OmniSolve
Provider of Integrated Enterprise Solutions

DATA INTEGRATION

INDUSTRY: Federal Government
SERVICE: Data Engineering

CHALLENGE

The IT information security team at the client agency had been collecting identity access management (IAM) data via Google surveys from internal application owners on what tools, technologies and capabilities they had in place to perform identity, credentialing, authentication and authorization. This data collection was part of a broader program to develop a new security framework and architecture which would unify the many and disparate identity management mechanisms used by different applications. Due to the number of applications, the surveys were being performed in phases. Also, given the complexity of the applications the surveys were designed to capture answers to survey questions in free form text to allow the respondents the ability to provide detailed information. As a result, the client asked for assistance with the visualization of the data and deriving insights from the detailed responses.

SOLUTION

OmniSolve worked with the client and key stakeholders to discuss possible solutions. Even though this effort was to show what could be prototyped when bringing all of the data together, the existing state of data capture, storage, and data health in general at the agency was not enough to demonstrate the portfolio view they were looking for. During these discussions we noted the following major pain-points:

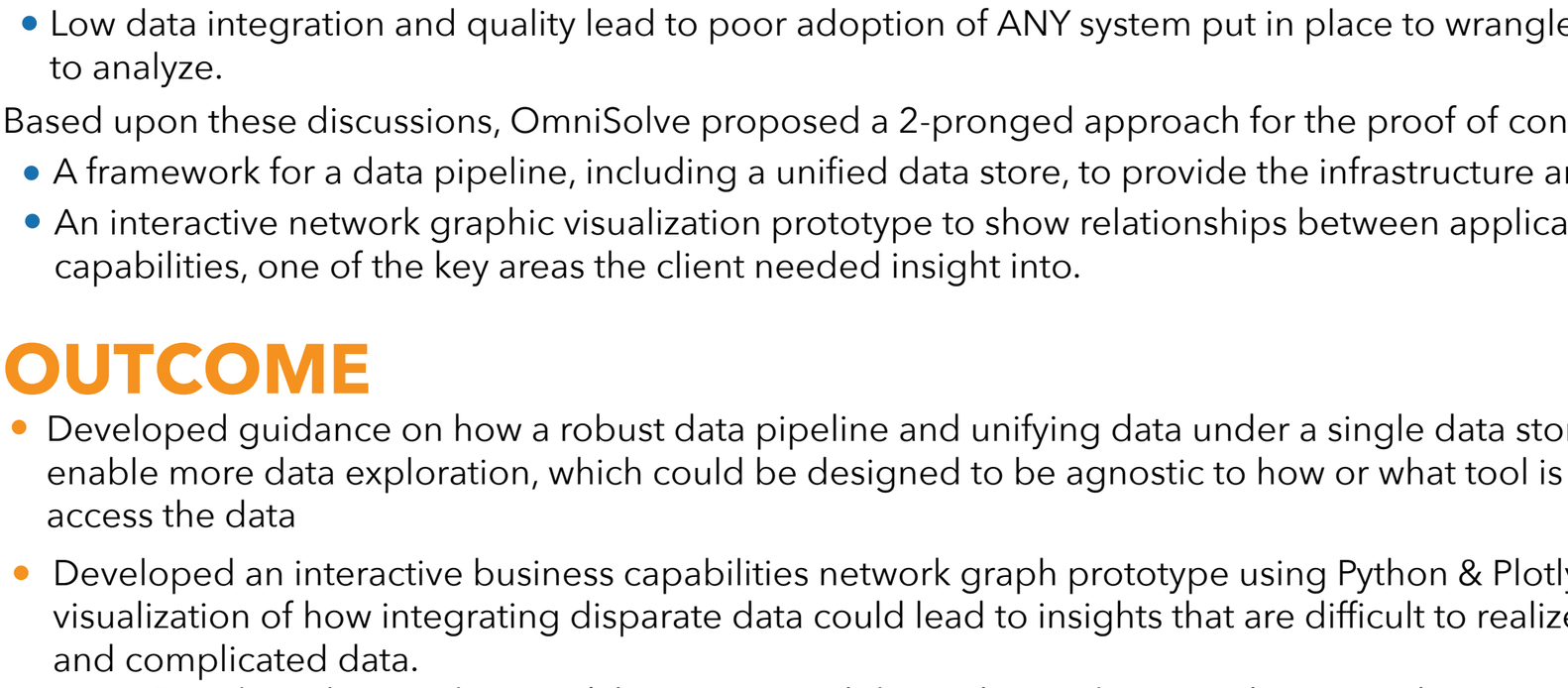
- Systems and data were siloed in multiple spreadsheets.
- Data reliability and cleanliness were questionable.
- Low data integration and quality lead to poor adoption of ANY system put in place to wrangle data together to analyze.

Based upon these discussions, OmniSolve proposed a 2-pronged approach for the proof of concept:

- A framework for a data pipeline, including a unified data store, to provide the infrastructure and strategy.
- An interactive network graphic visualization prototype to show relationships between applications and capabilities, one of the key areas the client needed insight into.

OUTCOME

- Developed guidance on how a robust data pipeline and unifying data under a single data store could enable more data exploration, which could be designed to be agnostic to how or what tool is used to access the data
- Developed an interactive business capabilities network graph prototype using Python & Plotly to show a live visualization of how integrating disparate data could lead to insights that are difficult to realize with siloed and complicated data.
    - Developed a visual network business capabilities, the applications that serve these capabilities.
    - Demonstrated how the visualization could be used to find insights common or duplicative business capabilities
    - Further demonstrated how integrating TBM cost data to show the potential costs associated with these applications



TECHNOLOGIES & METHODOLOGIES

- Python
- Plotly