Supplemental Services, Operations and Maintenance, and Licensing, along with a grand total.

Table 44**. FY 2016 Cost Basis and Discounts**

IL Cost Summary		
Service Layer	**Retail Price**	**Discount Price**
Core Operations	$610,522	$500,628
Issue Resolution	$610,522	$610,522
Project / Team Management	$0	$0
SME	$305,261	$305,261
Subtotal Operations	**$1,526,304**	**$1,416,410**
CHAMPS Enhancements	$610,522	$610,522
Legislative Enhancements	$0	$0
MSA Other Enhancements	$0	$0
Data Warehouse / Data Dictionary Support	$0	$0
COGNOS Training	$0	$0
ERP(OFIN) Support	$0	$0
eMIPP Support	$305,261	$305,261
DMP Support	$0	$0
SubTotal Supplemental Services	**$915,782**	**$915,782**
Total Operations & Maintenance	**$2,442,086**	**$2,332,193**
RuleIT	$0	$0
HealthBeat	$0	$0
ClaimsSure	$0	$0
CM Toolkit	$0	$0
LexisNexis	$0	$0
SubTotal Licensing	**$0**	**$0**
Total	***$2,442,086***	***$2,332,193***

Table **45** provides the retail and discounted price by service layer for Fiscal Year 2017 with subtotals for Operations, Supplemental Services, Operations and Maintenance, and Licensing, along with a grand total.

Table 45. FY 2017 Cost Basis and Discounts

IL Cost Summary		
Service Layer	**Retail Price**	**Discount Price**
Core Operations	$5,803,200	$4,758,624
Issue Resolution	$967,200	$967,200
Project / Team Management	$1,289,600	$1,289,600
SME	$1,934,400	$1,934,400
Subtotal Operations	**$9,994,400**	**$8,949,824**
CHAMPS Enhancements	$1,612,000	$1,612,000
Legislative Enhancements	$644,800	$644,800
MSA Other Enhancements	$644,800	$644,800
Data Warehouse / Data Dictionary Support	$322,400	$322,400
COGNOS Training	$322,400	$322,400
ERP(OFIN) Support	$644,800	$644,800
eMIPP Support	$322,400	$322,400
DMP Support	$322,400	$322,400
SubTotal Supplemental Services	**$4,836,000**	**$4,836,000**
Total Operations & Maintenance	**$14,830,400**	**$13,785,824**
RuleIT	$0	$0
HealthBeat	$0	$0
ClaimsSure	$0	$0
CM Toolkit	$0	$0
LexisNexis	$288,000	$288,000
SubTotal Licensing	**$288,000**	**$288,000**
Total	***$15,118,400***	***$14,073,824***

Table **46** provides the retail and discounted price by service layer for Fiscal Year 2018 with subtotals for Operations, Supplemental Services, Operations and Maintenance, and Licensing, along with a grand total.

Table 46**. FY 2018 Cost Basis and Discounts**

IL Cost Summary		
Service Layer	**Retail Price**	**Discount Price**
Core Operations	$5,158,400	$4,229,888
Issue Resolution	$967,200	$967,200
Project / Team Management	$1,289,600	$1,289,600
SME	$1,934,400	$1,934,400
Subtotal Operations	**$9,349,600**	**$8,421,088**
CHAMPS Enhancements	$967,200	$967,200
Legislative Enhancements	$644,800	$644,800
MSA Other Enhancements	$644,800	$644,800
Data Warehouse / Data Dictionary Support	$322,400	$322,400
COGNOS Training	$322,400	$322,400
ERP(OFIN) Support	$644,800	$644,800
eMIPP Support	$322,400	$322,400
DMP Support	$322,400	$322,400
SubTotal Supplemental Services	**$4,191,200**	**$4,191,200**
Total Operations & Maintenance	**$13,540,800**	**$12,612,288**
RuleIT	$0	$0
HealthBeat	$0	$0
ClaimsSure	$0	$0
CM Toolkit	$0	$0
LexisNexis	$288,000	$288,000
SubTotal Licensing	**$288,000**	**$288,000**
Total	***$13,828,800***	***$12,900,288***

5.3.4 Total Costs by Fiscal Year for the State of Illinois

Table 47 depicts the total cost for the State of Illinois to undertake the services and tasks presented throughout the proposal. The table presents the full cost for the service and the discounted cost offered by CNSI per fiscal year.

The total cost presented includes the required effort to undertake the CHAMPS operations support and maintenance tasks in addition to the supplemental services required from CNSI.

Table 47. Cost Basis and Discounts by Fiscal Year

Fiscal Year	Retail Price	Discount Price
FY2014	*$2,136,826*	*$2,026,932*
FY2015	*$2,442,086*	*$2,332,193*
FY2016	*$2,442,086*	*$2,332,193*
FY2017	*$15,118,400*	*$14,073,824*
FY2018	*$13,828,800*	*$12,900,288*
Total	*$35,968,198*	*$33,665,429*

5.3.5 Total Combined Costs by Fiscal Year for the States of Michigan and Illinois

Table 48 depicts the total combined cost for the States of Michigan and Illinois to undertake the services and tasks presented throughout the proposal. The table presents per Fiscal Year the full cost for the service and the discounted cost offered by CNSI.

The total cost presented includes the required effort to undertake the CHAMPS operations support and maintenance tasks in addition to the supplemental services required from CNSI.

Table 48. Cost Basis and Discounts by Fiscal Year

Fiscal Year	Retail Price	Discount Price
FY2014	*$23,550,882*	*$21,792,579*
FY2015	*$25,077,186*	*$23,318,883*
FY2016	*$25,077,186*	*$23,318,883*
FY2017	*$35,458,866*	*$32,313,330*
FY2018	*$33,524,466*	*$30,494,994*
Total	*$142,688,584*	*$131,238,669*

This results in a total cost growth factor of 40% from FY2014 to FY2018.

5.4 Key Resources

For every phase of the contract since 2006, CNSI has identified key resources that are instrumental to the project in maintaining the knowledge accumulated over time and

representing the business and personal relations that are so critically required. This ensures the continued success of supporting CHAMPS operations.

Table 49 provides the named key resources for the Project:

Table 49. Key Resources

Position	Name
Senior Vice President	Sharif Hussein
Senior Technical Director	Sashi Ravipati
Delivery Director	Ashok Ramanjanappa
Operations and Infrastructure Director	John Harding
Michigan Deputy Project Manager	Jerry Armstrong
Illinois Project Manager	Michele Chamberlin
Integration Manager	Mohanbabu Narayanasamy
Operations Manager	Johnson Samgnanakan
Functional Manager	Aditya Sakpal
Development Manager	Saravanan Regunath
Application Support Manager	Rafiq Mohammed
Operations Support Manager	Jim Schloss
Back End Systems Manager	Dev Vijay
HIPAA Lead	Ravi Bhimisetty

Position	Name
Application Support Lead	Vidyadhar Gundluru
Application Support Lead	Rejoice Chemmannur

Section 6 – State Responsibilities and Statements of Fact

In this section we have identified the State responsibilities and statements of fact that were a key driver in formulating this proposal. These items have been formulated to set the expectation for the State as to how CNSI is planning to undertake the offered services.

6.1 State of Michigan Responsibilities

The following are the State responsibilities for this proposal:

- DTMB is responsible for managing all infrastructures except for the Development environment which is hosted at CNSI facilities.
- DTMB is responsible for all system and database backups.
- DTMB will provide additional disk storage space for all environments, as needed.
- DTMB will provide system and application monitoring tools.
- Access to CHAMPS is through the Single Sign On (SSO) application which is maintained by DTMB. Any disruptions in SSO will also disrupt CHAMPS Production operations. The State will continue to provide VPN tokens and access to the State network. DTMB is responsible for maintaining and extending all software licenses, with the exception of the licenses held by CNSI.

6.2 State of Illinois Responsibilities

The following are State responsibilities for this proposal:

- HFS and ICMS are responsible for managing all infrastructures within Illinois facilities.
- HFS and ICMS will provide any necessary networking or telecommunications infrastructure for connecting Illinois users to CHAMPS.
- HFS will provide any necessary for web services or other integration between CHAMPS and Illinois systems.
- HFS will provide any necessary connectivity for transferring interface files required for CHAMPS to exchange with Illinois systems.

6.3 Statements of Fact

The following are general Statements of Fact for this proposal:

- COTS product upgrades will be performed in order to remain at standard or supported software versions according to DTMB Enterprise Architecture standards.
- CNSI will continue to use OTRS for incident reporting and Clearquest for defect/issue resolution and enhancement tracking.

- Releases will follow the mutually agreed upon release calendar.
- No knowledge transfer tasks or cost are included in this proposal.

The following statements of fact provide the basis for resource requirements and cost:

- All costs include support for both Michigan and Illinois. Resource and cost allocations indicate where resources are shared or dedicated to an individual state.
- Core Operations represents the team required to keep the Production system running. This includes support for all enhancements and initiatives once they become operational.
- Project/team management represents the CHAMPS Management Team.
- The SMEs presented in the resource requirement play an integral role in CHAMPS operations and are not part of the supplemental services offered by CNSI. They represent an essential component of the overall resource pool required by CNSI to support the day-to-day CHAMPS operation and support activities.
- The warranty period is 90 days from the production deployment of ICD-10 and is only applicable to the changes made as part of the ICD-10 implementation. There are resources dedicated to warranty support and are not chargeable to the State.
- Issue Resolution represents the effort to resolve issues not covered by enhancements or warranty work, and will also include UAT support.
- Enhancements represent the efforts required based on the allocated hours provided by MDCH management.
- Data Warehouse/Data Dictionary represents the operational support of the Data Warehouse including ICD-10 and EHR changes. The Data Dictionary support includes working with OptumInsight to build the CHAMPS Data Dictionary for the Data Warehouse.
- COGNOS User Training is based on a train-the-trainer approach.

Appendix A – Glossary

The below table lists common terms and acronyms used in the project and this proposal.

Term/Acronym	Description
5010 Standard	The national standard for exchanging health care information via electronic data interchange that replaces the 4010A1 standard and becomes effective on January 1, 2012. This standard allows for the larger field size of ICD-10 as well as other improvements.
Acceptance Testing	The phase of software testing that follows technical unit and system testing by the development organization. After the system testing, the completed software release is turned over to experienced end-users who evaluate the software to ensure that it meets the agreed-upon business requirements.
AI	Action Item
Analyst	A person or group who analyzes the issue, determines causal factors, and develops/recommends implementation alternatives
Approver	A person or group who authorizes the closure of an issue, a change in priority, and/or assignment of action
Architecture	The structural design of shared information environments. The art and science of organizing and labeling web sites, intranets, online communities, and software to support finding and using information.
As-One	CNSI's project collaboration and document repository system which as part of its many project documentation capabilities is specifically used to submit, update, and track risks, issues, and change control orders throughout their life cycle.
Business to Business Testing	This refers specifically to the period of testing mandated by CMS to ensure that payers and their trading partners can successfully exchange EDI transactions prior to the compliance date.
Capacity	The maximum amount of work the system can support in terms of simultaneous users, size of data base and information throughput.
CCB	Change Control Board
CHAMPS	Community Health Automated Medicaid Processing System. Replacing Michigan's MMIS - Medicaid Management Information System.

Term/Acronym	Description
Change	An element of configuration management that becomes altered or modified after formal establishment of its configuration identification; to make something different from what it is or from what it would be if left alone; to transform or convert.
Change Control	The process, by which a change is proposed, evaluated, approved or rejected, scheduled, and tracked.
Change Control Board (CCB)	The Change Control Board is a business committee that manages changes to software. For CHAMPS, this methodological function is fulfilled by the IPMO.
Change Management	A process methodology to identify the configuration of a release and to manage all changes through change control, data recording, and updating of baselines.
Change Request	Abbreviated as CR, a request to expand or reduce the project scope, modify policies, processes, plans or procedures, modify costs or budgets, or revise schedules. A change request can be direct or indirect, initiated internally or externally, legally or contractually mandated, or optional. A documented proposal for a change of one or more work items or work item parts.
CMCP	CHAMPS Medicaid Compliance Project
Contingency Plan	A set of actions and/or events brought to bear when a risk trigger has occurred, thus signaling the occurrence of a risk event. The purpose of a Contingency Plan is to treat the effects of a risk event in a way that minimizes negative impact or maximizes potential benefit.
Covered Entity	Per section 160.103 of title 45, Code of Federal Regulations, covered entities are health plans, health care clearinghouses, or health care providers who transmits any health information in electronic form in connection with a transaction covered by the HIPAA Administrative Simplification transaction standards.
CQ	ClearQuest
DB	Database

Term/Acronym	Description
Defect	A variance from expectations. See also Fault.
Defect Management	A set of processes to manage the tracking and fixing of defects found during testing and to perform causal analysis.
DOC1	A commercial off-the-shelf software (COTS) product integrated with CHAMPS. DOC1 is an electronic document composition system that creates customer-focused documents, such as letters, statements, notices, and bills. Helps to quickly develop documents, collaborate with other users, reuse content and maintain consistency throughout the organization. Allows creation of interactive documents in print or electronic formats and delivery of them across multiple channels -- web, fax, email and print -- including highly-customized correspondence for the healthcare industry.
Domain	A realm of administrative autonomy, authority, or control.
E2E	End-to-End
Edifecs	Edifecs is a transaction processing COTS that performs validation of EDI transactions in accordance with the Strategic National Initiative Process (SNIP) validation levels 1 through 7 to ensure both inbound and outbound transactions meet critical HIPAA compliance thresholds.
Electronic Data Interchange (EDI)	The structured transmission of data between organizations by electronic means. It is used to transfer electronic documents or business data from one computer system to another computer system, i.e. from one trading partner to another trading partner without human intervention.
Element	Under HIPAA, the smallest named unit of information in a transaction.
eMIPP	Electronic Medical Incentive Payment Program

Term/Acronym	Description
Encounter	(1) A face-to-face contact between a patient and the provider of health care services who exercises independent judgment in the provision of health care services. (2) A non-reimbursable claim-like transaction processed similarly to a claim and used for reporting medical services supplied to a member. Encounters are the result of a face-to-face contact between a patient and the provider of health care services who exercises independent judgment in the provision of health care services. The term typically applies to services rendered under a managed care contract. (3) For purposes of EHR MIPP, an “encounter” is defined as all services provided to an individual in a 24-hour period. In CHAMPS, an encounter typically refers to non-payable claims submitted to provide utilization data for quality assurance auditing and pricing of managed care organizations.
End –to-End Testing	Abbreviated E2E.; a dynamic level of testing which ensures that the systems integration activities appropriately address the integration of application subsystems, integration of applications with the infrastructure, and impact of change on the current live environment. . In standard test engineering terminology, this is referred to as “System Integration Testing”.
Entry Criteria	A checklist of activities or work items that must be complete or exist, respectively, before the start of a given task within an activity or sub-activity.
Environment	The configuration of hardware and software to support a particular function such as system testing or production.
Executive Steering Committee (ESC)	A State committee that establishes the overall priority and direction for the CHAMPS project. The committee also sets strategic vision and determines appropriate changes to State’s policies. This body will resolve any issue, risk, and/or Change Request that could not be resolved at the C5CCC or CHAMPS and State Circuit Breaker / Key Staff level.
Exit Criteria	(1) Actions that must happen before an activity is considered complete; (2) A checklist of activities or work items that must be complete or exist, respectively, prior to the end of a given process stage, activity, or sub-activity.

Term/Acronym	Description
Extensibility	“In software engineering, extensibility (sometimes confused with forward compatibility) is a system design principle where the implementation takes into consideration future growth. It is a systemic measure of the ability to extend a system and the level of effort required to implement the extension. Extensions can be through the addition of new functionality or through modification of existing functionality. The central theme is to provide for change while minimizing impact to existing system functions.” “Although forward compatibility and extensibility are similar, they are not the same. A forward compatible system can accept data from a future version of itself and pick out the "known" part of the data. An example is a text-only word processor ignoring picture data from a future version. An extensible system is one that can be upgraded to fully handle the new data in the newer input format. An example is the above mentioned word processor that can be upgraded to handle picture data.”(Wikipedia 2009)
Function	(1) A specific purpose of an entity or its characteristic action; (2) A set of related control statements that perform a related operation. Functions are sub-units of modules.
Functional Requirements	This term is used throughout this document to refer to the business requirements document which serves as input to design documents.
Functional Testing	Selecting and executing test cases based on specified function requirements without knowledge or regard of the program structure. Also known as black box testing. See "Black Box Testing."
Gap Analysis	A report indicating differences identified between systems or functionality.
HW/SW	Hardware/Software
I/O	Input/Output
ICD-10	International Statistical Classification of Diseases and Related Health Problems 10th Revision
Implementation Guide	For HIPAA, the 4010A1 standard provided by the ASC X12N Insurance Subcommittee for EDI data exchange of health care information. For NCPDP, the term “Implementation Guide” refers to both current and past NCPDP standards for EDI exchange of prescription drug information.

Term/Acronym	Description
Information Technology Information LibraryITIL	Information Technology Information Library (ITIL). A is a set of best-practice publications for IT service management. ITIL gives guidance on the provision of quality IT services and the processes, functions and other capabilities needed to support them. The ITIL framework is based on a service lifecycle and consists of five lifecycle stages (service strategy, service design, service transition, service operation and continual service improvement), each of which has its own supporting publication. There is also a set of complementary ITIL publications providing guidance specific to industry sectors, organization types, operating models and technology architectures
Integrated Project Management Office (IPMO)	Abbreviated The IPMO is, an integrated board that consists of State and CNSI members. The IPMO is the primary project oversight organization for the CHAMPS project. This includes monitoring and management project status and activities along with responsibility for Issue Resolution, Risk Management, and Change Control processes. From the perspective of CMM Level 3 certification the IPMO fulfills all the responsibilities of the CCB.
Island Time	A concept used during CHAMPS design, development, and implementation to reserve specific blocks of time dedicated for joint CNSI and State participant discussions on a particular area of subject matter.
Issue	An issue is an obstacle preventing project progress or limiting effectiveness: “a point or matter in question or in dispute, or a point or matter that is not settled and is under discussion or over which there are opposing views or disagreements” (The Project Management Institute 2008). A circumstance that prevents or limits the effectiveness of a team member or end-user from performing their job on time or within established quality standards.
JVM	Java Virtual Machine
Lifecycle	The software development process stages. Requirements, Design, Construction (Code/Program, Test), and Implementation.
Loop	A repeating structure or process, e.g., collection of segments.
MI	(The State of) Michigan

Term/Acronym	Description
Mitigation Plan	A risk response consisting of a set of actions and/or events that are put in place to reduce the likelihood of risk occurrence or negative impact before occurrence of the risk event.
MSIS	Medicaid Statistical Information Summary
Named User	An individual authorized to use the programs which are installed on a single server or multiple servers, regardless of whether the individual is actively using the programs at any given time. A non human operated device will be counted as a named user in addition to all individuals authorized to use the programs, if such devices can access the programs.
NCPDP D.0 Standard	The national standard for exchanging pharmacy information via electronic data interchange that replaces the NCPDP 5.1 standard and becomes effective on January 1, 2012.
OATS	Oracle Application Testing Suite
OEM	Other Equipment Manufacturer
Originator	A person who identifies a potential issue, risk, or change control.
Owner	Responsible for managing the analysis process and monitoring the status and progress during its “life cycle”. The Owner is responsible for presenting alternatives and recommendations to reviewers and decision makers.
P/D/I	Professional/Dental/Institutional
Patient Event	Patient event refers to the service or group of services associated with a single episode of care.
Payer / Payer Organization	A business entity that adjudicates and renders payment for health care claims, include pharmacy claims. Examples of Payer organizations include Medicare, state Medicaid programs, and commercial insurance carriers. This term is frequently shown as “payor” – meaning and usage are the same.
PD/PM	Project Director/Project Manager
Pilot Program	An initial phase of testing with the State’s trading partners that is intended to be accomplished before the beginning of the B2B test phase.

Term/Acronym	Description
Priority	Issues will be assigned a priority, from 1, the highest, to 5, the lowest. The priority indicates how quickly the issue needs to be resolved. The definitions are similar and consistent with those for classifying problems or defects
PWP	Project Work Plan
Real-Time	An information management term referring to a process that is executed with or without human intervention (e.g., web service) that has an immediate or near immediate result, e.g., online eligibility inquiry.
Regression Testing	A functional type of test, which verifies that changes to one part of the system have not caused unintended adverse effects to other parts.
Release	In this document, release refers to a completed package of executable code that supports functionality for one or more HIPAA transaction.
Requirement	(1) A condition or capability needed by the user to solve a problem or achieve an objective. (2) A condition or capability that must be met or possessed by a system or system component to satisfy a contract, standard, specification, or other formally imposed document. The set of all requirements forms the basis for subsequent development of the system or system component.
Requirements Management	A systematic approach to eliciting, organizing and documenting the requirements of the system, and establishing and maintaining agreement between the customer and the project team on the changing requirements of the system.
Resolution	A course of action or solution to an issue
Reviewer	A person or group that reviews and recommends approval of the preferred implementation alternative
Risk Repository	A central location for documenting the identification, analysis, status, and resolution of risk. For the C5C project, As-One will serve as the project risk repository.
Risk Response	The planned action to take for an identified risk.

Term/Acronym	Description
Risk Triggers	A predetermined signal that a risk event has occurred. There are fundamentally two types of risk triggers: (1) A temporal trigger based on the occurrence of an event or A point in time by which something should happen. (2) A threshold trigger based on items that can be measured or counted.
Script	A component of a test case that provides information regarding what to do during the test.
SDLC	(1) Software Development Life Cycle (2) System Development Lifecycle
Segment	Under HIPAA, this is a group of related data elements in a transaction.
SNIP	Strategic National Initiative Process
Subsystem	(1) A group of assemblies or components or both combined to perform a single function: (2) A group of functionally related components that are defined as elements of a system but not separately packaged
System	A collection of components organized to accomplish a specific function or set of functions.
System Test/System Testing	A dynamic level of testing that verifies and confirms that the individual elements across the subsystems integrate as a whole and the system is functioning as per the design specifications.
Systems Integration Testing	See End-to-End Testing
Technical Report Type 3	The term for the documents replacing the HIPAA Implementation Guides. All 5010A1 standards are defined in the TR3 documents.
Template	The model Companion Guide document without any transaction level customizations. The template includes all potentially required sections and the basic information to be included in all documents.
Test Case	(1) A set of test inputs, execution conditions, and expected results developed for a particular objective, such as to exercise a particular program path or to verify compliance with a specific requirement. (2) The detailed objectives, data, procedures and expected results to conduct a test or part of a test.

Term/Acronym	Description
Test Data	The input data and file conditions associated with a specific test case.
Test Environment	The external conditions or factors that can directly or indirectly influence the execution and results of a test. This includes the physical as well as the operational environments. Examples of what is included in a test environment are: I/O and storage devices, data files, programs, JCL, communication lines, access control and security, databases, reference tables and files (version controlled), etc.
Test Objectives	The tangible goals for assuring that the Test Focus areas previously selected as being relevant to a particular Business or Structural Function are being validated by the test.
Test Plan	A document prescribing the approach to be taken for intended testing activities. The plan typically identifies the items to be tested, the test objectives, the testing to be performed, test schedules, entry / exit criteria, personnel requirements, reporting requirements, evaluation criteria, and any risks requiring contingency planning.
Test Readiness Review (TRR)	The TRR is held to create a test baseline and confirm test execution readiness.
Test Report	A document describing the conduct and results of the testing carried out for a system or system component.
Test Script	A sequence of actions that executes a test case. Test scripts include detailed instructions for set up, execution, and evaluation of results for a given test case.
Test Strategy	A high level description of major system-wide activities which collectively achieve the overall desired result as expressed by the testing objectives, given the constraints of time and money and the target level of quality. It outlines the approach to be used to ensure that the critical attributes of the system are tested adequately.
Testing	The process of exercising or evaluating a program, product, or system, by manual or automated means, to verify that it satisfies specified requirements, to identify differences between expected and actual results.
TP	Trading Partner
TPMO	Technical Project Management Office

Term/Acronym	Description
TR3	Technical Report Type 3
Traceability	The ability to map a project element to other related project elements, especially those related to requirements. Project elements involved in traceability are called traceability items.
Trading Partners	A general umbrella term used to describe entities or organizations that use EDI processes to electronically submit claims or encounters to payer organizations. This includes individual providers, group providers, institutional providers (such as hospitals), billing agents, and managed care organizations.
Transaction	Under HIPAA, this is the exchange of information between two parties to carry out financial or administrative activities related to health care.
TRR	Test Readiness Review
Types of Risk	Risks can be categorized in numerous ways. For the C5C project, we will categorize risks in As-One, the project risk repository, by: Technical, Schedule, Cost, and Other (e.g., cultural change, communications, functional, security, quality).
Use Case	A description of system behavior, in terms of sequences of actions. A use case yields an observable result of value to an actor, including all alternate flows of events. It identifies who or what interacts with the system and what the system should do.
User Acceptance Testing	See Acceptance Testing.

Appendix B – Acronyms

Term/Acronym	Description
AI	Action Item
B2B	Business-to-business
BAM	Business Activity Monitoring toolkit
CCB	Change Control Board
CDT	Current Dental Terminology
CHAMPS	Community Health Automated Medicaid Processing System
CMCP	CHAMPS Medicaid Compliance Project
CQ	ClearQuest
DB	Database
E2E	End-to-end
eMIPP	Electronic Medicaid Incentive Payment Program
ESC	Executive Steering Committee
HIPAA	Health Insurance Portability and Accountability Act
HSIP	Hardware Software Infrastructure Plan
HSTP	HIPAA System Test Plan
HW/SW	Hardware/Software
I/O	Input/Output
ICD-10	International Statistical Classification of Diseases, Tenth Edition
IRL	Indexed Relational
ITIL	Information Technology Information Library
JVM	Java Virtual Machine
MSIS	Medicaid Statistical Information Summary

Term/Acronym	Description
NCPDP	National Council for Prescription Drug Programs
OATS	Oracle Application Testing Suite
OEM	Other Equipment Manufacturer
P/D/I	Professional/Dental/Institutional
PD/PM	Project Director/Project Manager
PT/SP/SSP	Provider Type/Specialty/Sub-Specialty
PWP	Project Work Plan
SDLC	(1) Software Development Life Cycle (2) System Development Lifecycle
SNIP	Strategic National Initiative Process
TP	Trading Partner
TPMO	Technical Project Management Office
TR3	Technical Report Type 3
TRR	Test Readiness Review
UAT	See Acceptance Testing