



**FOCAL POINT**  
DATA RISK

CASE STUDY:

## DATA QUALITY ASSESSMENT AND DATA WAREHOUSE DESIGN ASSESSMENT AT A GROWING TECH COMPANY

### The Big Picture

Focal Point's Data Analytics practice was hired by a leading technology company to perform a data quality assessment for their 11 top-tier systems and assist in developing a roadmap to modernize their data warehousing environment. The company was only eight months away from its initial product launch, but it had major concerns about its data quality and data management practices and wanted more visibility into its data assets and their supporting infrastructure.

The Focal Point team was initially tasked with executing a data quality assessment for the tech company's critical SQL database and DW environments, ERP system (SAP), and top-tier applications. The successful execution of Focal Point's data quality assessments quickly led to involvement in the creation of a continuous monitoring solution for ongoing data quality support, data migration assessments, and the development of a data governance plan. The Focal Point team was able to help this client overcome three significant data quality challenges.

### Challenge #1: Identifying Data Quality Issues

The company had three key priorities: understanding its existing data assets, data quality health, and supporting infrastructure. A lack of an established data governance program contributed to systemic data integrity issues, which led to system redundancies and errors, outages, operational inefficiencies, and diminished confidence from data consumers.

Before it could address the problem, the company needed visibility into the impact of the data quality issues on critical IT systems and business operations. Focal Point performed a design assessment of the company's top-tier systems and integration tools. The team then executed a data quality assessment of these systems, which involved advanced data profiling techniques and targeted testing using Alteryx. The team also integrated the company's on-premise Tableau server and dashboarding platform to provide continuous data quality monitoring KPIs.

Focal Point's data quality assessment and continuous data quality monitoring solution allowed the company to increase the data quality health measurement of its top-tier systems by 23%. In addition, Focal Point's initial design assessments led to the discovery of 60 observations, which provided the company valuable insights into weaknesses in system and data integration and data management practices. With this information, the company funded additional initiatives to harden integration, clean up data management systems, deploy data quality tools and practices, and develop data governance policies and procedures.

#### SNAPSHOT

**Client:** Leading Tech Company

**Goal:** Improve data quality and modernize data warehousing environment

**Tools:** Tableau, Alteryx

#### KEY OUTCOMES

 **23%**

Increase in data quality health measurement of top-tier systems.

 **60**

Observations that provided insight into weaknesses with system and data integration and data management.

## Challenge #2: Understanding Cost Impact

The company sought insight into the cost drivers related to the data quality of 11 in-scope top tier systems, as well as clarity on the relationship between the company's business metrics and IT service costs. Focal Point uncovered 60 observations in the following areas that had an impact on cost:

- **Data Integration (23):** The main cost drivers in this area included inconsistent formulation and maintenance of rules within in-scope integration tools, misalignment of business rules and data integration logic, data disparity (difference in data structure, format, and use of values), and significant reliance on alternate manual steps developed outside of integration tools to address deficiencies with the integration technology.
- **IT Operations and Maintenance (16):** Data quality issues resulted in deficiencies that impacted the effectiveness of IT operations, including system maintenance and data management practices.
- **Data Modeling & Design (11):** These deficiencies related to the impact of the organization's lack of understanding around its data assets, misaligning and miscommunicating data requirements, and not documenting or retaining documentation related to data modeling and design during SDLC.
- **Data Governance & Stewardship (10):** These deficiencies represented data quality issues that resulted from the immediate lack of master data management and data governance programs within the organization.

Focal Point developed a remediation plan for each of these data quality observations as part of the initial design assessment. Focal Point applied its risk ranking methodology, including details on the level of complexity and associated cost impact and ROI, to help the company prioritize its remediation efforts.

## Challenge #3: Modernizing the Data Warehouse

Focal Point assisted in the development of an enterprise data warehouse (EDW) modernization roadmap. Previous attempts by the company had been unsuccessful due to the following design problems:

- Lack of ETL utilities and data modeling expertise meant the SQL EDW was simply used as a data repository. In the existing architecture, dedicated SQL databases (DBs) stored raw tables from source systems extracted via SQL Server Batch Jobs. As a result, the Tableau server was leveraged by a separate IT organization to prepare the data rather than preparing it upfront in the EDW.
- Lack of data governance, data management, and change management policies led to mismanagement of the SQL EDW environment. Consequently, ongoing issues with system availability and integrity adversely impacted the business.
- The existing SQL EDW was not able to manage (i.e., store, model, analyze) streaming data, including data coming from the company's devices.

Through a collaborative effort, Focal Point helped lay out a data warehouse modernization plan, including architecture design, tool selection, and a phased transition plan, that would incrementally migrate data and/or functionality to the component technologies eventually comprising the future EDW environment.

### DATA INTEGRATION

**Cost Impact:** \$541,800

**ROI if remediated:**  
\$1,250,784 annually

### IT OPERATIONS

**Cost Impact:** \$141,900

**ROI if remediated:**  
\$925,188 annually

### DATA MODELING

**Cost Impact:** \$144,480

**ROI if remediated:**  
\$614,556 annually

### DATA GOVERNANCE

**Cost Impact:** \$72,240

**ROI if remediated:**  
\$626,940 annually

### KEY OUTCOMES

#### 13

SQL DBs, identified by the Focal Point team, that should have been decommissioned, but were still being used to extract outdated data.

## About Focal Point

Focal Point Data Risk is a new type of risk management firm, one that delivers a unified approach to addressing data risk through a unique combination of service offerings, including cyber security, identity governance and access management, data privacy and analytics, internal audit, and hands-on training services.

### CONTACT US

**Chadwick Moore, Sr. Manager**  
cmoore@focal-point.com  
(704) 740-1363  
focal-point.com