This PowerPoint presentation provides an orientation to the DHCS Strategic Vision Drawing. The Notes section provides additional information to better understand the reasoning behind the representations in the drawing.
Each member of the DHCS team should understand how their work supports this “To-Be” vision.
It is necessary for any organization to have a vision that can then be clearly communicated and understood by the entire department. A major driver in DHCS’s vision is alignment with the Centers for Medicare & Medicaid Services’ (CMS) MITA framework, so a “strategic vision drawing” was produced to provide a pictorial representation of what the department could look like as a mature MITA-aligned enterprise.

This drawing will be submitted to CMS as part of Advanced Planning Document (APD) submittals to demonstrate the DHCS future state.

This future won’t happen overnight, as this much change will require phased projects that continually move us towards this “To-Be” vision. As we work on developing the roadmap to achieve this vision, everyone at DHCS will have a role and a voice on that journey.
Enterprise Architecture (EA) is a business discipline that provides guidance and governance for all types of strategic and tactical change within DHCS. Enterprise Architecture does this through a set of descriptive representations that serve as the baseline for changing any part of or all of the enterprise (assuming that the descriptive representations are maintained consistent with the actual enterprise). Part of the EA role is to ensure that DHCS makes the best use of its various resources, capabilities and structures, while adapting to DHCS’s changing needs over time. EA has a particular focus on optimizing efficiency, effectiveness, agility and durability across DHCS as a whole.

At DHCS, Enterprise Architecture is the discipline used to:

*Increase the Effectiveness, Efficiency, Agility and Durability of the ENTERPRISE by supporting the Management of Cost, Risk, Flexibility and Quality of CHANGE using Structured Models, performing EA Governance and recommending Enterprise investment opportunities*
The “Vision Strategy Drawing” depicts a future architecture at MITA maturity levels 3-5. Framed by the department’s Strategic Plan (SP) and Quality Strategy (QS), the diagram highlights cross-cutting interactions and services while putting focus on the three dimensions of MITA:

- **Business Architecture**: Business Architecture (BA) is a blueprint of the enterprise that provides a common understanding of the organization that includes the services provided by the organization, stakeholders, key knowledge/information that is processed and its operational aspects. BA is used to align strategic objectives and tactical demands. Various aspects of the Business Architecture are represented using different views such as: Business Strategy View, Business Capability View, Business Knowledge/Information View, Business Operational View. The DHCS Enterprise Business Architecture is centered around the California State Medi-Cal enterprise that includes leveraged systems and interconnections among Medi-Cal stakeholders, providers, beneficiaries, insurance affordability programs, Health Insurance Exchange (aka “Covered California”), County Consortia (C-IV, CalWIN, LEADER), Health Information Exchange (HIE), other state and local agencies, other payers, Centers for Medicare & Medicaid Services (CMS), and other federal agencies.

- **Information Architecture**: Information Architecture (IA) provides a blueprint of information strategy that includes enterprise data models, organization, policies, rules, and standards that govern how data is modeled, collected, stored, arranged, exchanged, reported and managed as an enterprise asset for the DHCS Enterprise. The DHCS Information Architecture is based on the MITA Information Architecture and several Reference Information Models (such as NIEM and HL7). The Information Architecture is driven by the Business Architecture and is a part of the critical foundation elements for the DHCS Technical Architecture.

- **Technical Architecture**: The Technical Architecture (TA) provides the blueprint for the technology strategy and includes process, tools, technologies, standards and best practices required to implement, manage and monitor the Business, Technical and Information services capabilities driven by the Business Architecture Roadmap. DHCS Technical Architecture is aligned to the MITA Technical Architecture that defines a consistent vision and strategy for DHCS system context, technology architecture, process, and standards throughout the organization and supplies the context (for identified patterns) for imposing best practices on development and deployment of the DHCS Service-Oriented Architecture (SOA).
The diagram is based on the DHCS Strategic Plan (SP). The SP is focused on commitments which have associated strategies.

- **To the Public** – California Citizens look to DHCS to provide affordable and available management of Medi-Cal and the other vital health care programs which we administer or participate in. Our department, processes, and technologies must be ready for transformation and innovation necessary to support all of the changes taking place to improve the quality of health care services and delivery.

- **To the People We Serve** – Members should be given timely services through modern methods to support their healthcare experience. DHCS transformation and innovation will support the growing demand, change in member interactions and streamline the process and technology that supports our relationship.

- **To our Employees** – We want nothing more than to do a great job at our place of employment. Setting this DHCS strategic vision enables clear communication, common direction, and easily measured success criteria for the journey we are all about to take.
Consistent with the Institute for Healthcare Improvement’s Triple Aim and the Three Aims of the National Quality Strategy, DHCS’s Quality Strategy is anchored by Three Linked Goals:

- Improve the health of all Californians;
- Enhance quality, including the patient care experience, in all DHCS programs; and
- Reduce the Department’s per capita health care program costs.

The Three Linked Goals in the DHCS Quality Strategy form the base of our DHCS vision.
This list will be a constant reminder to all of us that each stakeholder plays a pivotal roll in achieving our commitments, either as a consumer of our services or a partner to assist us in our efforts.
The goal of MITA is to change the way States design and build, or modify their Medicaid systems and the manner in which States perform IT investment planning. In the future, States must ensure that their business goals and objectives meet the MITA goals and objectives and must plan procurements and enhancements within the MITA Framework. To implement the MITA Framework, States will choose the elements that best meet their strategic and tactical IT goals and objectives, and reflect their choices in their Advanced Planning Documents (APDs). The Centers for Medicaid and Medicare Services (CMS) recognize that different States have differing needs and are likely to begin their participation at different points. The MITA Framework can accommodate an implementation path best suited to each State.

Based on MITA, DHCS Enterprise Architecture has the following three architectural building block domains:

- **Business Architecture**
- **Information Architecture**
- **Technical Architecture**

**Acronyms:**

- **BA**: Business Architecture
- **BCMM**: Business Capability Maturity Model
- **DaaS**: Data as a Service
- **DW**: Data Warehouse
- **BI**: Business Intelligence
- **IaaS**: Infrastructure as a Service
- **PaaS**: Platform as a Service
- **SaaS**: Software as a Service
The DHCS Business Reference Architecture (BRA) is aligned to the MITA Business Architecture (BA) and defines a consistent vision, strategy, architecture, process, and standards for DHCS business services “To-Be” state, in alignment with the strategic vision and goals of the DHCS enterprise.

The dark blue banner at the top highlights the DHCS Vision: *to preserve and improve the physical and mental health of all Californians.*

The “To-Be” business areas are related to the business processes that are defined in the MITA BA across ten key business areas. Today, many of these business processes are implemented in individual program silos, resulting in redundant business processes that must be managed and maintained.

The light blue banner highlights the DHCS Mission: *to provide low-income Californians with access to affordable, high-quality health care, including medical, mental health, substance use disorder services, and long-term care.*

The shared, reusable business services across the DHCS enterprise will enable achieving:

- **Effective, Efficient and Sustainable Health Care Delivery Systems** – Delivery Systems and Payment Strategies Designed to Improve Quality and Outcomes, Responsible Fiscal Stewardship.

- **Improve and Maintain Health and Well-Being** – Address Quality, Population Health, and Outcomes across Systems of Care, Identify and Eliminate Disparities in Health Outcomes

- **Communication, Collaboration, Teamwork and Effective Decision-Making** – Collaboration Strengthened across DHCS, Trust Built by Empowering People with Responsibility, Improved Performance Management
The DHCS Information Reference Architecture (IRA) is aligned to the MITA Information Architecture (IA) and defines a consistent vision, strategy, architecture, process, and standards for the DHCS information context to enable effective and efficient design, implementation, storing, sharing, accessing, analyzing, reporting, managing and governing data as an enterprise asset. The DHCS IRA has the following key components:

- **Information Access and Sharing**: Strategy, architecture, process, tools, technologies and best practices for efficient, and timely exchange, access and reporting of enterprise information within DHCS and outside DHCS across various state and federal agencies in a timely and secure manner.

- **Program Business Rules, Policy and Data Repository**: Strategy, architecture, process, tools, technologies and best practices for storage, access and sharing of program specific data, rules and policies.

- **Master Data Management**: Strategy, architecture, process, tools, technologies and best practices for centralized management and governance of Master Data (such as Provider, Member, Identity) as part of an overall data integration strategy and architecture within the DHCS enterprise.

- **Unstructured Data**: Strategy, architecture, process, tools, technologies and best practices for centralized management and governance of Unstructured Data (such as images, documents, audio and video files) as part of an overall data integration strategy and architecture within the DHCS enterprise.

- **Data Warehouse**: Strategy, architecture, process, tools, technologies and best practices for centralized management and governance of the DHCS Data Warehouse, analytics and reporting as part of an overall data integration strategy and architecture within the DHCS enterprise.

- **Metadata Management**: Strategy, architecture, taxonomy, process, tools, technologies and best practices for centralized management, governance, access and reporting of Metadata within the DHCS enterprise.

- **Data Model**: Conceptual, Logical and Physical Data Models for the DHCS business domains and processes as classified by MITA 3.0.

- **Reference Information Model (RIM)**: Process, guidance, tools, standards and best practices to develop interoperable domain and exchange data models for the DHCS enterprise using existing industry standard Reference Information Models (such as NIEM and HL7 RIM).

- **Data Standards**: Standards for unique business and technical naming and definition of business entities and attributes across the DHCS enterprise that are used for defining business and technical data models.

- **Information Security and Compliance Policies**: Security classification and policies for storage, sharing and security interoperability of various types of data elements (such as PI, PII, PHI, FTI).
The DHCS Technical Reference Architecture (TRA) is aligned to the MITA Technical Architecture and defines a consistent vision and strategy for DHCS system context, technology architecture, process, and standards throughout the organization and supplies the context (for identified patterns) for imposing best practices on development and deployment of the the DHCS Service-Oriented Architecture (SOA). The primary goal is to create a *business-driven technology architecture* (i.e., the strategy and capabilities for the infrastructure, platform, Technical and Integration Services will be derived from the Business Process Maturity Roadmap to ensure business and technology alignment).

The key goal and objectives is to create an agile Technology Architecture for DHCS by:

- **Building Shared, Reusable Technical Capabilities** – through collaborating and reusing existing assets via Software as a Service (SaaS)
- **Dynamic Resource Allocation** – enabling Infrastructure as a Service (IaaS) and Platform as a Service (PaaS) through virtualization and cloud enablement
- **Compliance and Security Risk Reduction** – by integrating and protecting Information and Systems

The Technical Reference Architecture (TRA):

- Offers an architectural framework for DHCS that maximizes interoperability and reuse across the enterprise
- Provides a common vision of the future for all State Medicaid programs (i.e., principles, goals, objectives, and technical capabilities)
- Drives towards a concrete Technology Architecture (framework, principles, protocol, standards, specifications, process, best practices, etc.)
- Provides process, standards and guidelines for key architectural principles for making architectural and design decisions
- Offers a common logical infrastructure for Medicaid business processing and information exchange
- Uses common requirements for implementation (i.e., business services, technical services, and infrastructure)
Core Values: Integrity, Service, Accountability and Innovation.

INTEGRITY: (coming soon, part of the new Dept. Strategic Plan)

SERVICE
We are approachable and offer assistance as needed.
We communicate and collaborate with partners and stakeholders.
We are responsive – answering questions and concerns within 24 hours when possible.
We treat everyone with courtesy and respect.
We value each employee and their contributions to the department and the people of California.

ACCOUNTABILITY
We are open and prudent fiscal stewards of public resources.
We communicate clearly, honestly and politely in a professional and appropriate tone.
We conduct confidential conversations in private.
We support team approaches and decisions.
We focus on the problem and not on the person.
We focus on finding and implementing solutions.
We arrive at the office prepared for work.

INNOVATION
We provide a safe environment for all employees to create and innovate.
We focus on quality improvement and professional growth.
We embrace new technologies to improve effectiveness.
We take pride in and celebrate the accomplishments of staff.
We ask for help.
We exhibit a can-do attitude.


HIPAA and other Security Policies and Standards: The end-to-end lifecycle activities and the requirements for the security controls to protect the confidentiality, integrity and availability (CIA) of DHCS systems and their information. Ensures these are compliant with various state and federal requirements and guidance such as:

- Health Insurance Portability and Accountability Act (HIPAA)
- Title III of the E-Government Act
- Federal Information Security Management Act (FISMA)
- Office of Management and Budget (OMB)
- Management of Federal Information Resources
- Health Information Technology (HITECH)
- National Institute of Standards and Technology (NIST)
- Tax Information Safeguarding Requirements

Encryption: Defines the processes, technology, standards and best practices for encryption of data in storage and in motion.

Secured Infrastructure Architecture: The DHCS S&P framework defines the security requirements, processes, tools, technology, and best practices for the security of the Infrastructure Architecture that includes Multi-Zone Computing Architecture; Centralized Security Compliance Management and Monitoring; Public Key Infrastructure; Operational Continuity and Disaster Recovery; Architecture & Control for Security Threat Challenges (STRIDE); Security Controls for Public, Community & Private Cloud.
Centralized Deployment, Configuration & Versioning: Deployment focuses on the ability to manage, configure and version a multitude of services, from a centralized console, in a consistent manner throughout the enterprise.

Centralized Management & Monitoring: Defines infrastructure, processes, tools, technologies and best practices to manage and monitor the services, security and compliance policies in a centralized manner. This includes:

- **Centralized Security Management** – Enables configurable, policy-driven, centralized security enforcement to manage, monitor and enforce security and privacy.
- **Centralized Compliance and SLA Management** – Enables configurable, policy-driven, centralized compliance and service level agreements (SLAs).
- **Centralized Service Management and Monitoring** – Enables centralized service management and monitoring.

Rapid Cycle Quality Improvement: Rapid-cycle quality improvement is a strategy for expediting improvement and spreading change that enables organizations to test and refine ideas and achieve quick, small iterative improvements.

Analytics and Reporting: DHCS produces a wide range of analyses and reports. Many of these are produced by departmental staff while some are produced through contracts administered by DHCS. The “To-Be” architecture provides analytics and reporting capabilities as enterprise services.

- **Monitoring** – Supervising activities in progress to ensure they are on-course and on-schedule in meeting the objectives and performance targets.
- **Statistics** – The study of the collection, organization, analysis, interpretation, and presentation of data.
- **Performance and Quality Measurement** – Quality measure is a mechanism to assign a quantity to quality of care by comparison to a criterion.
- **Evaluation** – Systematic collection of information about the activities, characteristics, and outcomes of programs to make judgments about the program, improve program effectiveness, and/or inform decisions about future program development.
- **Research** – Systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge.
Portfolio Management defines processes, tools, technologies and best practices for DHCS Enterprise Portfolio Management.

- **Project Management**: the discipline of planning, organizing, motivating, and controlling resources to achieve specific goals. A project is a temporary endeavor with a defined beginning and end (usually time-constrained, and often constrained by funding or deliverables), undertaken to meet unique goals and objectives, typically to bring about beneficial change or added value.

- **Program Management**: the process of managing several related projects, often with the intention of improving an organization's performance. In practice and in its aims it is often closely related to systems engineering and industrial engineering.

- **Agile Methodology**: an alternative to traditional project management, typically used in software development. It helps teams respond to unpredictability through incremental, iterative work cadences, known as sprints. Agile methodologies are an alternative to waterfall, or traditional sequential development.

- **Change Management**: an approach to transitioning individuals, teams, and organizations to a desired future state. Change management uses basic structures and tools to control organizational change efforts, with the goal of maximizing benefits and minimizing negative impact on those affected. It may also refer to a project management process wherein changes to a project are formally introduced and approved.

- **MITA Alignment**: demonstrates how the California Medi-Cal enterprise is aligned with the CMS MITA framework. This also involves showing how project work progresses the DHCS Medi-Cal enterprise towards increasing MITA maturity levels with respect to business, technical and information architectures and processes.
The following components are defined as part of the Governance Reference Model (GRM) within the DHCS Enterprise Architecture:

- **Enterprise Governance**: Defines processes, organization, policies, matrices, tools, infrastructure and best practices to develop organizational competency for enterprise strategy development, and subsequent design, implementation and operations of the DHCS enterprise, to ensure that DHCS’s overall strategic initiatives are converted into actions in a consistent and coherent manner.

- **SOA Governance**: Definition, implementation, monitoring, measurement and control of organization, processes, policies, infrastructure and best practices required to manage DHCS Service Oriented Architecture (SOA) successfully. SOA Governance is a part of the overall Enterprise and IT governance that refers to the DHCS organizational structures, processes, policies, and matrices that enable DHCS’s SOA efforts to sustain and extend DHCS’s business and IT strategies, and achieve desired outcomes. The SOA Governance Framework works within the context of the business and IT strategy and governance frameworks.

- **Information Governance**: Definition, implementation, monitoring, measurement, control of organization, process, policies, infrastructure and best practices required to manage end-to-end information lifecycle (including valuation, design, implementation, storage, integration, access, sharing/exchange, archival, deletion, analysis and reporting for DHCS enterprise) to support DHCS’s immediate and future regulatory, legal, risk, environmental and operational requirements.

- **IT Governance**: Defines processes, organization, policies, matrices, tools, infrastructure and best practices to develop organizational competency for development of IT strategy for IT products and services and subsequent design, implementation and operations of the IT services. IT Governance is an integral part of the Enterprise Governance.
Change has many faces and drivers in the transformation and innovation of DHCS.

- **Centers For Medicare & Medicaid Services (CMS):** Federal regulation and funding (through CMS) now includes 7 Conditions and Standards, MITA, State Self Assessment and roadmap, Enhanced Federal Funding with deadlines, and HIPAA Standards (IDC-10, 5010, 35C-837)

- **Delivery Transformation:** Expanding Medi-Cal, Affordable Care Act, Payment reform, Coordinated Care Initiative

- **Providers:** PAVE, “One Stop Shop”, Provider Enrollment process, CA-MMIS, Claims Processing Improvements

- **Members:** Fee-for-service to Managed Care, CAPMAN, Health Benefits Exchange, “Covered California”, Health Care Options

- **California Health and Human Services Agency:** Promote Health Information Technology, Agency Enterprise Architecture, Interoperability Project

- **Business, Information, Technology:**
  - Enhanced Program Integrity, Consolidated Processes, Shared Services
  - Agile IT Systems, Aligned w/Business Strategies, Common IT Services
  - Health Information Exchanges, Electronic Health Records, Paid claims encounter system, Data Warehouse (MIS/DSS)
Leveraging the Enterprise Strategy Model (Business/IT strategic Plans, Vision, Mission, Goals, objectives and other discovery sessions), DHCS will set a course from the current business, information and technology structure to the one outlined on the Vision Poster (the *DHCS Structural Model – Target* box on the left side of this slide’s diagram). This will be accomplished by aiming for several interim structural models, achieved through multiple projects in various divisions.

With the help of newly developed enterprise principles, DHCS will be able to better assist projects with remaining on track with the DHCS strategic vision.
CMS requires each State Medicaid Agency to perform a State Self-Assessment (SS-A) based on their current business processes. This assessment results in the determination of what MITA maturity levels are currently achieved by that state’s Medicaid enterprise. The SS-A also works with business areas to determine their expectations of what maturity levels they will strive to achieve within a set time period (typically, five years). CMS federal financial participation (FFP) is then addressed to projects that increase MITA maturity levels.

The Office of HIPAA Compliance (OHC) completed our first SS-A in 2008. At that time MITA maturity levels for most DHCS Medi-Cal business processes were determined to be at Levels 1 and 2.

OHC is currently updating the entire SS-A in compliance with CMS requirements. The SS-A and a road map will then be updated and submitted to CMS annually.

Within DHCS, there are duplicate business processes, duplicate hardware and software licenses in program silos, and inflexible technology architecture. The consequences are inefficient change management and lack of reusability and interoperability that in turn leads to increased cost for maintenance and operations, and increased risks for security and compliance. The increasing cost for operations and maintenance is leaving very little room for future innovations and extensions under tighter budget conditions.
This is a visual representation of the partial technologies that must be supported (and integrated) for the multiple business programs that the department supports.

This slide represents an enterprise debt:

- Need for wide range of technical skills
- Increased training requirements
- Increased licensing costs

Organizationally, DHCS needs to identify solutions that are good enough for most, as opposed to those that are good for the many (i.e., the "perfect solution").
The Standards Reference Model (SRM) is a framework that identifies technical services. This drawing shows the SRM, consisting of technical services shown as a series of horizontal layers and vertical slices. The horizontal layers represent six (6) separate areas of technology standards and evolving technology which are, 1) user interface, 2) message exchange, 3) metadata repository, 4) message transmission, 5) data and information, and 6) communication. The four (4) vertical slices of the SRM shown are, 1) security and privacy services that include policy, management, and technical service elements, 2) coordination of event notification and publish-and-subscribe, 3) access channels, and 4) adaptability and extensibility services that operate with each of the layers to design and manage changes in a consistent manner. The SRM provides an overview of the taxonomy of standards and how they would relate to different solution sets.
This visually represents an example of a duplicate process implemented in program silos. In this example it’s shown that the “Provider Enrollment” business service is implemented ten times in ten different program silos. There are many other duplicate business services that are implemented in program silos. Today, there are about 141 business processes implemented across eleven Medi-Cal business areas where there are only 80 unique business process across the ten CMS Medicaid business areas.

The duplicate business processes must be maintained and managed by each program who implements them causing redundant spending for each of those programs.
This visually represents an example of a single process implementation in an enterprise approach.

- The single shared business process supports the “Enroll Provider” to multiple programs.
- A “single door” for all providers for enrollment into multiple programs.
- Eliminates separate enrollment processes for same provider into multiple programs.
- Alignment to MITA Maturity Level 3-5
- A single provider Registry will:
  - Centralize Provider Registry managed as Enterprise Master Data
  - Eliminate Duplicate Provider data in program silos.
  - Provide a “Single View of Truth” for all reporting, policy, compliance and quality assurance purposes.
The diagram shows a high level view of the To-be architecture based on MITA that uses Service Oriented Architect (SOA) as its core architectural style. The To-be architecture has the following characteristics:

- Business, Information and Technology Alignment – The to-be architecture creates a business driven technology and Information Architecture where the strategy and requirements for the Technical and Information Architecture are driven by the Business Architecture strategy and requirements.
- Reduced Redundancies: Shared, Interoperable Business and Technical Capabilities across the DHCS enterprise
- Increased Agility of Business and IT Systems
- Increased Business Process Adaptability
- Business, Technology and Information Reference Architecture: Provides a blueprint for business, information and technology architecture
- Architecture for enhanced interoperability
- Enhanced capability for Security & Compliance policy management and monitoring
- Cost incentive for shared, reusable services – decreased maintenance and operations cost by eliminating redundant services and creates more opportunity for future innovation