

# Defining Business, Information and Technology Architecture for California's Health Benefit Exchange

## CALIFORNIA HEALTH ELIGIBILITY, ENROLLMENT AND RETENTION SYSTEM (CALHEERS) PROJECT, Office Of Systems Integration (OSI)

### California Department of Health Care Services (DHCS)

**INDUSTRY** - Government -  
Healthcare

**STATE** - CALIFORNIA

#### CHALLENGES

California's Medi-Cal Eligibility and Enrollment business process serves over 13M Medi-Cal Members with an annual Medicaid budget of \$90 billion. The Eligibility and Enrollment business process is complex and spans across multiple systems – three SAWS (CIV, LEADER, CalWIN), MEDS, EDD, FTB, SSA, and USCIS etc. Adding the new Health Benefit Exchange to existing business process made significant changes to the business process models and compounded the data exchange complexities. Moreover, the CalHEERS goal for real-time eligibility determination caused service enablement of the existing legacy system partners to deliver business functions in real-time.

#### OUTCOME

xFusion successfully defined business, information and technical architecture for CalHEERS, that is currently supporting 1.4M active members enrolled in various health plans. xFusion defined the technical and solution requirements for the RFP for the procurement of the SI vendor for CalHEERS implementation with an initial implementation cost of \$200M that was finally grown to over \$1 billion.

#### THE PROBLEM

The California Department of Health Care Services' (DHCS) provides Californians with access to affordable, high-quality health care, including medical, dental, mental health, substance use treatment services, and long-term care. With an annual budget of \$104.5 billion for the support of DHCS programs and services, DHCS Medi-Cal (Medicaid) program supports 13M+ Californians with high quality health care.

CA DHCS established the Enterprise Architecture (EA) practice to manage the enterprise changes via strategic transformation. The transformation plan provides the required expectations, prioritization, and trade-offs for the planned deliverables. The aim is to develop optimal business capabilities over time, which gives the enterprise its strategic edge. This requires investment in people, process, technologies, and information with an expectation of returns.

In addition to setting a long-term vision and goals, DHCS wanted to establish implementation Strategy that describes the department's approach and roadmap to accomplish department's goals and vision to advance Medicaid Information Technology Architecture (MITA) maturity levels for its Business, Information and Technology Architecture through business process automation, enterprise governance, information management, and establishing required technology capabilities.

## SERVICES PROVIDED

xFusion was engaged to provide business, information and technical architecture for California's Health Benefit Exchange, CalHEERS.

xFusion took a top-down business centric approach for the technical and solution architecture development. We performed as-is analysis of eligibility and enrollment business processes that spans across multiple systems – three SAWS (CIV, LEADER, CalWIN), MEDS, EDD, FTB, SSA, and USCIS etc.;

xFusion developed alternative business process models for California's Health Benefit Exchange implementation; established to-be Business, Information and Technical architecture for CalHEERS; architected and documented CALHEERS technology reference architecture (TRA) based on MITA, SOA, CMS reference architecture and other open, federal and state standards and guidance; defined architecture and strategy for business rules externalization, centralized business rules repository and decision services for California eligibility and enrollment systems.

xFusion architected and documented CalHEERS integration and infrastructure architecture using Enterprise Service Bus (ESB) and Service Oriented Architecture (SOA) for seamless integration of applications and resources within CalHEERS and outside CalHEERS with the partners (e.g. SAWS, Federal Data Hub, EDD, FTB, SSA, USCIS etc.) and Suppliers (e.g. Providers).

xFusion architected and documented CalHEERS Risk Based Harmonized Security and Privacy Framework, a single, comprehensive, integrated risk-based framework with process, tools, technology, standards and best practices to design, implement, manage, administer, govern the security and privacy of the CALHEERS system and data using HIPAA, NIST, HITECH, FISMA, and CMS guidelines etc.

xFusion defined CalHEERS technology, security, infrastructure, tools and technology standards and requirements for the CALHEERS system integration (SI) vendor procurement RFP; developed and documented technical artifacts for CALHEERS SI vendor procurement library.

## Tools, Standards and Best Practices Used

SOA, FEA, MITA 3.0, CMS Reference Architecture, HL7, NIEM, HIPAA, FISMA, NIST, HITECH, Business Rules Management System (BRMS), Business Process Management System (BPMS), Business Process Modeling Notation (BPMN), Enterprise Service Bus (ESB), XML, MS Project, UML, Sparx Enterprise Architect, Business Process Analysis and Design, Service Oriented Analysis and Design, Service Oriented Software Development Life Cycle and Service Portfolio Management, Service Oriented Governance Model.

## OUTCOME

Successfully performed Business Process Analysis, Alternative Architecture Analysis and adopted the target Business Process Model. Concept of Operations for California's Eligibility and Enrollment Business Process, and CalHEERS Solution Architecture was established. Business, Technical, Data and non-functional requirements were defined RFP for CalHEERS SI vendor procurement.

## About xFusion Technologies, Inc.

xFusion Technologies, Inc. is a State of California Incorporation, head quartered in Rancho Cordova, California, with offshore enters in Kolkata and Pune, India. xFusion is an expertise-based organization that specializes in serving various Public and Private sector organizations. xFusion offers a full spectrum of IT services in the areas of Enterprise Architecture, Legacy Systems Modernization, Custom Product Development, Outsourced Product Development, and Data Engineering. xFusion's xAQUA.io provides Platform Automation Functions as a Service (FaaS).

### **xAQUA.io**

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