



MOVING BEYOND THE SILOS WITH A MODERN ENTERPRISE DATA PLATFORM

A Case Study into Health Insurance Client's Journey

INSURANCE NEXUS

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Case Study

Healthcare Insurer
Data Silos to Comprehensive Enterprise Data Strategy

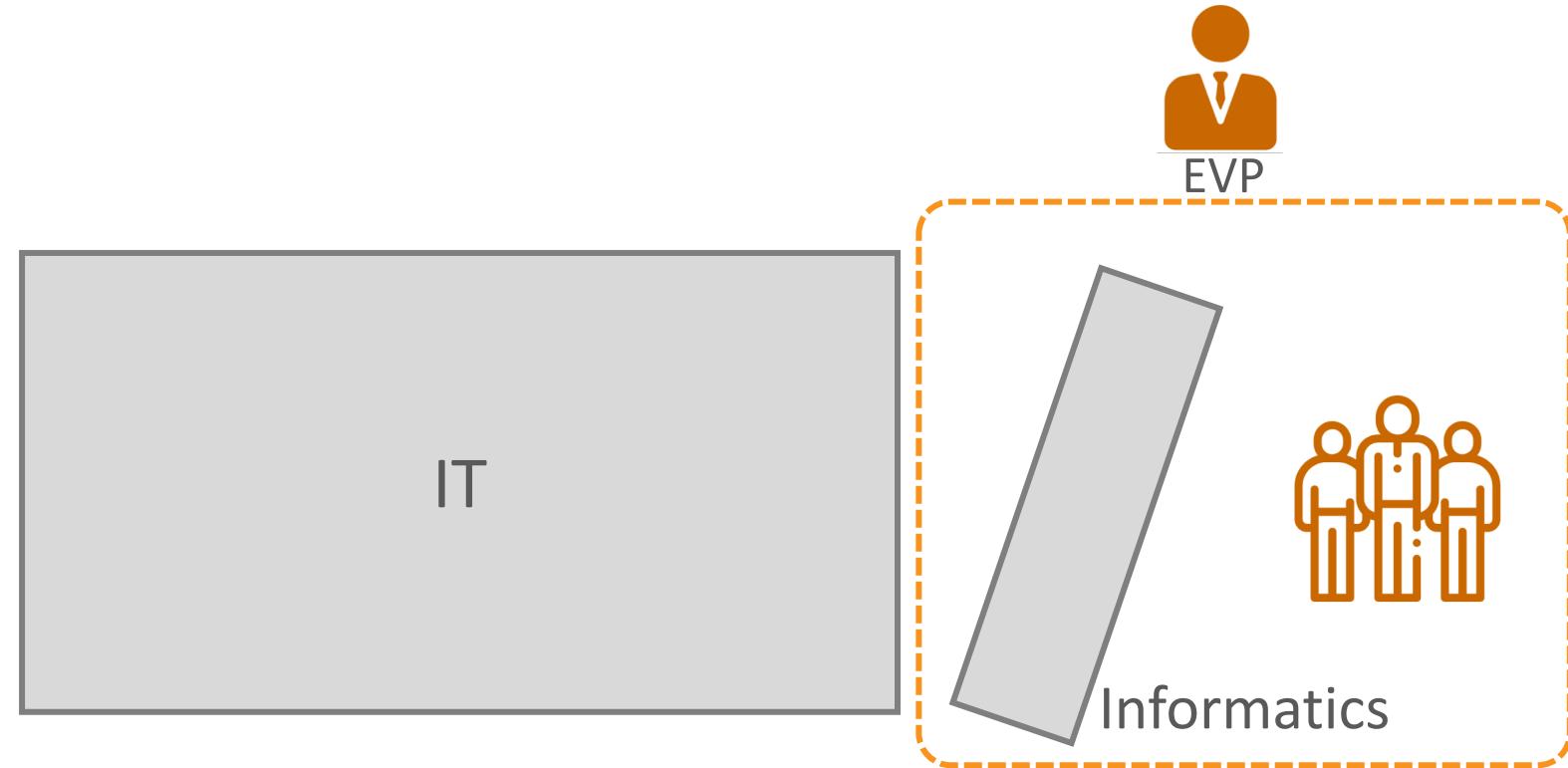
Organizational Context

Sr. Leadership not happy with Analytics Capability

IT focused on operations and deeply buried in technical debt

Organizational Context

CEO carves out the Informatics Group from IT
Hires an EVP level leader





EVP Informatics

Deeply fragmented data silos across the organization

No Data Governance

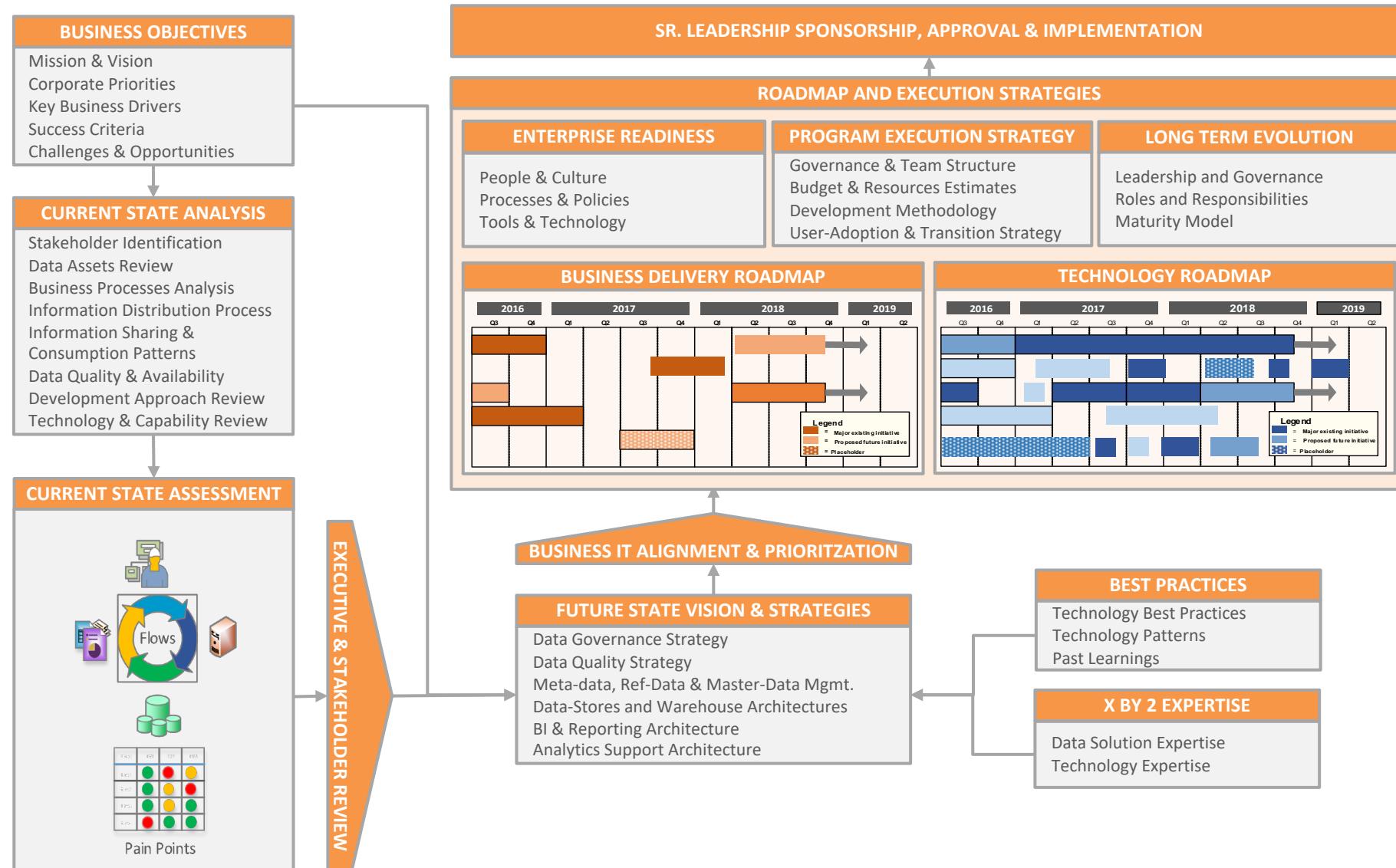
Constant reinvention of wheel

No one trust anyone's data, mass confusion

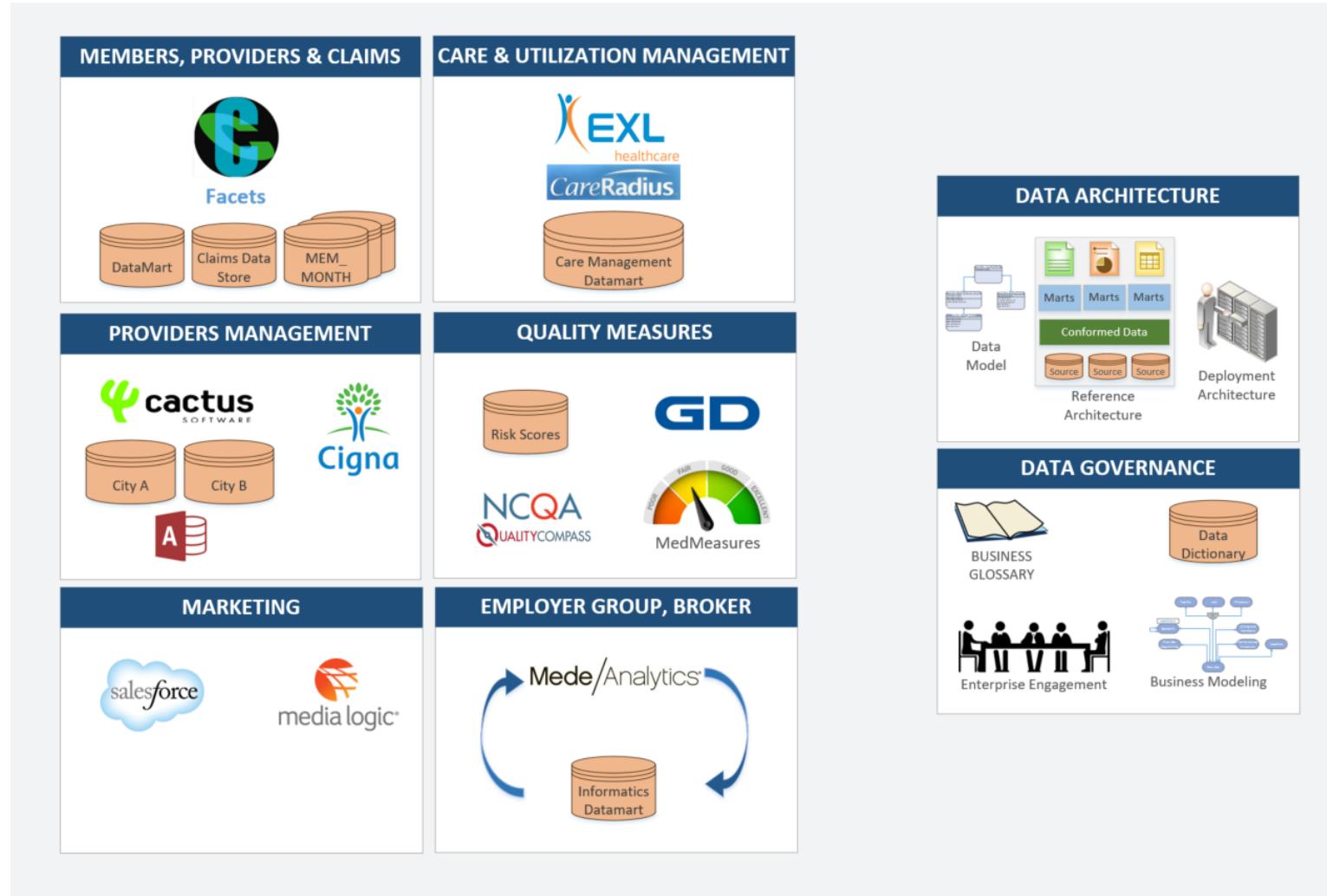
Over 25,000 data assets

Not happy with data strategy envision by leadership

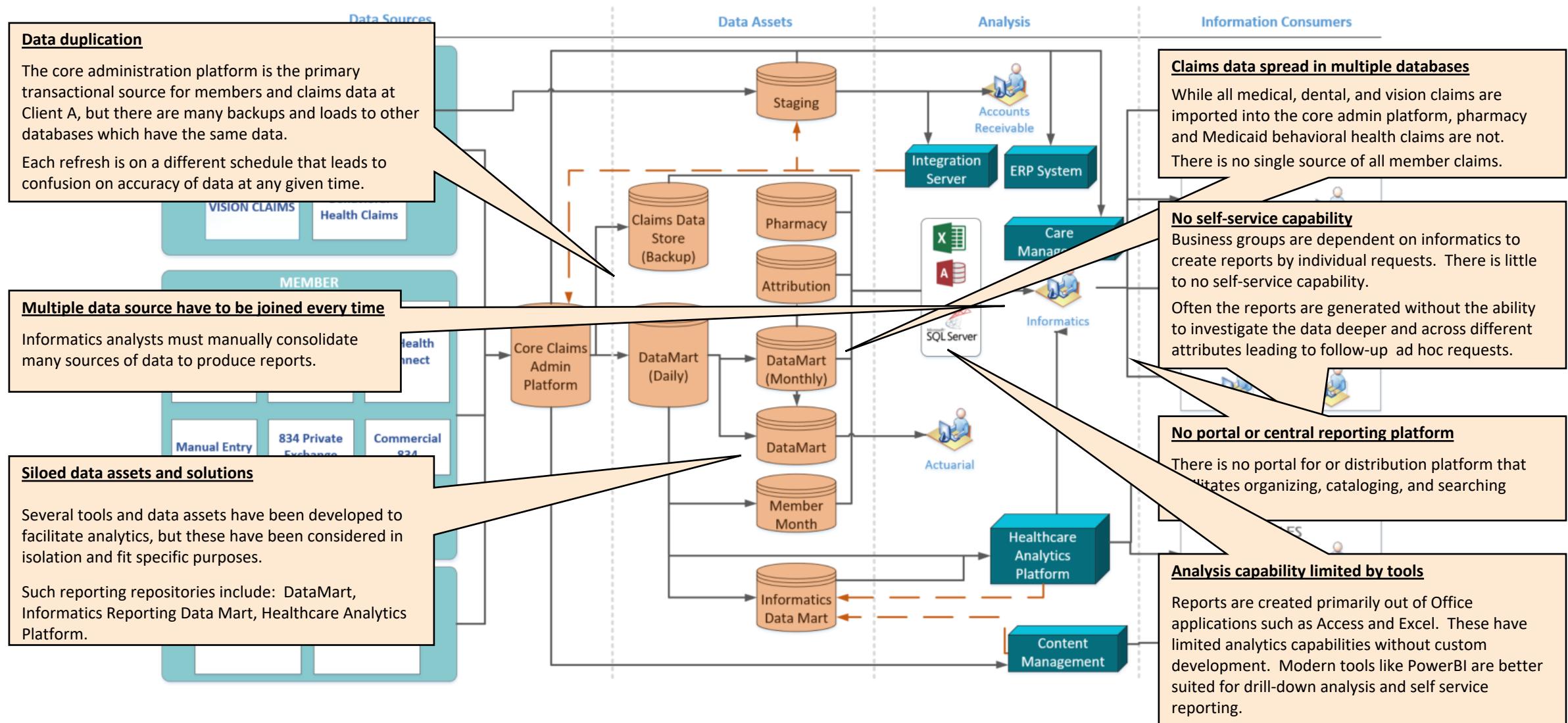
Approach and Framework



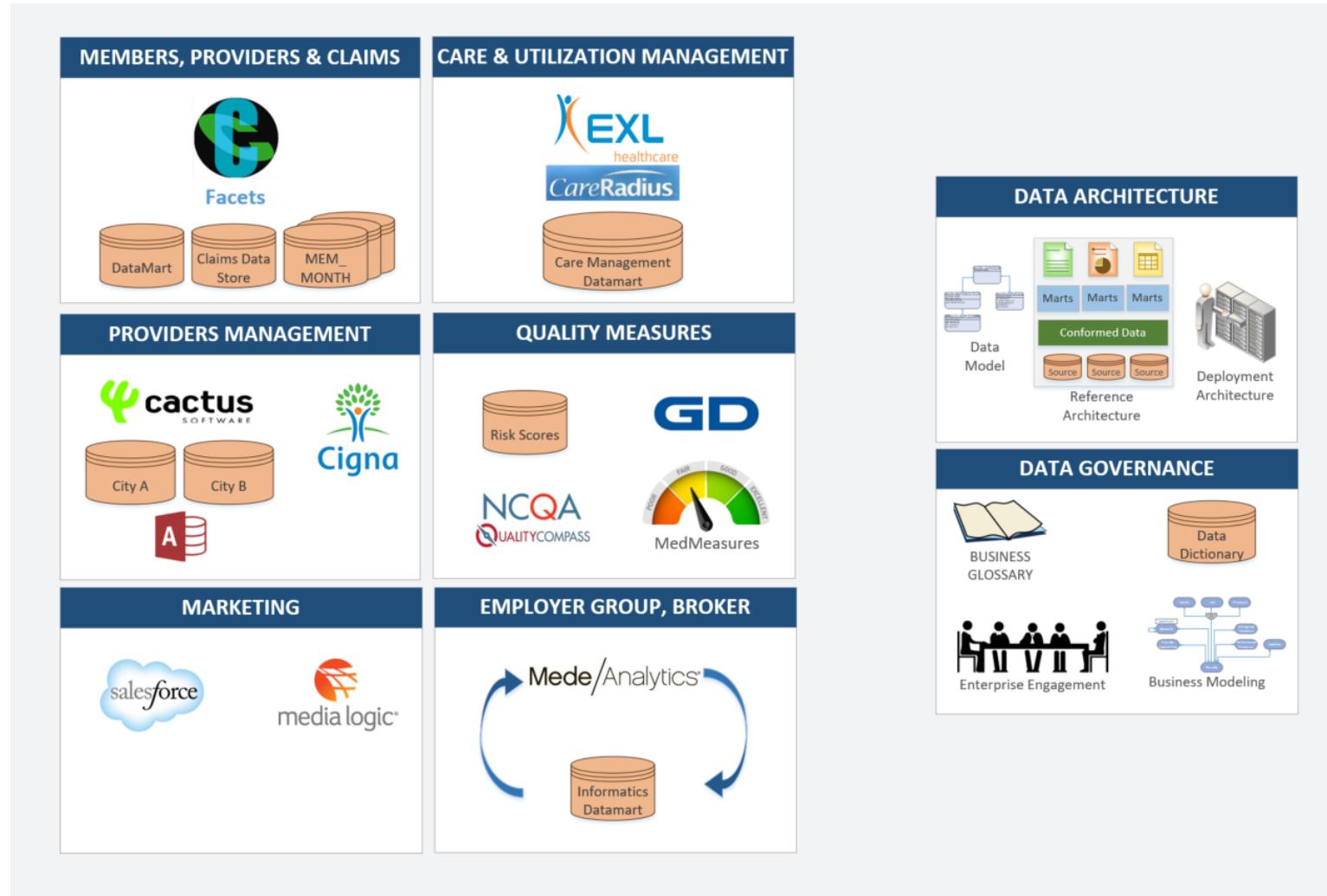
Business Areas included in Current State



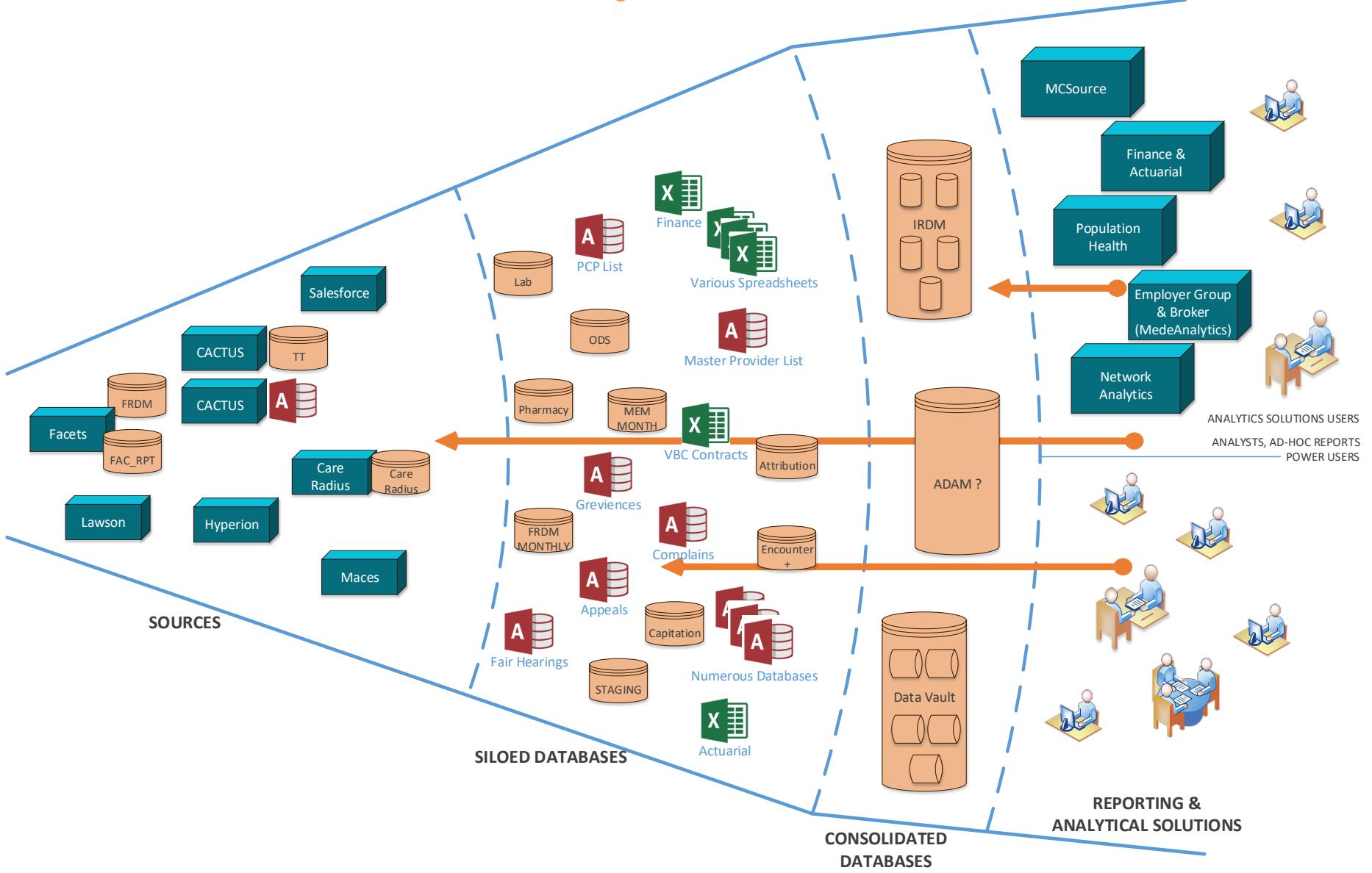
Current State Analysis – Claims Data Flow



Business Areas included in Current State

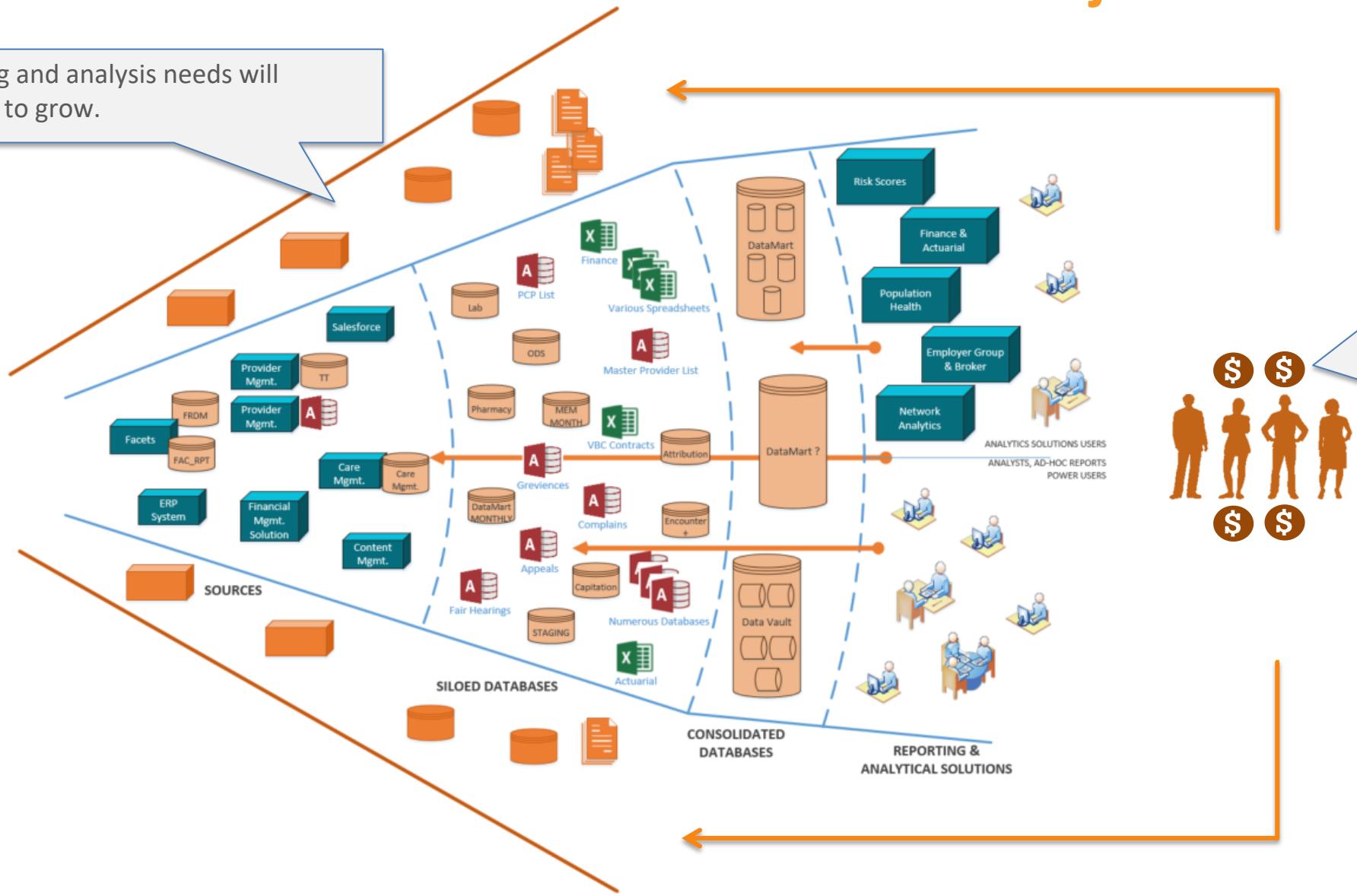


Current State Analysis – Data Architecture

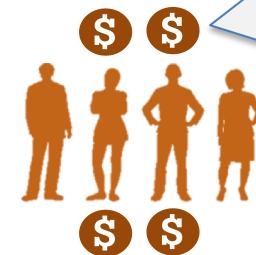


Current Data Architecture Projection

Reporting and analysis needs will continue to grow.

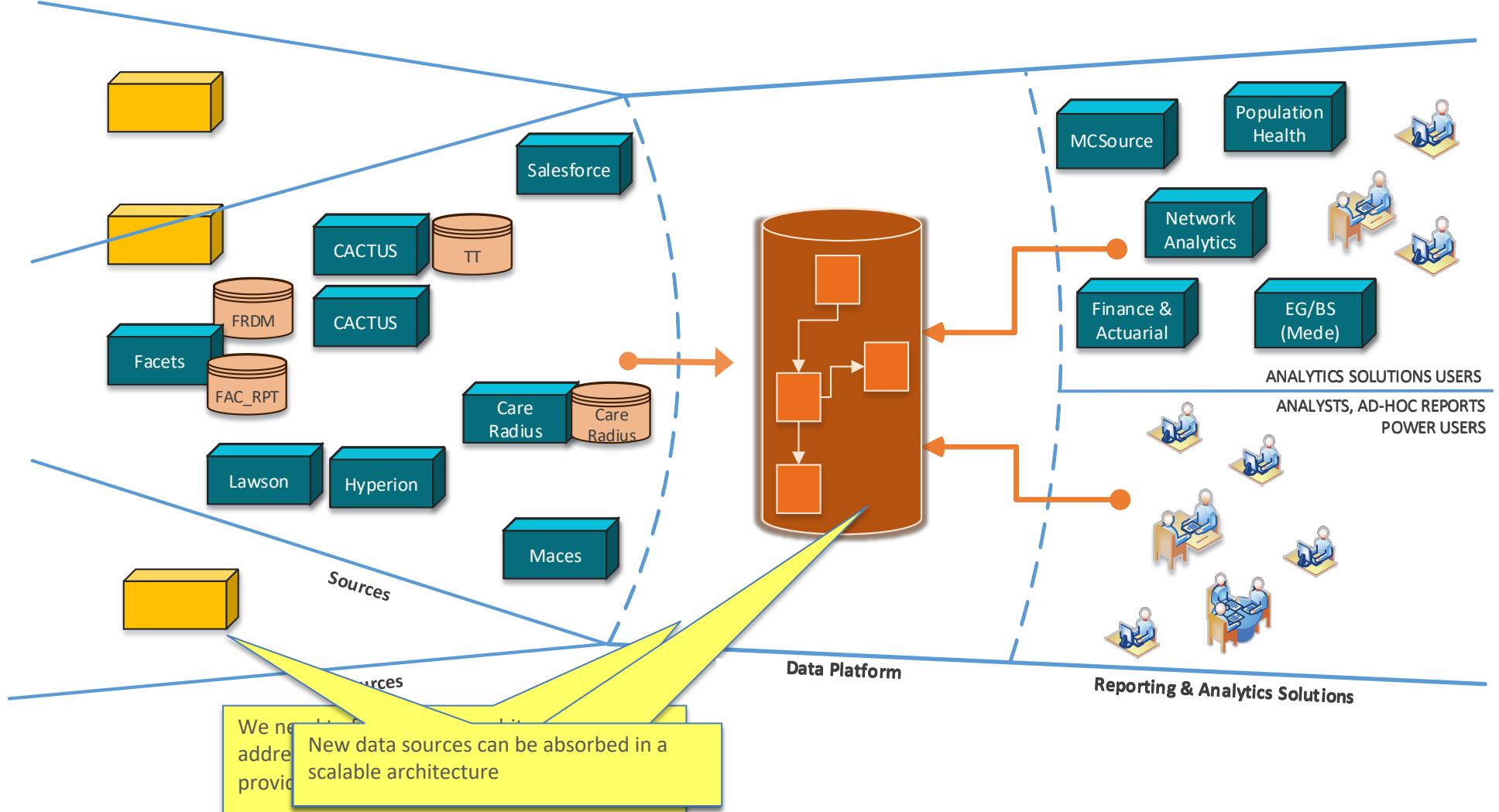


There are few opportunities to scale the current architecture to support future growth.

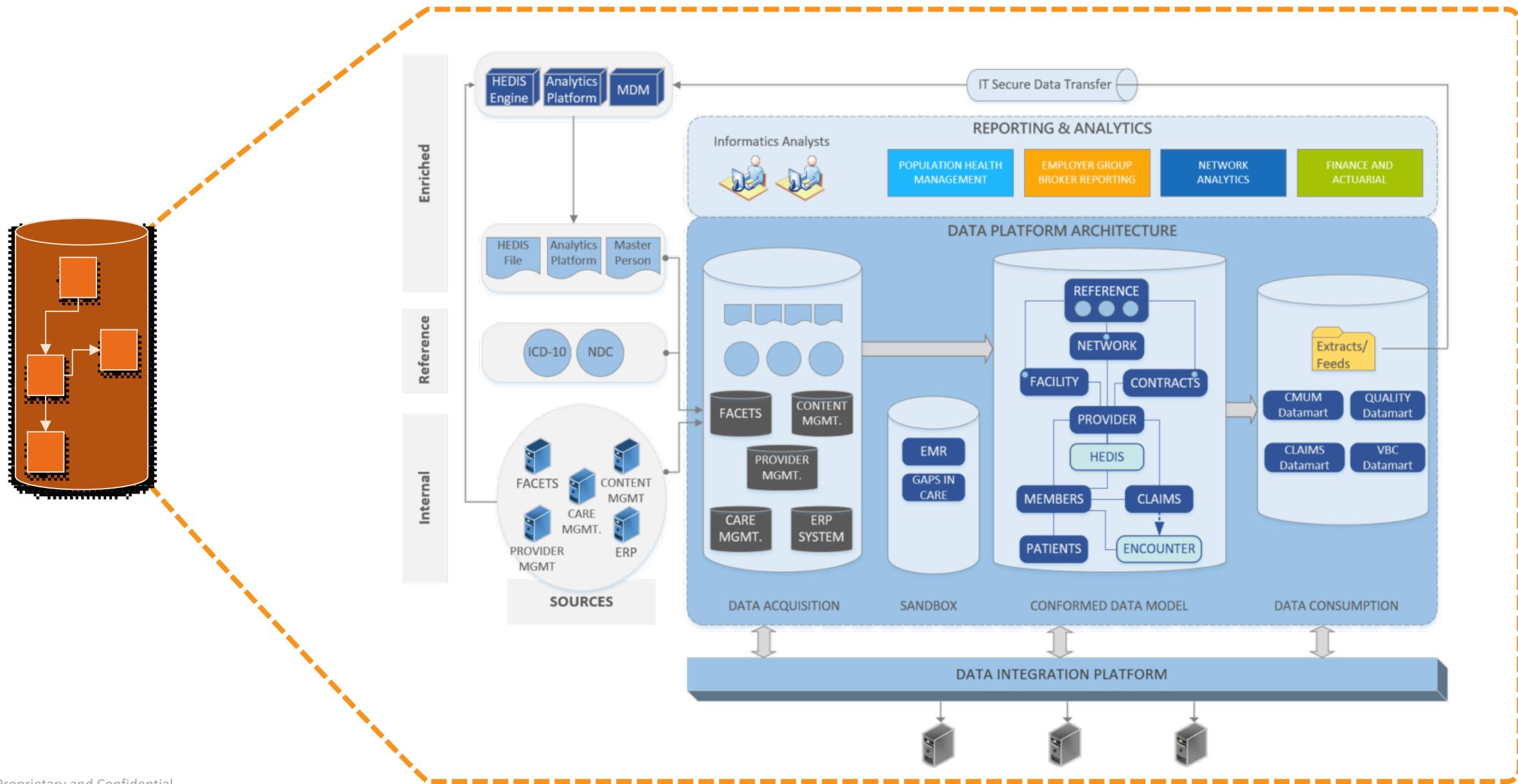


Higher investment will be needed in hardware and human resources.

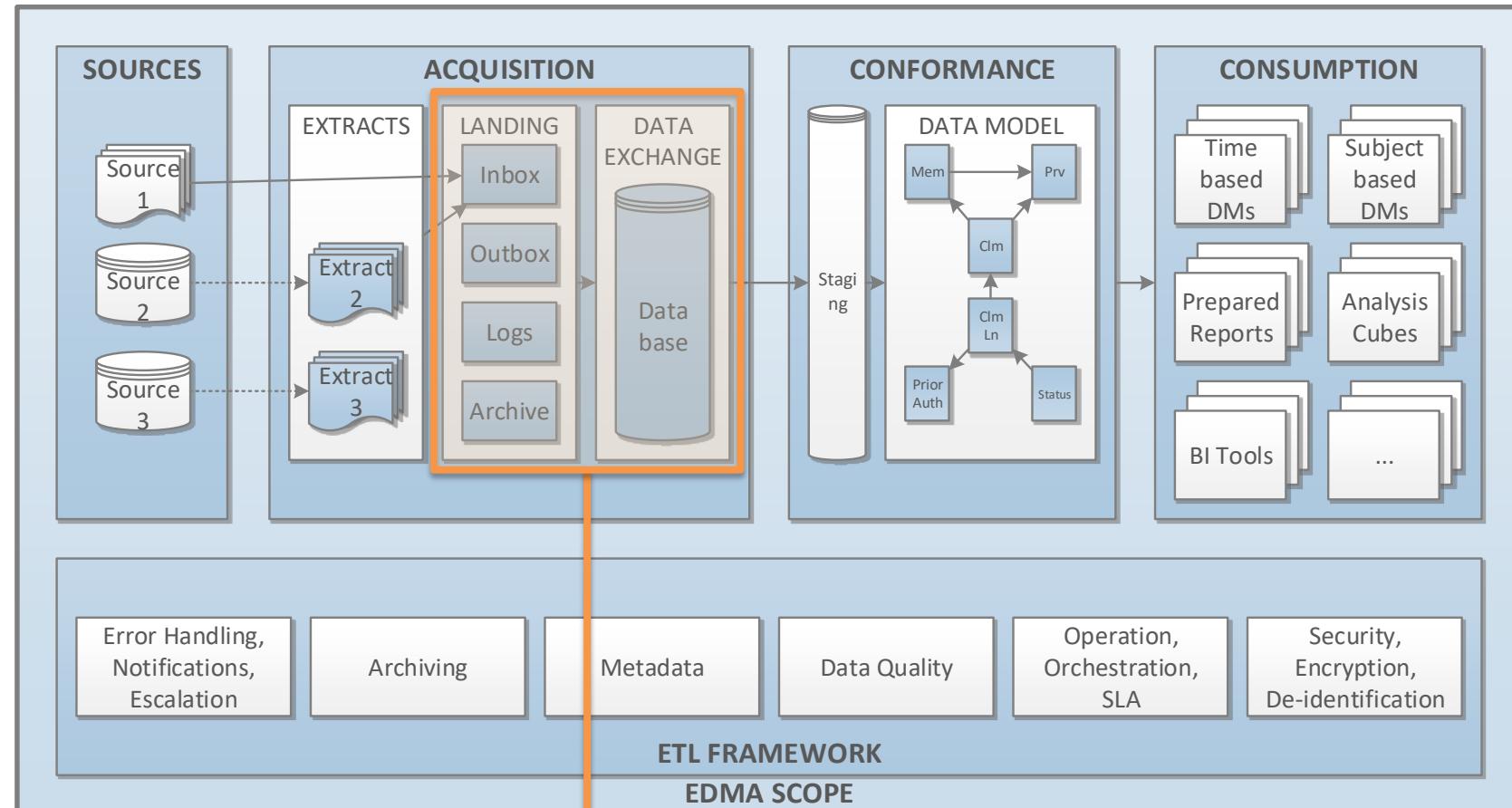
Future State – Architecture Direction



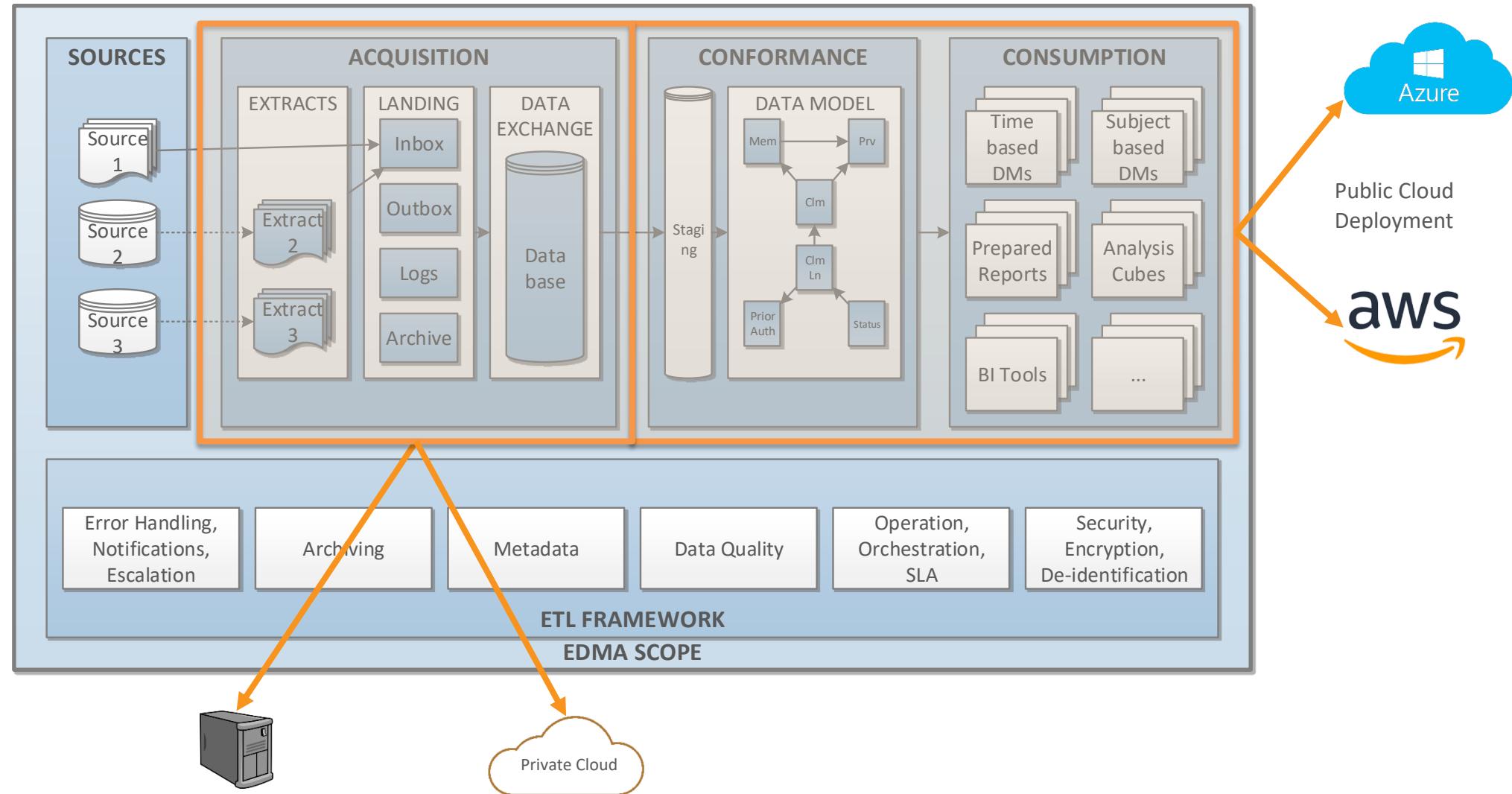
Future State – Reference Architecture



Future State – Modern Data Needs



Future State – Cloud Deployment Options



Rationalizing Existing Data Initiatives

Data warehouse by IT

Data marts by Informatics

Data marts by Actuarial

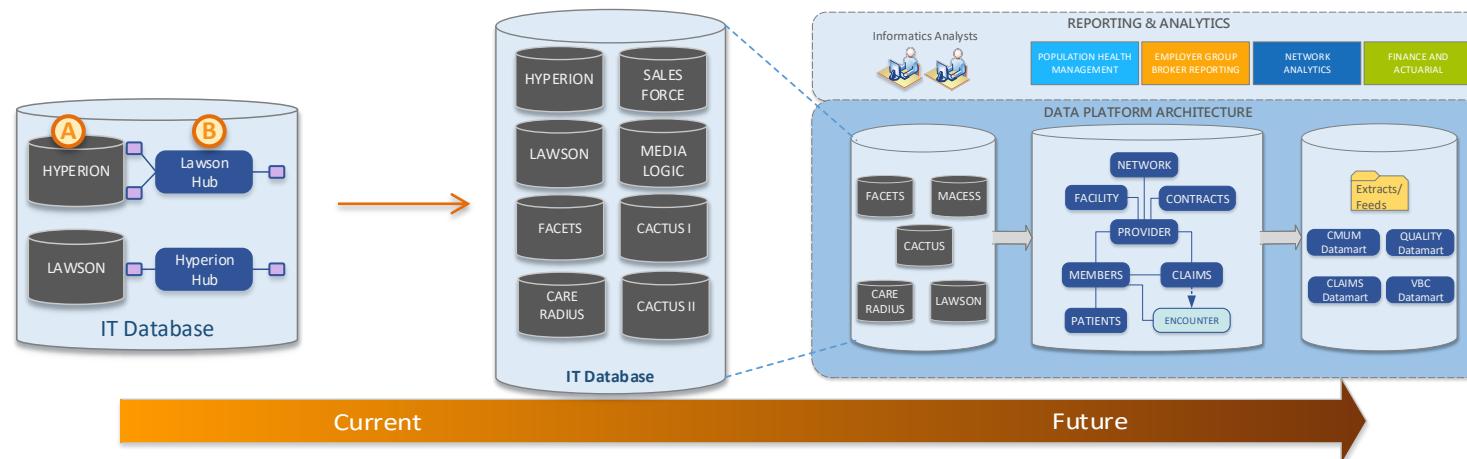
IT Data Warehouse Rationalization

ITTS

- A. *IT should continue data sourcing with minimal to no transformations and become the data acquisition layer*
- B. *Data transformations should be done in the conformed data model*

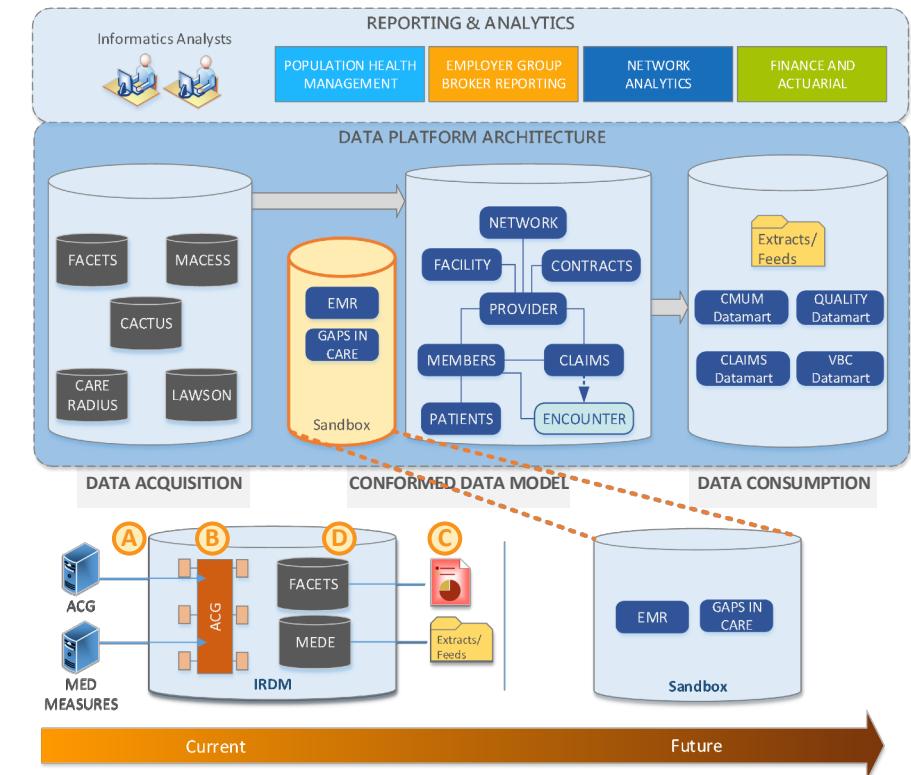
Informatics

- *Informatics should focus on building the conformed data model for reporting and analysis using the IT database as the primary data source*
- *The data storage pattern to be used in conformed model (data vault, 3NF, etc.) should be decided during design stage*



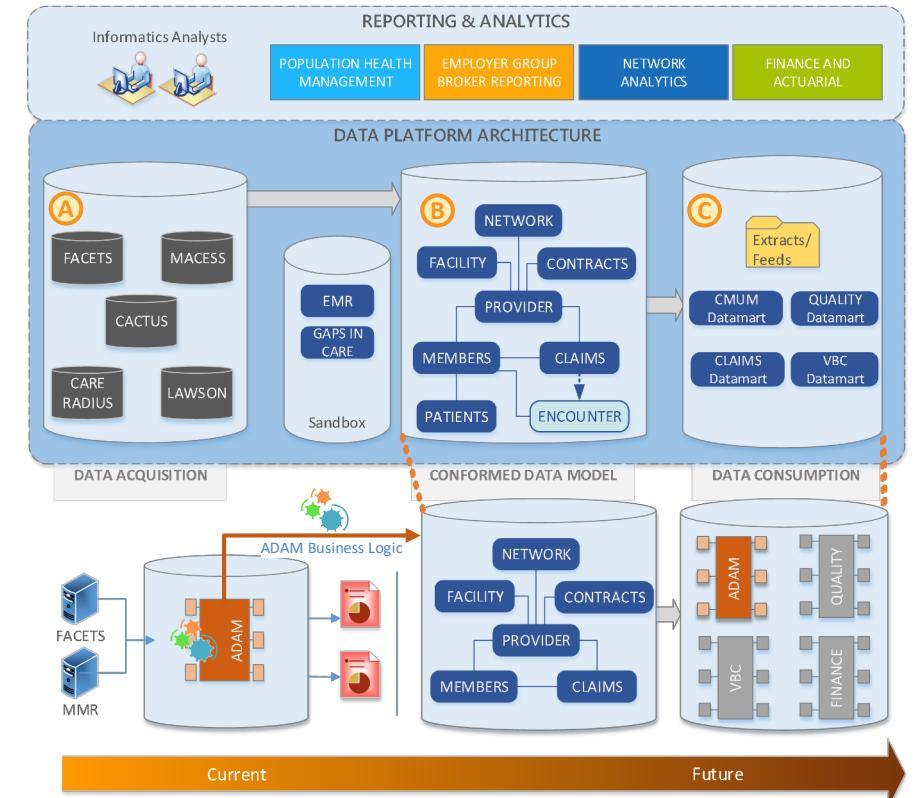
Informatics Data Mart Rationalization

- IRDM is used for multiple purposes by Informatics
 - A. Acquisition
 - B. Data Transformations
 - C. Data Marts & Extracts (e.g. Mede)
 - D. Sandbox (multipurpose, experimental dataspace)
- Following approach is recommended to rationalize various uses of IRDM
 - A. Data sourcing should be moved to the data acquisition layer
 - B. All data transformations and business logic should move to the conformed data model
 - C. Data Marts and extracts should move to the data consumption layer
 - D. A sandbox area should be available within the data platform to experiment with data that is not yet ready for the conformed model.

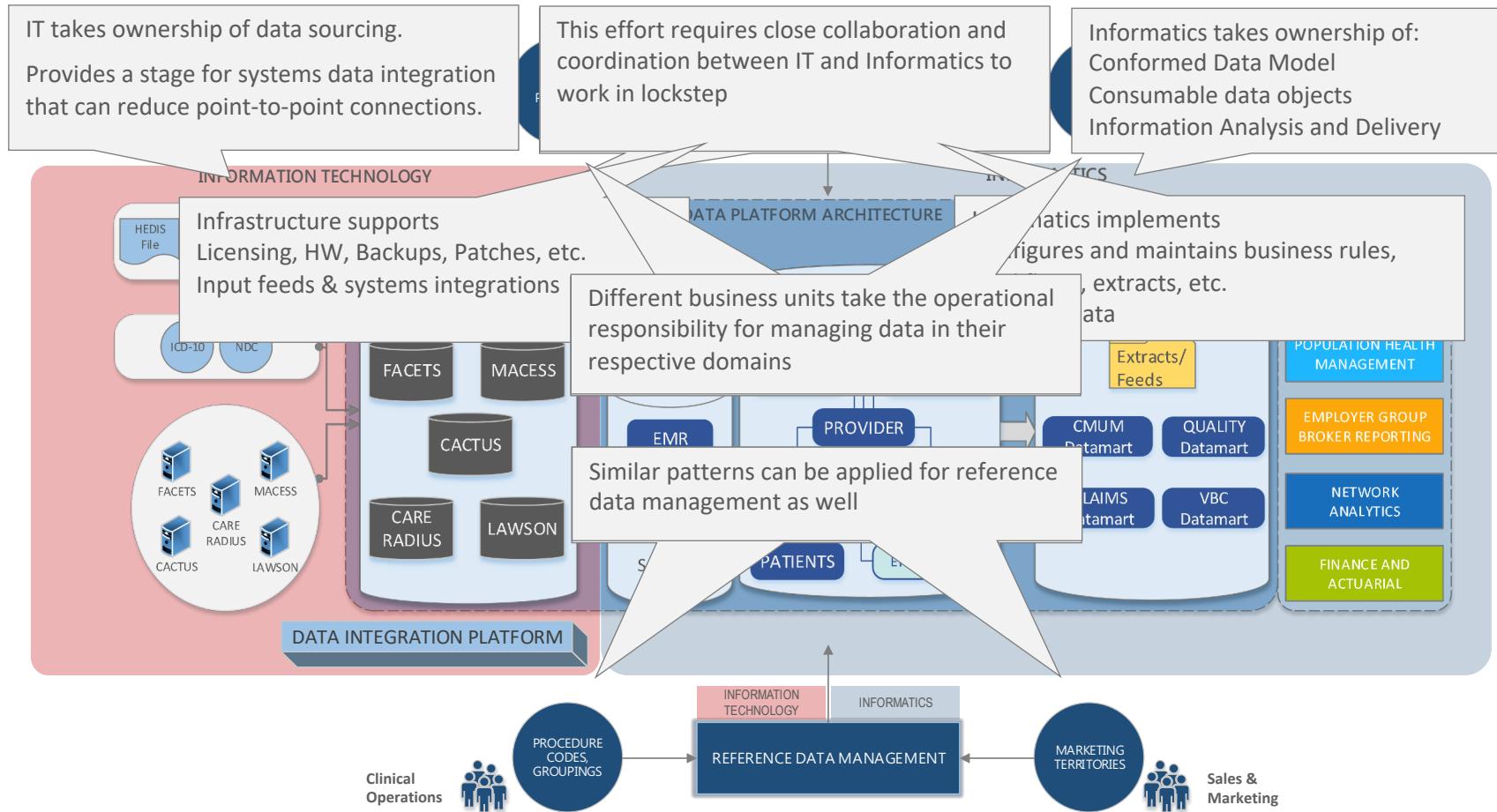


Actuarial Data Mart Rationalization

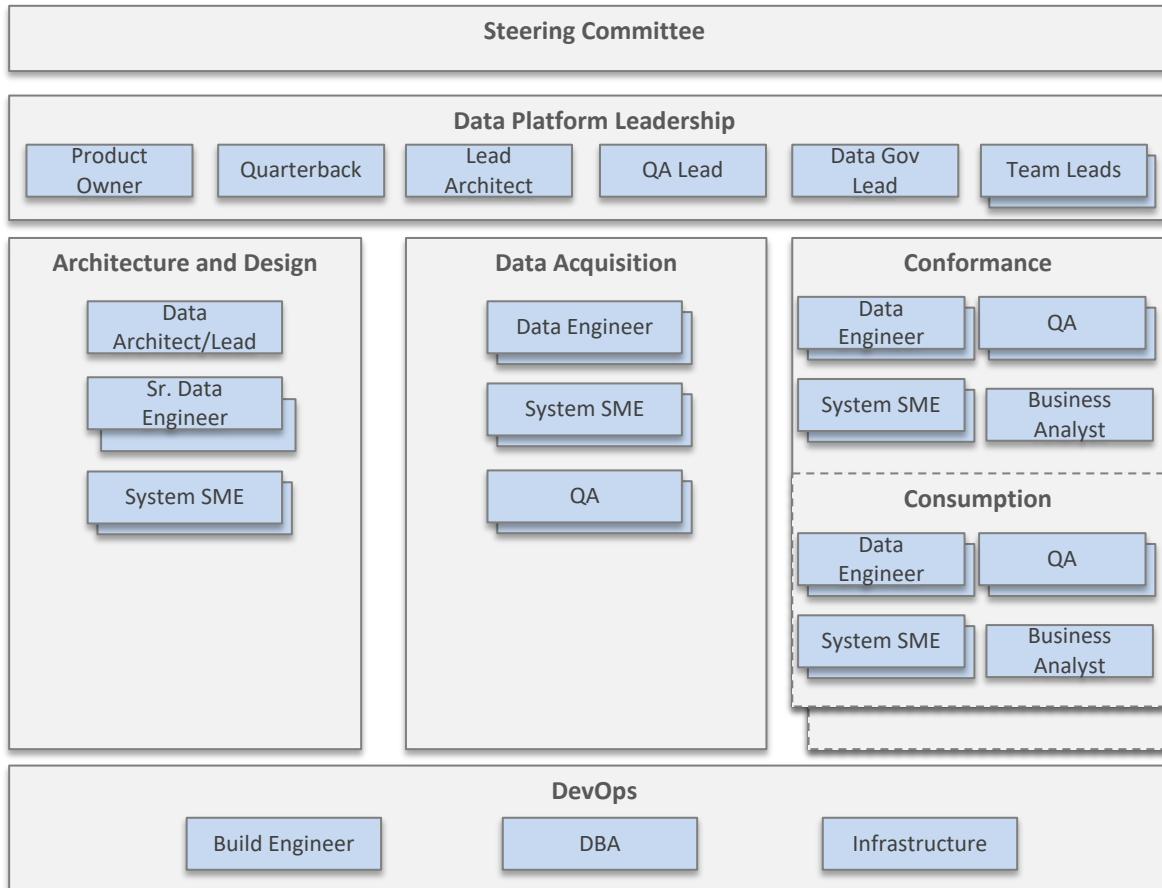
- ADAM maintains its own data pipeline from data sourcing, transformation, processing, to reporting
- ADAM has valuable data transformations and business rules that are useful outside of Actuarial
- We recommend distributing pieces of ADAM's data pipeline to gain efficiency and reuse as follows:
 - A. All sourcing should be done from the Data Acquisition layer
 - B. Business Rules implemented in ADAM should be moved to the conformed data model for reuse across the organization
 - C. ADAM should source its data from the conformed data model and deliver data via the consumption layer



Cross-Divisional Roles



Team Structure and Roles



Product Owner

- Product visionary
 - Prime authority on feature requests

Quarterback

- Execution leader responsible for project success
 - Not simply an administrator or bookkeeper
 - Makes decisions on team composition and order of work within sprints
 - Understands business and technology

Lead Architect

- Understands modern practical architecture concepts
 - Steward of unified architectural vision
 - Comprehends business needs and how to satisfy them through technology

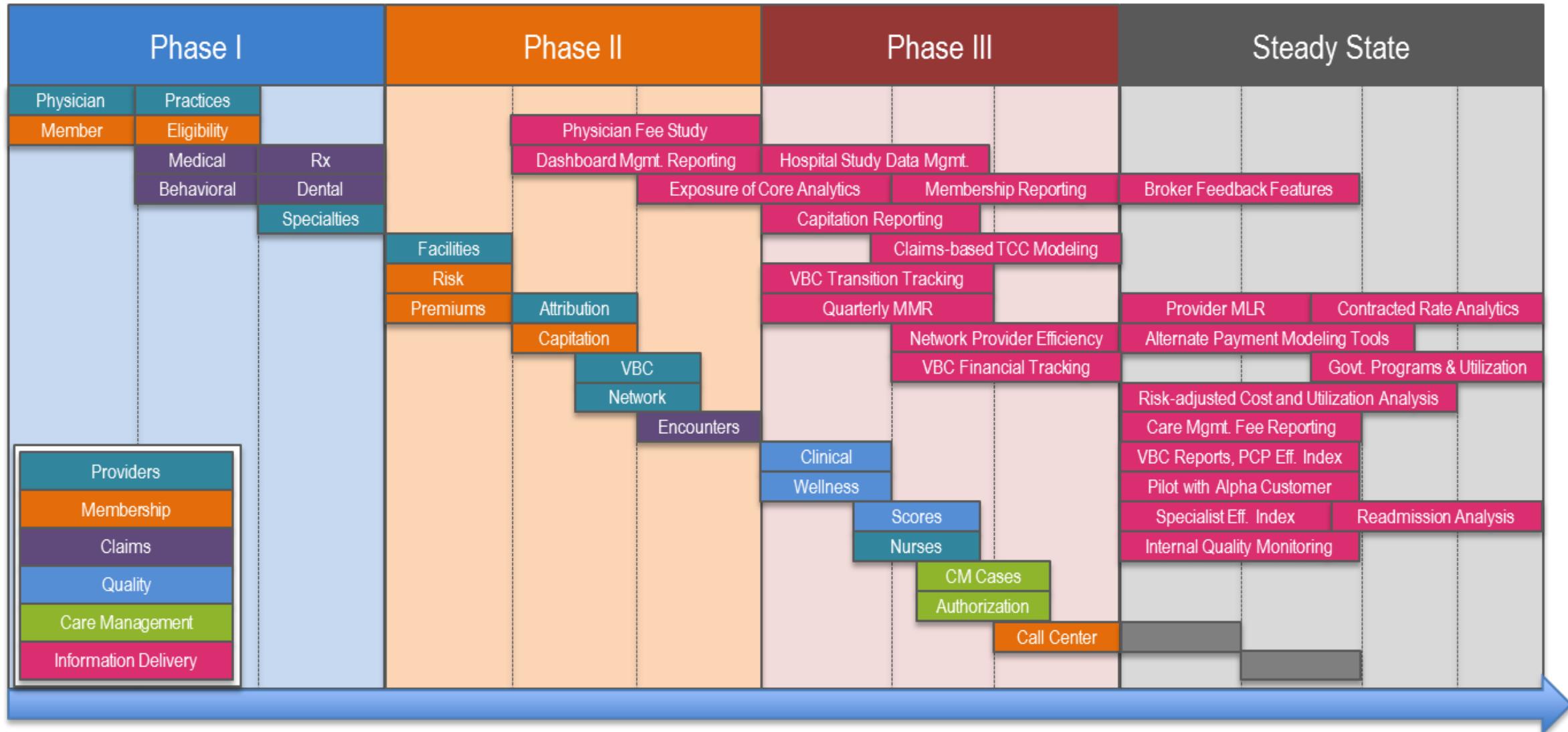
System SME

- Subject matter expert of a particular business unit or application
 - Authority on business rules and data usage

Business Requirements Delivery Optimization

Domain	Requirement	Priority	Release	Physician	Practices	Member	Eligibility	Medial	Rx	Behavioral	Dental	Specialty	Facilities	Risk	Premiums	Attribution	Capitation	VBC	Network	Encounters	Clinical	Wellness	Scoring	Nurses	Cases	Auth.	Call Center	Complexity
Network Analytics	Physician Fee Study	1	1	◆	◆			◆	◆	◆	◆	◆															7	
Network Analytics	Dashboard Mgmt Report	1	1	◆	◆			◆	◆	◆	◆	◆															7	
Network Analytics	Hospital Study Data Mgmt	1	2	◆	◆			◆	◆	◆	◆	◆		◆													8	
Employer Group & Broker	Exposure of Core Analytics Reports to Employers	1	3	◆	◆	◆	◆	◆	◆	◆	◆	◆				◆	◆									13		
Financial and Actuarial	Membership Reporting	1	3	◆	◆	◆	◆	◆																			8	
Employer Group & Broker	Broker Feedback features	4	3	◆	◆																						3	
Financial and Actuarial	Claims-based TCC Modeling	1	4	◆	◆	◆	◆	◆	◆	◆	◆	◆														13		
Financial and Actuarial	Capitation Reporting	2	4			◆	◆	◆	◆	◆	◆	◆														7		
Financial and Actuarial	Quarterly MMR	2	5	◆		◆	◆	◆	◆	◆	◆	◆														8		
Network Analytics	Network Provider Efficiency Analysis	2	5	◆	◆	◆		◆	◆	◆	◆	◆		◆			◆	◆	◆	◆						13		
Network Analytics	Provider MLR	2	5	◆	◆	◆	◆	◆	◆	◆	◆	◆		◆	◆		◆	◆	◆	◆						15		
Network Analytics	VBC Transition Tracking	3	5	◆	◆									◆				◆	◆	◆						6		
Network Analytics	Contracted Rate Analytics	3	5	◆	◆				◆	◆	◆	◆		◆	◆					◆	◆					11		
Financial and Actuarial	Govt. Programs & Utilization Breakout	4	5	◆		◆	◆	◆	◆	◆	◆	◆														8		
Network Analytics	Alternate Payment Modelling Tools	4	5	◆	◆	◆	◆	◆	◆	◆	◆	◆		◆	◆		◆	◆	◆	◆						16		
Population Health Management	VBC Financial Tracking	2	6	◆	◆	◆	◆	◆	◆	◆	◆	◆		◆	◆		◆	◆	◆	◆	◆	◆				16		
Population Health Management	Add'l Risk-Adjusted Cost and Utilization Analyses	4	7	◆	◆	◆	◆	◆	◆	◆	◆	◆		◆	◆		◆	◆	◆	◆	◆	◆	◆	◆	◆	19		
Population Health Management	Care Mgmt Fee Reporting	3	8	◆	◆	◆	◆	◆						◆	◆		◆	◆	◆	◆	◆					10		
Population Health Management	Pilot with Alpha Customer	1	9	◆	◆	◆	◆	◆	◆	◆	◆	◆		◆	◆		◆	◆	◆	◆	◆	◆	◆	◆	◆	20		
Population Health Management	VBC Reports, PCP Eff. Index	1	9	◆	◆	◆	◆	◆	◆	◆	◆	◆		◆	◆		◆	◆	◆	◆	◆	◆	◆	◆	◆	21		
Population Health Management	Readmission Analysis	3	10	◆	◆	◆	◆	◆	◆	◆	◆	◆		◆	◆		◆	◆	◆	◆	◆	◆	◆	◆	◆	15		
Population Health Management	Specialist Eff. Index	2	10	◆	◆	◆	◆	◆	◆	◆	◆	◆		◆	◆		◆	◆	◆	◆	◆	◆	◆	◆	◆	19		
Population Health Management	Internal Quality Monitoring	2	11	◆	◆	◆	◆	◆	◆	◆	◆	◆		◆	◆		◆	◆	◆	◆	◆	◆	◆	◆	◆	19		
Employer Group & Broker	Impact Analysis																									0		
	Frequency			22	20	17	15	19	19	18	18	15	16	15	6	16	10	12	11	7	6	5	5	3	4	3	1	

Sequencing for Data Platform Development



Data Governance

TOPIC	DESCRIPTION
1. Data Ownership	Establish data ownership, stewardship, custodianship, and associated responsibilities
2. Business Glossary	Consensus on standards & meaning of data
3. Data Quality	Set up and enforcement of data quality standards
4. Data Security	Set up and audit of data security and privacy policies
5. Compliance	Identification and audit of internal and external data compliance requirements
6. Data Assets Life Cycle	Active data assets lifecycle & rationalization
7. Data Literacy	Help organization with understanding the use and analysis of data

Data Governance

Data Governance Leader

Thought leader, brings industry best practices, guides & leads the organization in establishing data governance

Corporate Data Governance Council

Set up enterprise level priorities
Build organizational alignment, internal support and commitment

Data Governance Committees (Topic Based)

Establishes standards, business rules, resolves conflicting concepts
Includes representation from many domains, e.g. Care Management, Marketing

Data Stewards

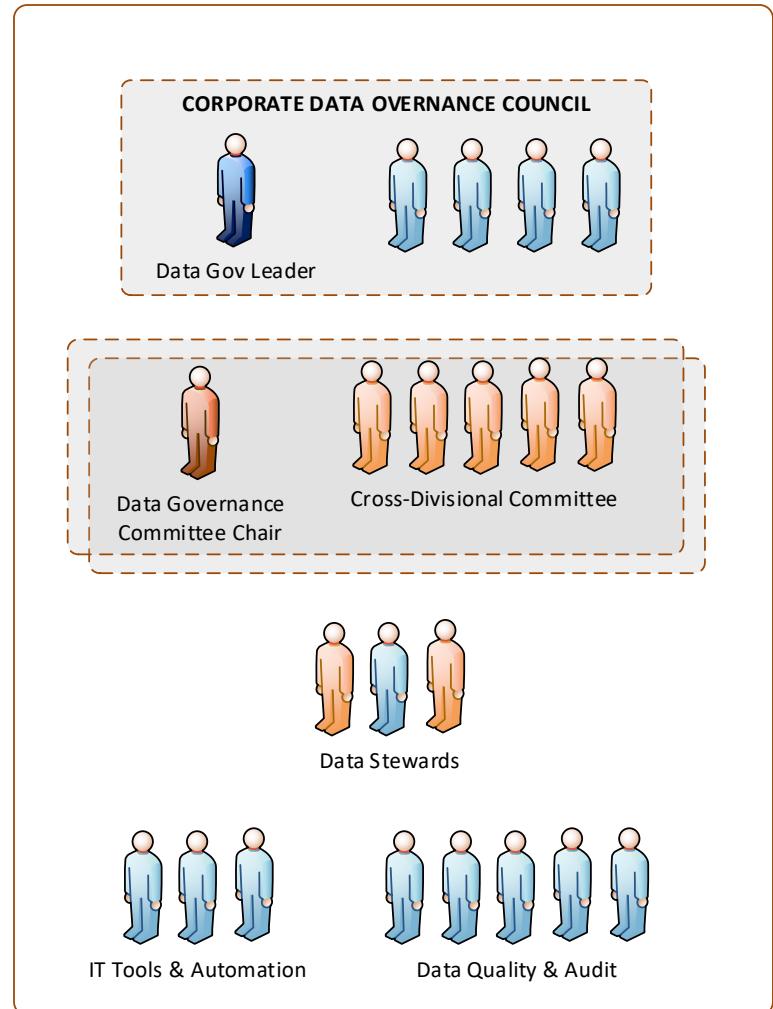
Day-to-day support for data quality, data issues resolution
Owns reference & master data, multiple people based on topic

Tools and Automation

Maintain & configure data governance tool, data quality reporting and automation

Data Quality & Audit

Monitor data quality, reporting, issue resolution with source systems, stewards, data platform, reporting teams



Thank You

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