



# Data Quality ROI Calculator

Discover the True Worth of Data Quality  
in Your Modern Data Environment



# Introduction

Ensuring the integrity of your data is no longer a luxury—it's a necessity. High-quality data forms the backbone of every strategic decision, driving growth and innovation. Yet, many organizations struggle to quantify the value of investing in data quality. Organizations often struggle to prove Data Quality ROI due to the challenge of quantifying the financial impact of poor data on business outcomes. Despite the clear importance of reliable data, teams frequently lack effective methods to measure and communicate the return on investment for data quality initiatives. This difficulty in demonstrating ROI can result in underfunded data quality programs, with resources diverted to more immediately visible or feature-centric projects. As a result, teams face the ongoing challenge of justifying their efforts and securing necessary support to maintain and improve data quality, ultimately impacting their ability to deliver reliable and trustworthy data essential for business success.

Let's explore why prioritizing data quality improvement is crucial and how it can transform your business.





# The Challenge

Organizations often face challenges in justifying investments in data quality due to the lack of mechanisms to calculate both the cost implications of poor data quality and the value derived from improved data quality. The impact of data quality on ROI isn't always immediately apparent, making it difficult to secure the necessary resources for data quality initiatives. To bridge this gap, it's essential to adopt effective metrics that showcase the tangible benefits of data quality.

To effectively evaluate the ROI of data quality improvements, it is crucial to differentiate between the costs associated with poor data quality and the benefits of high-quality data. Understanding key metrics that impact data quality will help in assessing the value of addressing data quality issues versus maintaining the status quo.

# Key Metrics for Data Quality

Two vital metrics for measuring the effectiveness of data quality initiatives are Data Issue Detection Time (DIDT) and Data Issue Resolution Time (DIRT).

## 1. DATA ISSUE DETECTION TIME (DIDT)

DIDT measures how quickly a data team can identify data quality issues such as inconsistencies, errors, or unexpected changes. In many organizations, detection can take days or even weeks because they rely on end-users to notice and report issues. This delay can be costly:



### Complexity and Cost

The longer an issue goes undetected, the more complex and costly it becomes to resolve.



### Decision-Making

Incorrect data leads to poor business decisions, affecting efficiency and credibility.

Reducing DIDT to minutes rather than days can significantly improve business outcomes. Establishing a baseline by analyzing past data issues can help set realistic targets and justify the need for additional resources.

## Strategies to Improve DIDT



### Automated Monitoring

Implement systems that continuously monitor data for anomalies, eliminating the need for manual checks.



### Real-Time Alerts

Use AI to detect and alert the team to potential issues immediately, ensuring swift action.



## 2. DATA ISSUE RESOLUTION TIME (DIRT)

DIRT tracks how long it takes to resolve data quality issues once they are detected. Monitoring DIRT in terms of hours or days helps evaluate the efficiency of data management processes. Translating DIRT into financial metrics simplifies communication with stakeholders.



### Strategies to Improve DIRT



#### Root Cause Analysis Tools

Utilize analytical tools to quickly identify and address the root causes of data issues.



#### Data Lineage Tracking

Maintain detailed records of data flow and transformations to facilitate quick identification and resolution of problems.



#### Proactive Governance

Establish clear policies and procedures for data management to prevent issues from arising.



# Quantifying Financial Impact

To understand the financial impact of data downtime, calculate both the cost of engineering time and business disruption. A straightforward formula is:

$$\begin{array}{c} \text{\$} \\ \text{Cost of} \\ \text{Data} \\ \text{Downtime} \end{array} = \left( \begin{array}{c} \text{Data Issue} \\ \text{Detection} \\ \text{Time} \end{array} + \begin{array}{c} \text{Data Issue} \\ \text{Resolution} \\ \text{Time} \end{array} \right) \times \begin{array}{c} \text{Hourly} \\ \text{Downtime} \\ \text{Cost} \end{array}$$

For example, if the cost of a data engineer's time is very conservatively \$60 per hour and the business impact is \$900 per hour, with an average of 50 downtime hours per month, the annual cost could easily exceed \$576,000. This calculation does not account for opportunity costs, which can be substantial.

By establishing baseline DIDT and DIRT, teams can effectively communicate the ROI of reducing data downtime. Presenting data like this to your leadership might look like this:

"Investing in additional data engineers and advanced monitoring tools can reduce our monthly downtime from **200 hours** to **10 hours**, yielding a **10x ROI** or **\$1.2 million** annually."

With this straightforward calculation, we can see the direct impacts of data downtime, but there are some indirect impacts that organizations fail to realize.

# Indirect Impacts of Data Downtime



## INACCURATE DECISIONS AND LOSS OF TRUST

For business teams & leadership, data downtime can have some dire consequences, especially if insights are drawn or decisions are made based on incorrect data. If an organization continues to face regular downtime issues, the employees will eventually start to lose trust in their data landscape and lower the morale and excitement about the data-driven culture of the organization.



## OPPORTUNITY COST

The time and resources spent to handle data downtime issues could be used for more productive tasks such as - solving customer problems and product innovations. These revenue generation opportunities are lost by organizations due to the opportunity cost of data downtime.

Let's modify our formula:

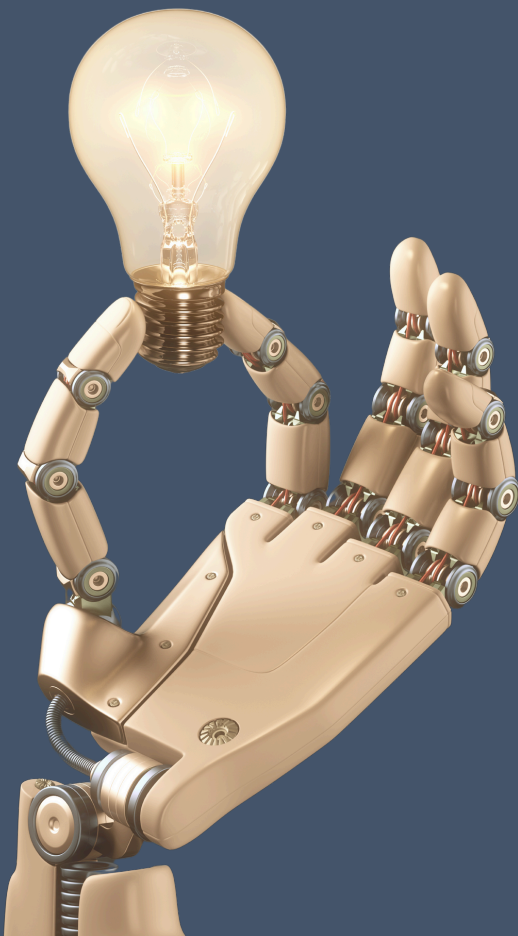
$$\begin{array}{c} \text{\$} \\ \text{Cost of Data Downtime} \end{array} = \left( \begin{array}{c} \text{Data Issue Detection Time} \\ \text{Data Issue Resolution Time} \end{array} + \right) \times \begin{array}{c} \text{No. of Incidents} \end{array} \times \begin{array}{c} \text{Hourly Downtime Cost} \end{array} + \begin{array}{c} \text{Business Impact (opportunity cost, loss of trust)} \end{array}$$

# How DQLabs Can Help

DQLabs offers advanced solutions to elevate data quality and observability beyond basic tools, providing comprehensive data governance and automation features that enhance data reliability.

**DQLABS**

Modern Data Quality  
and Observability  
Platform



## KEY FEATURES OF DQLABS



### AI and Machine Learning

Our platform leverages machine learning to automatically detect & resolve data anomalies, drastically reducing detection & correction times.



### Semantic Layer

Automatically classify and manage data based on business definitions, applying relevant quality rules and minimizing manual intervention.



### Robust Governance

Implement domain-specific governance views that ensure data is used correctly across different business functions, enhancing decision-making and compliance.



# DQLabs ROI Strategy

## LEVERAGING AI AND AUTOMATION

- Automated Anomaly Detection

DQLabs uses advanced AI algorithms to detect data anomalies in real-time, ensuring issues are identified and addressed before they impact business operations.

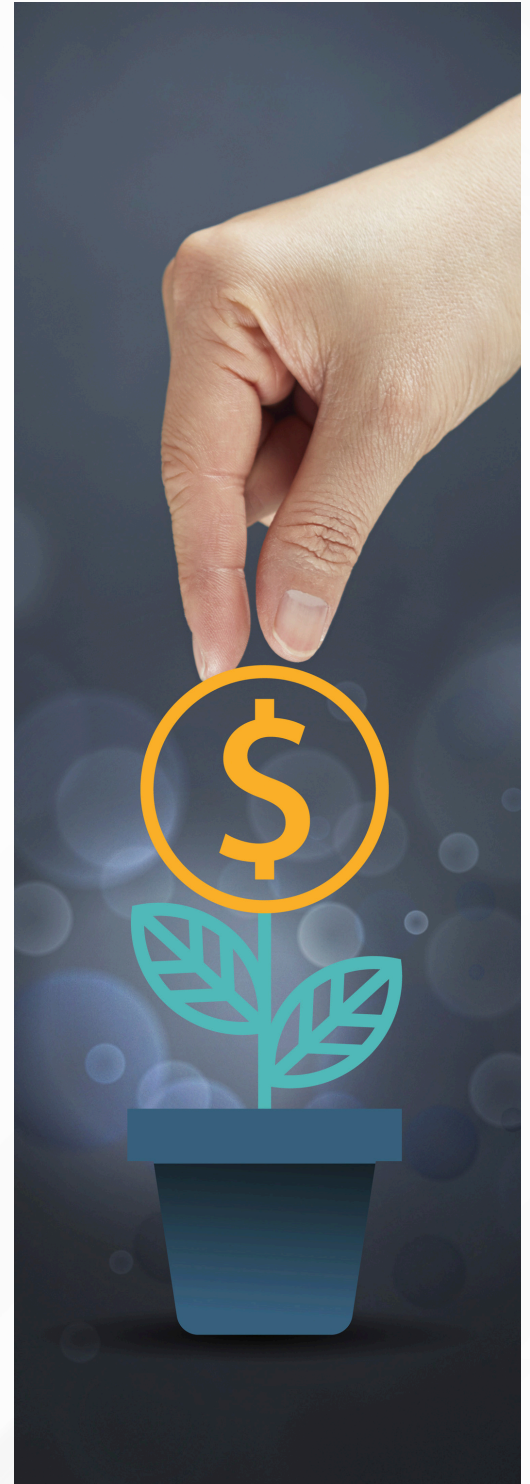
- Semantic Layer

This feature auto classifies data according to business glossary definitions enhanced with AI to accurately identify critical data elements and standardize application of data quality rules. This feature utilizes supervised learning algorithms and trainable classifiers to automatically categorize data based on established criteria. Leveraging these advanced techniques ensures data integrity and reduces the need for manual oversight, continuously improving its accuracy and adaptability through ongoing training and learning.

## ENHANCED BUSINESS GOVERNANCE

- Customizable Governance Views

Create tailored data views for different business units, ensuring each team has access to the most relevant and organized data. This improves efficiency and ensures compliance with internal and external regulations.



# Conclusion

Investing in data quality and observability is crucial not just to avoid data issues, but to empower your team with reliable, high-quality data that drives better business decisions. By leveraging metrics like DIDT and DIRT, and utilizing advanced features from DQLabs, data teams can effectively measure and communicate the ROI of their data quality improvement programs. This helps secure the support needed to maintain and scale operations. Understanding and mitigating the impact of data downtime is essential to drive leadership support, and for making informed investments in data quality improvement programs.







# About

DQLabs is a Modern Data Quality Platform that enables organizations to observe, measure, discover, and remediate the data that matters. With an automation-first approach and self-learning capabilities, the DQLabs platform harnesses the combined power of Data Observability, Data Quality, and Data Discovery to enable data producers, consumers, and leaders to turn data into action faster, easier, and more collaboratively.

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## Observe – Measure – Discover – Remediate with DQLabs

Let one of our experts show you the combined power of **Data Observability**, **Data Quality**, and **Data Discovery** to get you AI ready.

[Request a Demo](#)

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