



North Carolina
State Health Plan
FOR TEACHERS AND STATE EMPLOYEES



Memorandum of Understanding with Department of Information Technology for Business Services Provided by Government Data Analytics Center (GDAC) – Request for Approval

Board of Trustees Meeting

December 20, 2016

A Division of the Department of State Treasurer

Contract Approval Required by Statute

North Carolina General Statutes §135-48.22 and §135-48.33(a) require that the BOT approve all Plan contracts with a value over \$500,000.

The estimated cost of this contract is \$1,442,674.

Background & Context

Prior to transitioning to the Department of State Treasurer (DST), the State Health Plan held data on its own server and used the State's enterprise license for SAS software to develop its data warehouse.

Following the Plan's move to DST, the then recently formed Government Data Analytics Center (GDAC) was engaged to facilitate a transition of the hosted data repository into a much broader statewide platform hosted by SAS.

- Pursuant to statute §143B-1385(b)(1), the purpose of the GDAC is to utilize public-private partnerships as part of a statewide data integration and data sharing initiative and to identify data integration and business intelligence opportunities that will generate greater efficiencies in, and improved service delivery by, State agencies, departments and institutions.
- Pursuant to statute §143B-1385(b)(4)(a) all State agency business intelligence requirements, including any planning or development efforts associated with creating business intelligence capability, as well as any master data management efforts, shall be implemented through the GDAC.

Current Scope of GDAC Footprint Within State

NCAS	State Health Plan	Dept. of Commerce/Division of Employment Security
Purchasing Card Transactions Payment Data Vendor Data	Medical Claims Data Pharmacy Claims Data Provider/Member Data	Eligibility/Benefit Payment Data Employer Wage/Tax Data Case Management Data QCEW-Quarterly Census of Employment & Wages
Division of Motor Vehicles	BEACON	Secretary of State
Driver License Data Vehicle Registration Data	Employee and Position Data Employee Earnings Data	Corporate Registration Data UCC Data
Industrial Commission	DHHS-Center for Health Statistics	Other – External Sources
Workers Comp Insurance Data	Vital Records – Deceased Data Medicaid Claims Data Social Services Data	Bank of America P-card Data Social Security Death Master File
Criminal Justice (CJLEADS)		Office of State Budget Management
DPS – Prison Data DPS – Probation Data DPS – Local Jail Data AOC – Criminal Court/Warrants Domestic Violence Protective Orders	DMV – Web Services (person and vehicle) DOJ – Concealed Handgun Data DOJ – Sex Offender Registry Wildlife – Web Service <i>Future—Federal Hot Files and Criminal Incident based data</i>	Budget and Expenditures Data

Plan Data Analytics: Our Mission & Vision

Mission

By adopting a comprehensive approach to data analytics, the State Health Plan will systematically leverage health information assets to provide valuable insights allowing for leadership to make informed, data driven business decisions in support of the overall Plan strategic and operational priorities.

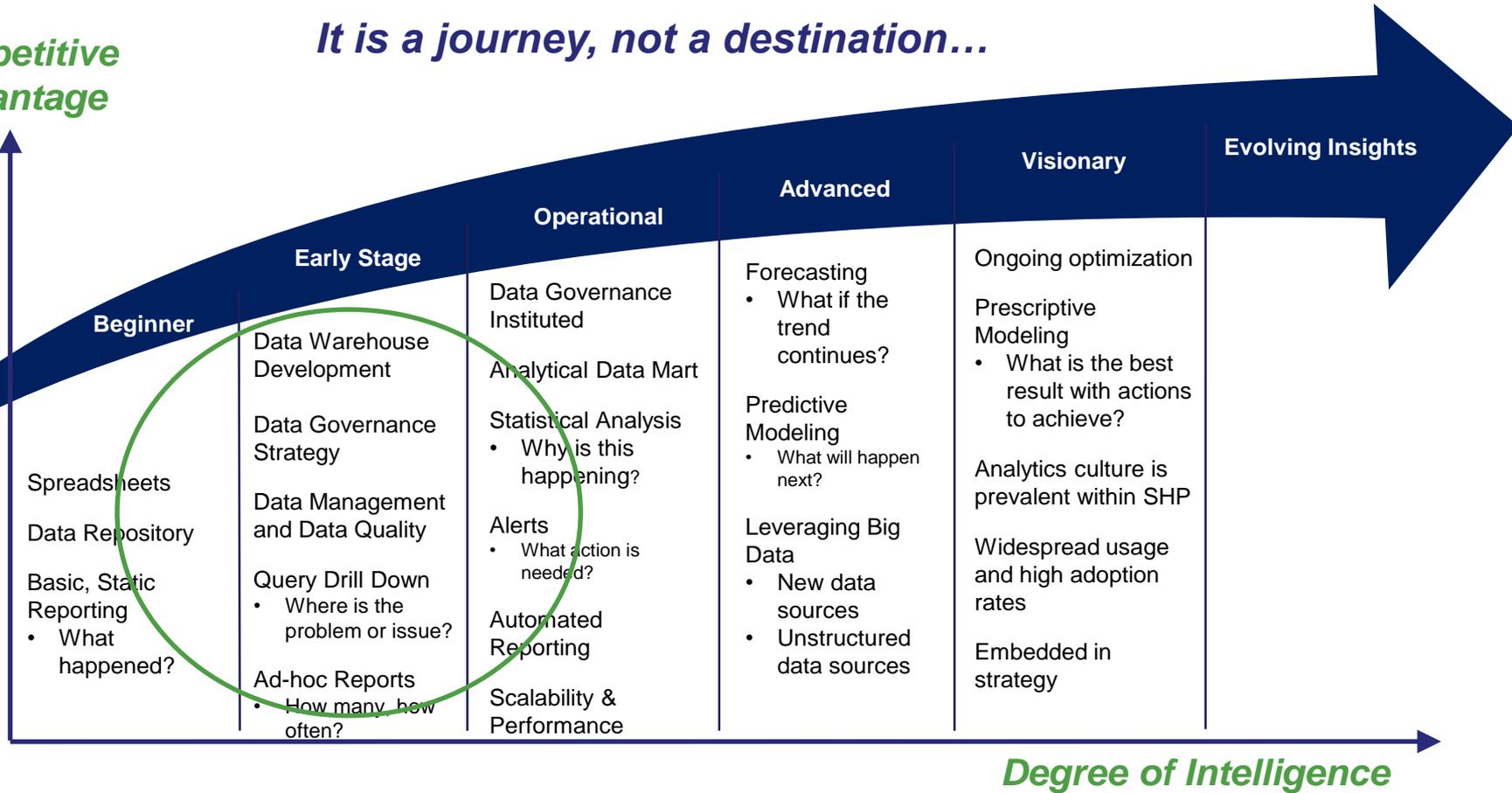
Vision

To become a leader and visionary in health care data analytics, whereby an analytics culture and mindset is prevalent throughout Plan. The more data assets that are leveraged, the more insights about our members' health and experience as well as our performance can be derived by applying data science and advanced modeling methods, in real or near real time.

Plan Data Analytics: Our Journey

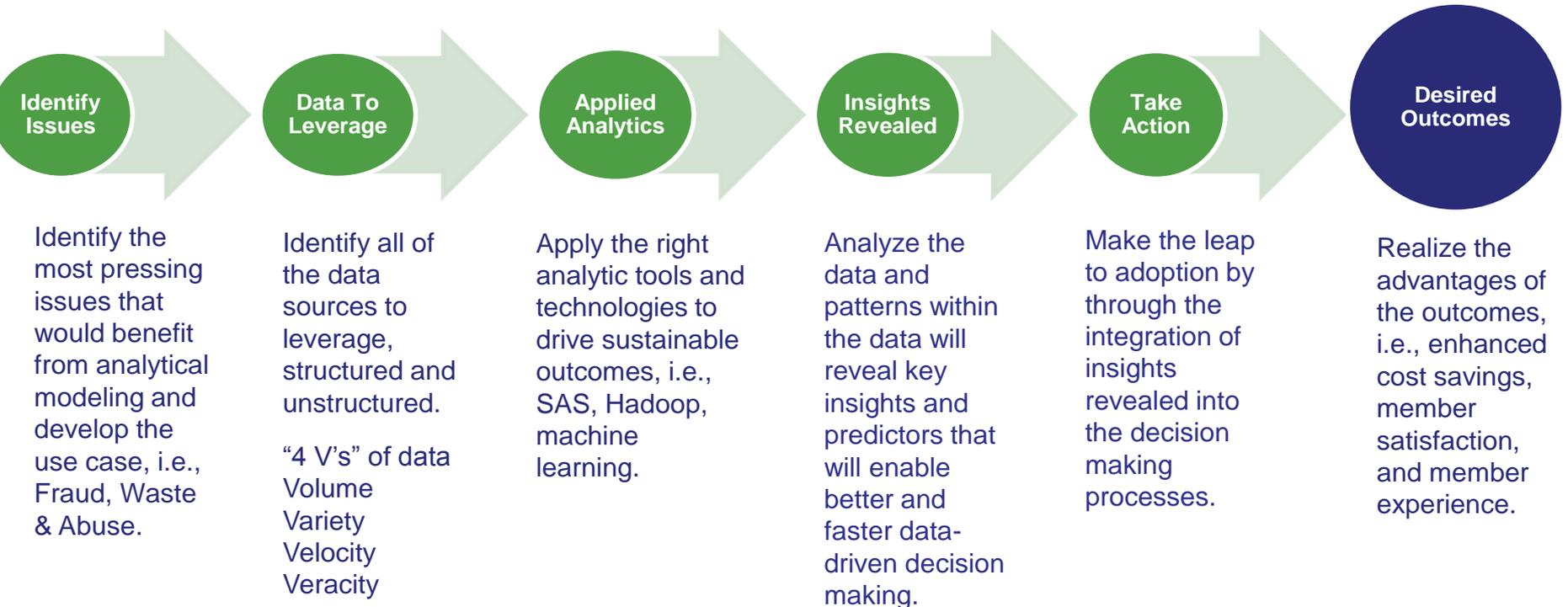
It is a journey, not a destination...

Competitive Advantage



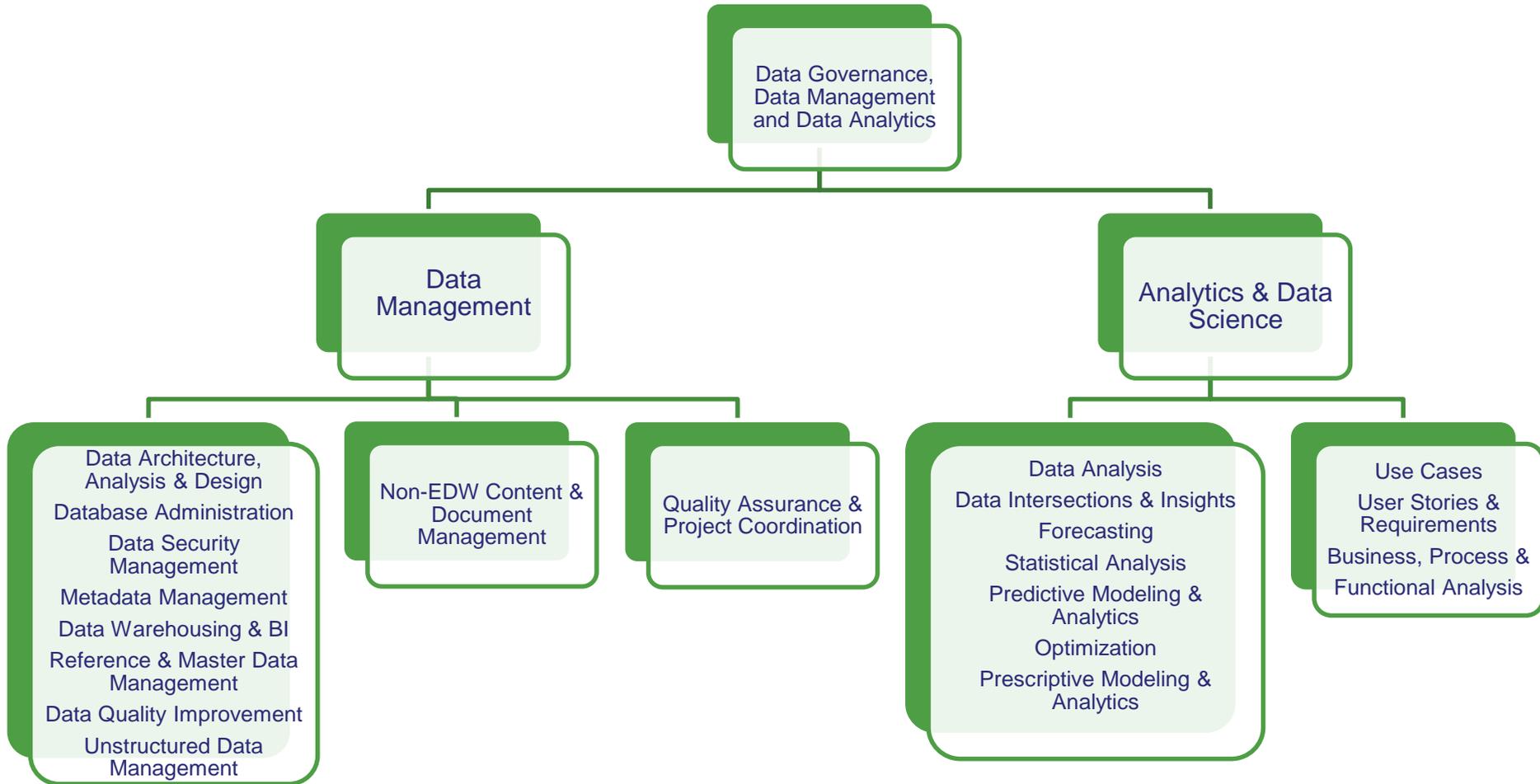
Plan Data Analytics: Our Process

From Issue Identification to Desired Outcomes

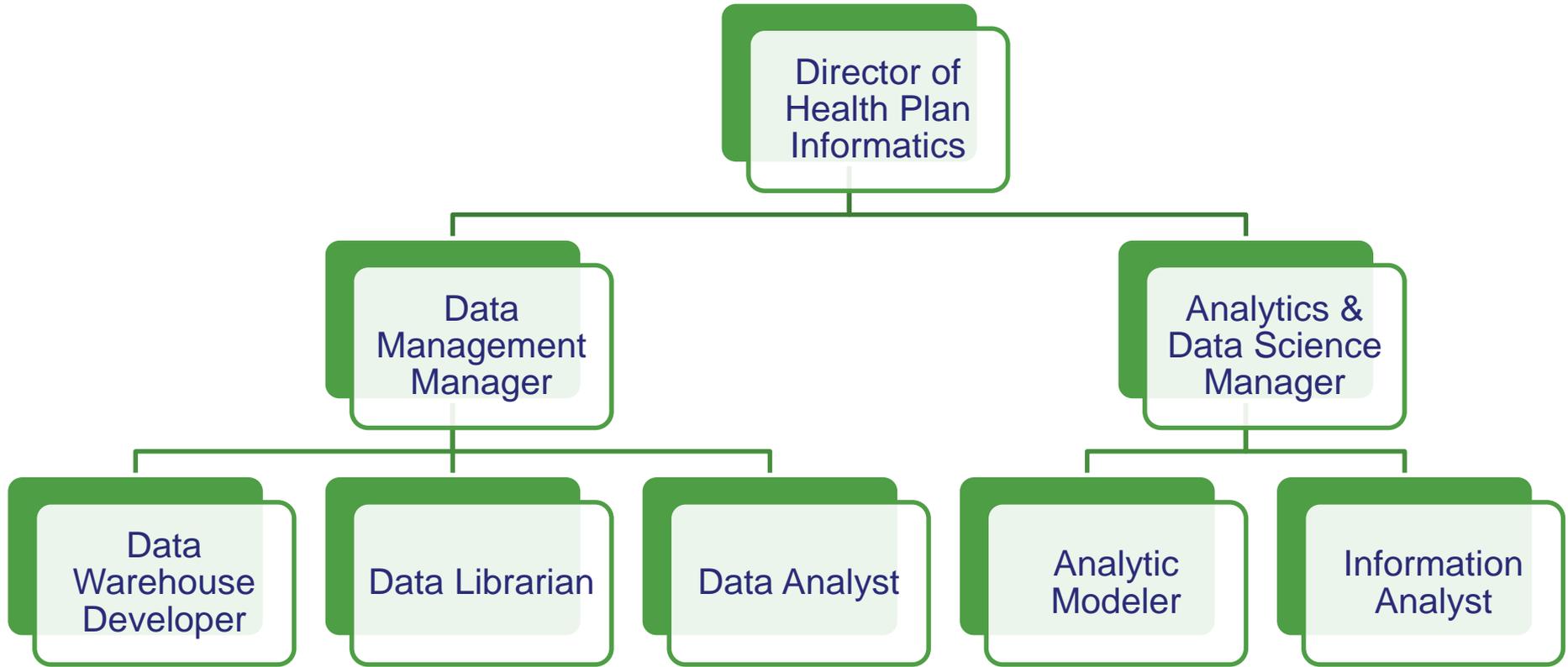


How We Will Get There, By Function

GDAC, SAS and Analysts within each section of the Plan



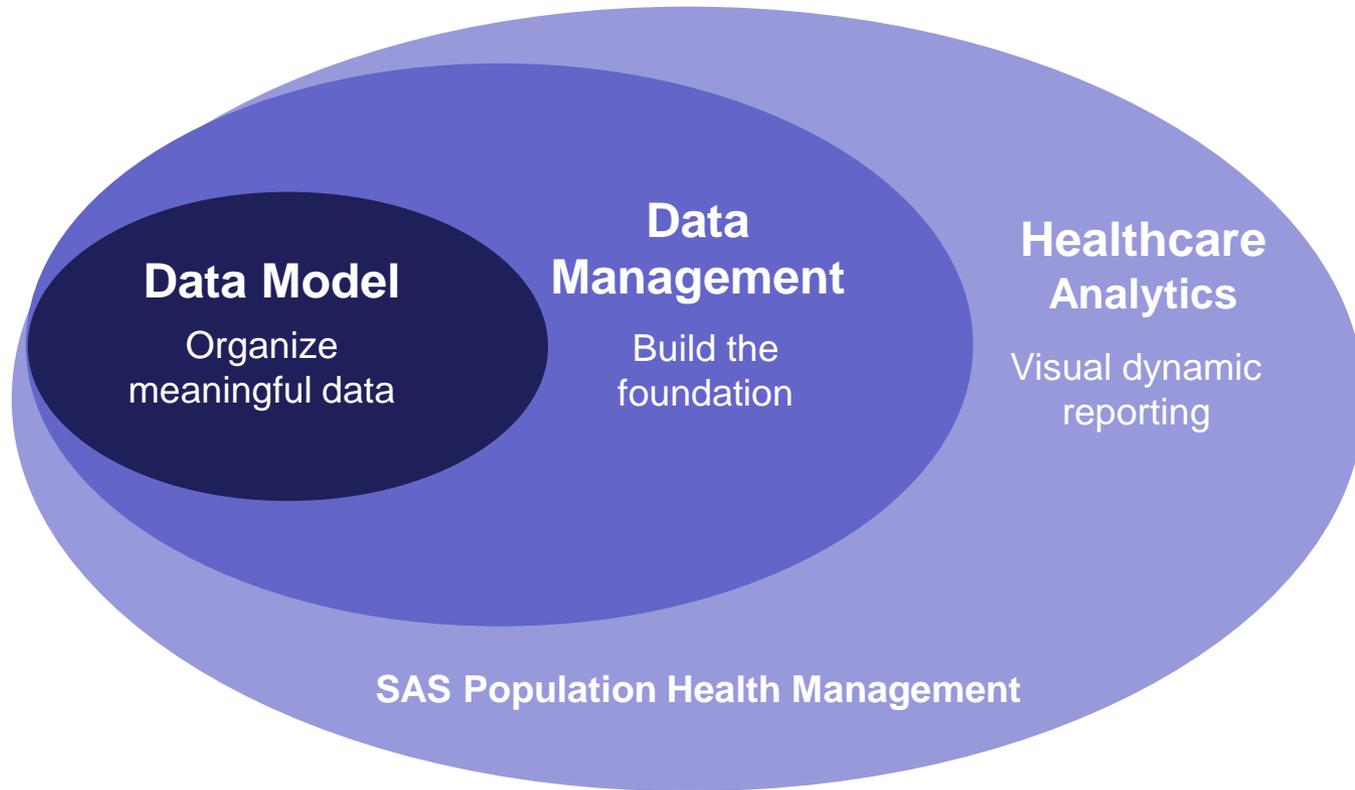
How We Will Get There, By Role



- GDAC and SAS provide expertise and augment Data Analytics section, as do Analysts within each section of the Plan.

SAS Solutions On Demand

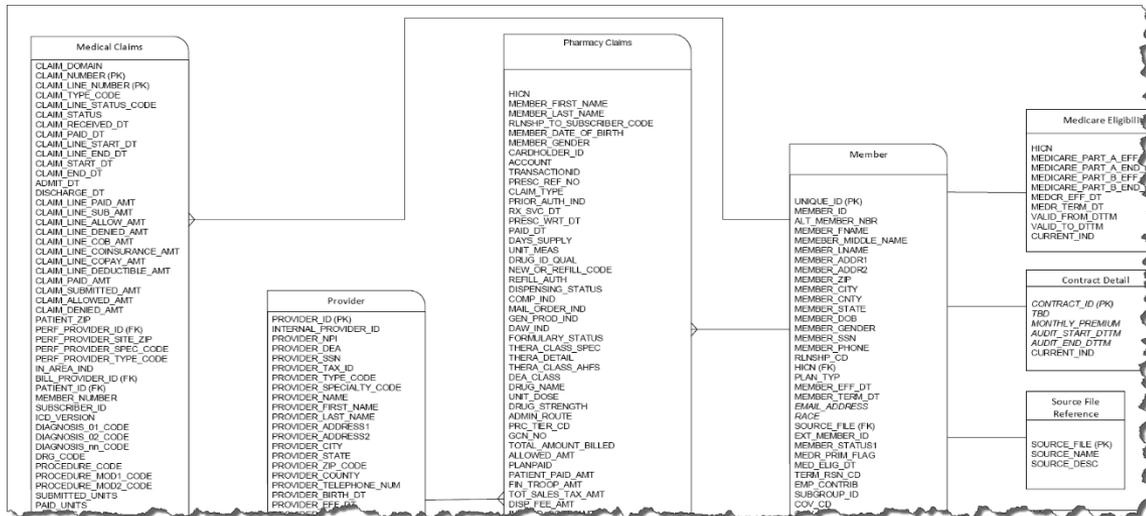
- **Purpose:** The Plan and the GDAC, leveraging the relationship with SAS, will continue the partnership to support advancing the Plan's data management and advanced analytics strategy. The work efforts will focus on two primary projects: Healthcare Data Model (HCDM) & Extract, Transform and Load (ETL) and the Visual Analytics (VA) Healthcare Analytics Framework (HAF).



SAS Healthcare Data Model & ETL Project

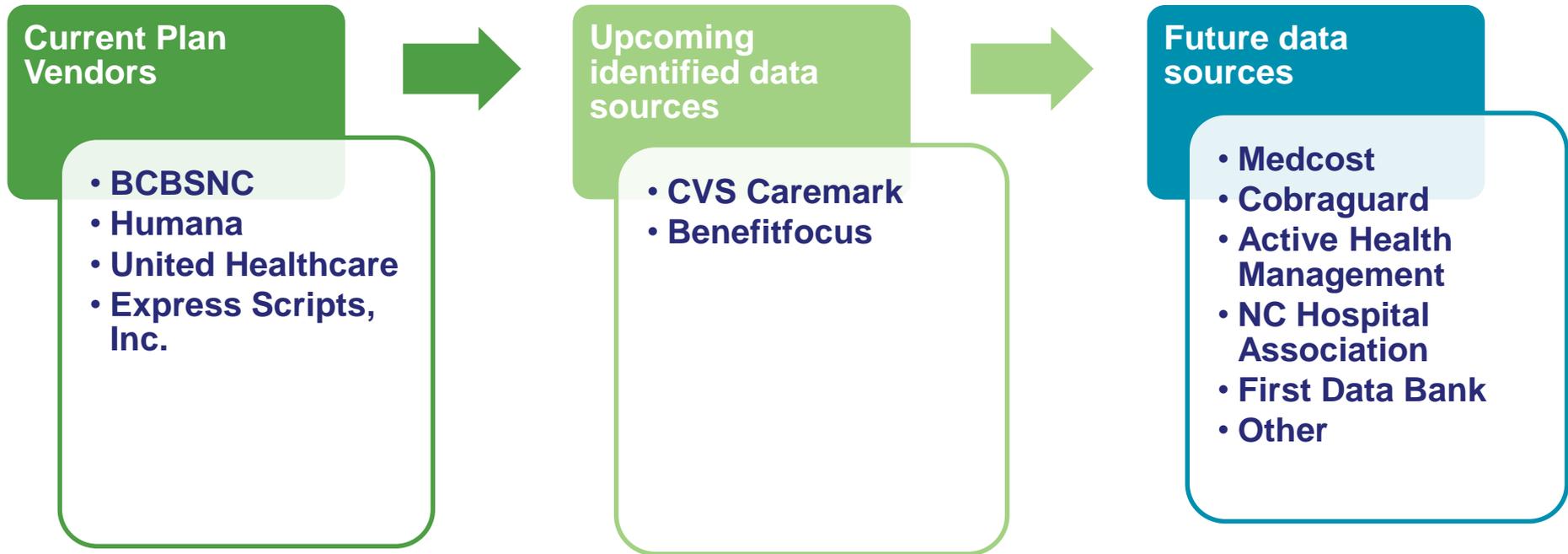
- Enrich existing Enterprise Data Warehouse (EDW) to focus on current and new data assets. Complete the requirements, design, development and implement the SAS Healthcare Data Model (HCDM) to be leveraged across various Plan vendor data. Initially, the HCDM will be populated with tables that will include:

- Medical Claims
- Providers
- Pharmacy Claims
- Member Eligibility



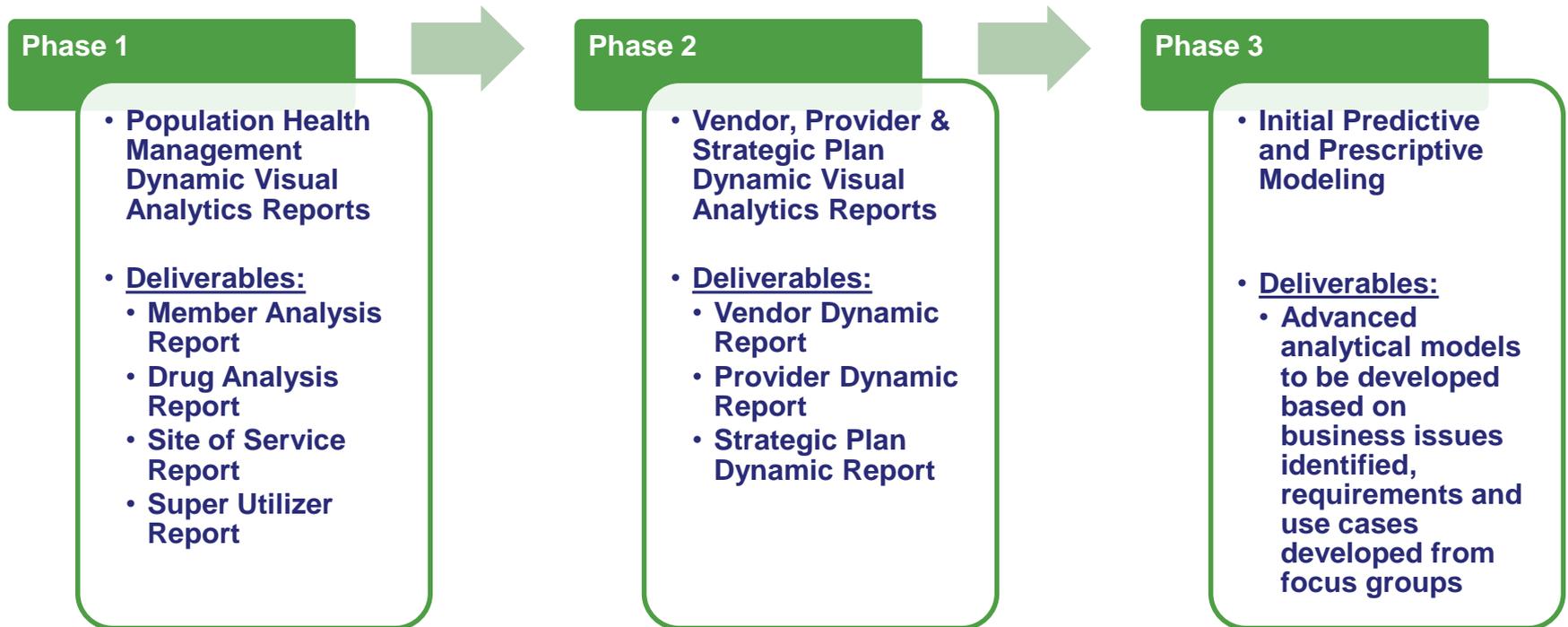
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Plan Data Assets



SAS Visual Analytics HAF Project

- **Purpose:** Implement a population health management dynamic visual reporting solution using SAS Visual Analytics to assist the Plan with data driven decision making capabilities relative to the health and experience of our members as well as the financial stability of the Plan. Develop useful analytical models to support the strategic plan and Plan priorities.



HCDM & ETL High Level Estimated Timeline

Integrate New Data Sources

(CVS and BenefitFocus)

Begin Parallel Testing (with Modernized Environment)

Retire Existing Environment

Use New Data, Phase Out Old

QA New Data
And ETL

Maintain
Environment

Utilize
Environment

Existing
Environment

Modernized
Environment

Feb

Apr

Jun-Jul

Jan

Mar

May

Aug-Sep

Profile New Data,
Develop Tables/Views

UAT, QA TEST,
Load PROD,
Knowledge Transfer

SHP Sandbox,
UAT,
Signoff PROD

Develop ETL for
Current Data Sources

DQ Checks,
Modify ETL,
Validate DEV and TEST

Revise Documentation,
QA, UAT, Resolve Issues

SAS VA HAF High Level Estimated Timeline

Population Health Management

Jan-Mar

Population Health Management dynamic visual analytic reports. Includes BCBS, UHC, Humana, and ESI

Start Strategic Plan

Start Vendor Report

Launch Provider Report

Start Predictive Modeling

Jan

Mar

Jul

Sep

Jan

Feb

Jun

Aug

Oct-Nov

Complete VA Install on DEV

Start setup VA on TEST, PROD

Start Provider Report

Launch Vendor Report

Launch Strategic Plan

Recommendation

Plan staff recommends approval of the MOU with GDAC beginning January 4, 2017, with an expected cost as follows:

HCDM & ETL Scope	\$300,000
VA HAF Scope	\$850,000
VA HAF Hosting	<u>\$292,674</u>
Total Cost	\$1,442,674