ANALYTICS USE CASE | Utility

Advanced Analytics Visualization – Gas Pipeline Assets

At a publicly traded gas utility company, a number of different advanced analytics tools, designed to process large datasets, provided immediate visibility and value.

Asset Analysis

A critical function performed by every gas utility company is studying asset condition, performance, and risk. The primary goal is to achieve public (and employee) safety and minimize risk. It is also important to have effective asset strategies to guide asset repair / replace decisions.

Working with the IT support group for utility asset management systems, and the Analytics team for guidance on tools and advanced analytics environments, Integrity Management personnel were able to access, cleanse, and prepare data to make it fit for use to assist in the analyses.

The power to combine multiple tables of data, from multiple purpose-built software systems, allowed Integrity Management to break down data silos and view data from a broader context. Spatial analysis is an important aspect of studying assets; and the tool's ability to plot data on a map was helpful.

The Integrity Management group, by design, studies asset data to improve risk and investment models. The company also has a group of Data Engineers skilled at data curation (the sourcing, cleansing and preparation of data). Even this seasoned team found things to get excited about when using some new advanced technology tools. The power of Tibco Spotfire dashboards, combined with the data curation tools of the Hadoop distribution, had immediate savings in terms of the time and effort required to source and curate data.

For this group, automating the data load and curation activities for one complex job reduced the effort from two people for a full week to one automated job that ran in under 45 minutes. Further, the job running through Hadoop didn't crash like their legacy tools often did. Hadoop also offered the opportunity to combine additional data sources to expand the ability to correlate data. For this group, the breakthrough was not in time and cost savings, it was the ability to run the jobs more frequently to improve their risk models.

The Integrity Management group was an early adopter for the Analytics team and requested to be the first to develop a Data Governance organization and manage the data lifecycle for these important systems. Read our case study on Data Governance to understand how this group implemented metadata management, data quality assessment, data remediation, and preparation with a goal of using machine learning to improve their data and the risk models so critical to their operations.

Summary Key Points:

- Defining the data required and cleansing was a significant effort. Scheduling extracts with the IT organization also took time.
- Working with an organization that has a natural incentive to manage their data lifecycle makes them a prime candidate to implement a data governance model with workflows and tools.
- Data visualization and data lifecycle management is a pre-requisite to ensure critical decision-making is based on the best data possible.
- Conclusion? Well governed data, with high quality, is a major enabler to apply advanced analytics to achieve even greater value.

Keller Schroeder's Data Strategy Group

At Keller Schroeder, we absolutely subscribe to the idea that Data Science, Machine Learning, and Artificial Intelligence are skills that every organization should have, and, in a connected, social media, *Internet of Everything* world, are vital to your company's future. **We think it is that simple - not easy, but simple.**

Keller Schroeder's **Data Strategy Framework** is a comprehensive implementation framework developed to help your organization establish the data lifecycle management practices necessary to successfully apply advanced analytics for your business benefit.
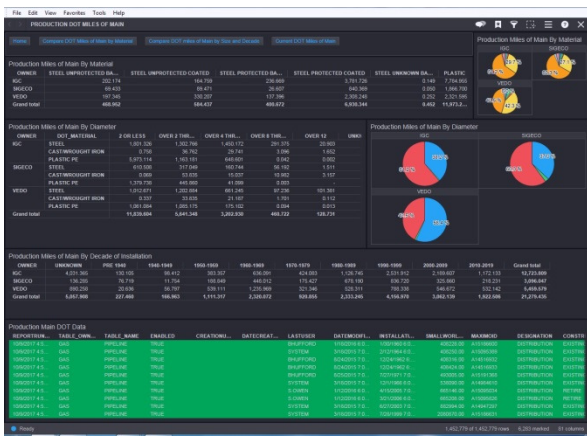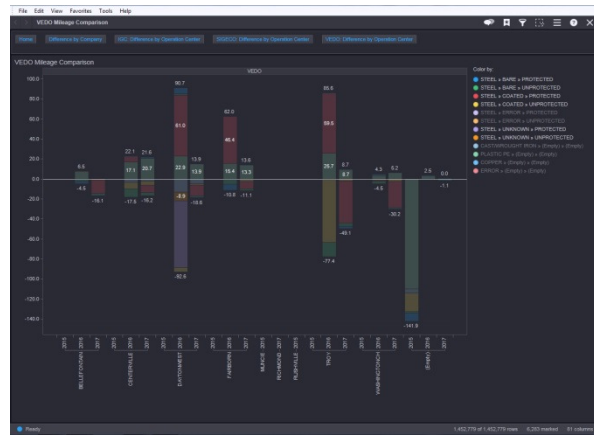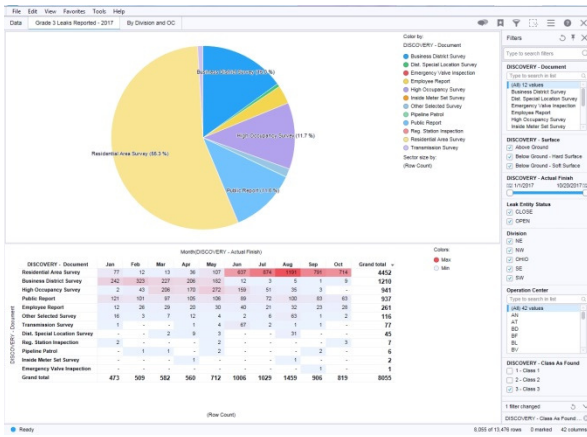

DATA STRATEGY **FRAMEWORK**

Contact Us For Your Complimentary Data Strategy Framework

manage data. do science. get better

Prepared By
Tom Vargo
Director, Data Strategy Group
812-492-7341
tvargo@kellerschroeder.com