

Case Study

Data
Analytics,
Architecture,
Engineering,
Reporting, &
Machine
Learning

Data & Analytics Solutions to Unlock Key Insights in Veteran Health Research

Using data and technology to revolutionize the US Department of Veterans Affairs' (VA) ability to make data-driven decisions around Veteran health and benefits

Challenge

National Consulting Partners (NCP) has supported the VA Profile and Enterprise Services Integrated Platform (ESIP) initiative since 2020. This support includes technical design and implementation of a data source that combines disparate streams of VA Administration-specific data into a consolidated, authoritative source. Our team works with the data sources and partner systems to define data models and integration requirements to foster a common/standard protocol for the full VA enterprise.

As a result of VA Profile and ESIP, VA now has the ability to gain powerful insights into the US Veteran population that were previously not possible. Combined with additional data related to the services and benefits VA provides, VA requires a team of data analysts and scientists who have the skills necessary to unlock findings in the data and provide support for data-driven decision making that improves outcomes for Veterans.

Approach

NCP's ESIP Reporting and Analytics team provides critical services to the Veterans Experience Services (VES) portfolio and business customers. We specialize in managing a diverse range of data requests, which requires our team to have knowledge of and access to key enterprise data sources. Our team replicates schemas into the Azure data lake, which is then conditioned in our DataBricks workspace via raw parquet files. By conditioning data in DataBricks, we eliminate any dependencies on the VA Customer Experience Data Warehouse (CxDW) or the need for time-consuming queries, further ensuring rapid access to critical information.

Our team supports data engineering and ETL (Extract, Transform, Load) procedures. We create data workflows, employing notebooks to build functions and dictionaries that facilitate schema loading and the incorporation of new data into raw tables within our DataBricks databases. SQL and Python transformations using DataBricks notebooks enable us to establish staging views with standardized coding and nomenclature and cleansed mart tables ready for reporting. Leveraging the mart tables we construct, we perform comprehensive data analysis and generate reports in PowerBI. Our expertise extends to crafting insightful visualizations and dashboards that facilitate informed decision-making. Before publication, our team reviews all visualizations and data, ensuring the highest quality reports. We are also well-versed in Azure Synapse Analytics, Oracle, and SSMS for efficient data querying.

Results

Our team now supports several data and analytics products as well as ad hoc needs such as data and insights requests for the VA Health Services Research & Development (HSR&D) Center for Mental Healthcare and Outcomes Research and Navigating Military Transition.

In another example, our data capabilities supplied VBA with contact information for Veterans who submitted PACT Act claims on va.gov but received an error message when they attempted to submit. Their submissions went through, so VA needed to contact 18,587 Veterans to inform them that their information was in fact captured. We leveraged the consolidated data sources to provide accurate contact information for 18,446 Veterans within the VA Profile and VA/DoD Identity Repository (VADIR) sources. Additionally, we recently established a team that works primarily with the Health Data Analytics Platform (HDAP) to bring a robust set of data science and machine learning engineering capabilities to the ESIP program. Our team analyzes and interprets statistical and machine learning models for actionable insights and is assisting with the transition of data pipelines and models to Azure Data Science enabling REST API integrations. The team is currently working with the Office of Mental Health and Suicide Prevention to develop models that will best support their desired business outcomes.

NCP Available Contract Vehicles

GSA MAS

541611
54151HEAL
54151S

Subcontractor to Vendors with Prime access to:

Alliant 2
VETS 2
VECTOR
IHT
T4NG / T4NG2

SDVOSB SOLE SOURCE

An acquisition can be established as a sole source award for an SDVOSB by the Department of Veterans Affairs and other Agencies through VAAR Part 819.7008 Sole source awards to a verified service-disabled Veteran-owned small business.



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