

# MATURITY MODEL-BASED DATA GOVERNANCE FOR A MAJOR INVESTMENT BANK

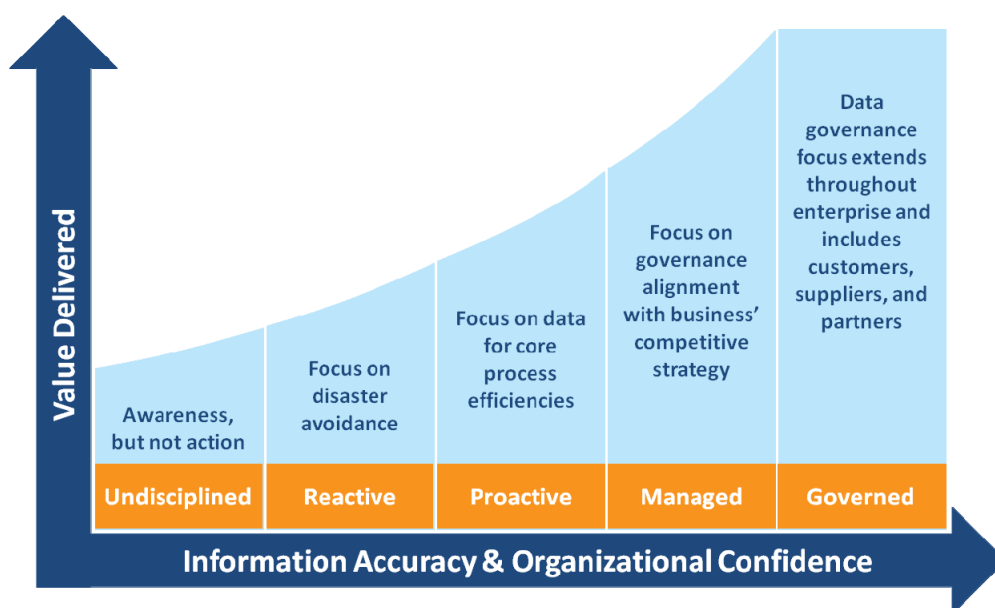
## Business Challenge

Our client, a major investment bank, was “Reactive” in managing data quality. As shown in Figure 1, “Reactive” is a dangerously immature governance level for a data-driven enterprise, such as our client’s research organization.

Senior management had a “feeling” that despite a critical reliance on clean, high-quality data, their processes were not “up to par” and any governance efforts that existed were “scattered.” Unfortunately, senior management lacked concrete recognition of the breadth or depth of data-quality problems. Moreover, they had no mandate for an organized approach to identify the root causes of low-quality data. Consistent with “Reactive” maturity, the client’s data professionals addressed problems only upon discovery—not via overall examination and ongoing, continuous, and managed review processes.

Events came to a head when government regulators discovered irregularities in our client’s reporting. Facing the likelihood of costly fines and sanctions as well as damage to industry reputation, our client’s senior management called Luxoft Consulting Strategies for help.

**Figure 1**  
Data  
Governance  
Maturity Levels



## Solution

Our client had come under regulatory scrutiny and faced grave consequences from immediate and present failings in obtaining and handling data used for research purposes. Luxoft acted swiftly to learn which processes were flawed, assess the nature of the issues found, prioritize a set of immediate-relief and longer-term activities, and present a plan for immediate implementation as well as a roadmap to future problem avoidance.

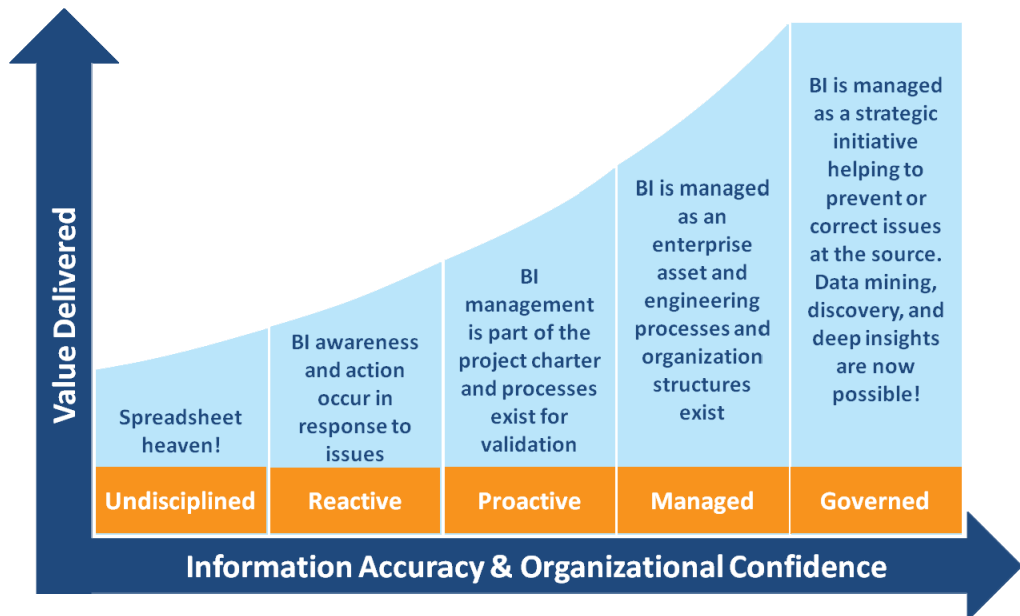
We performed our work using a two-phase approach, beginning with Discovery and Assessment of the current situation, and ending with Recommendations for Immediate Situational Relief, which included creation of a Roadmap for Data Governance and Quality Process Maturity Enhancement.

### Discovery and Assessment

We began by performing an assessment of relevant business processes involved in obtaining original source data. We learned that much of the data came to our client in the form of spreadsheets and emails, which were later transcribed into forms that were more useful. This meant significant teams of people were directly involved in manual processes, including “repair” of poor feed data. In parallel with business process analysis, we performed an Information Environment Assessment, a Data Quality Assessment, and a Visualization Transparency Assessment.

From these efforts, we discovered there was no data lineage or Business Intelligence (BI) processes to validate data quality by supplier. The table dumps in use for this purpose placed our client at the “Undisciplined – Spreadsheet Heaven” level (see Figure 2).

**Figure 2**  
Business Intelligence Maturity Levels



Furthermore, because data quality depended on widespread manual validation and correction of data rather than on repair at the data originator's site, many validations that depended on an individual employee's validation skills were no longer performed. In the recent economic downturn, the relevant individuals were no longer at the firm. Emails containing flawed source data attachments were simply "forwarded" to other "fixers," often not competent to perform validation and correction. Further, we discovered large time delays in data propagation to ultimate users. Data release cycles to researchers were occurring monthly, instead of daily, owing to the failure of manual validation and repair mechanisms.

### **Immediate Situational Relief and Roadmap to Maturity Enhancement**

We compiled, organized, and presented client senior management with assessment results, proactive recommendations for immediate situational improvement, and a roadmap for Data Governance maturity enhancement. For example, and to their dismay, senior management learned that five times more people were touching data than anyone was aware. We developed and shared a forward-looking Data Governance and Quality vision. Regulatory pressure required a movement to Managed Data Governance (the highest level on our maturity model), or our client could not satisfy government regulators. We prioritized and presented the Key Practice Areas (KPA) in which our client must succeed, along with prescriptive plans to improve in each area. Finally, we provided a Data Quality Aggregate Scoring model, and provided requisite Quality Visibility with a BI dashboard. As the direct result, senior management would be able to preventatively see and act to ensure high-quality data.

## **Results**

Luxoft persuaded the business to take ownership of their data. Client data consumers in their research organization required an automated data-validation system. We designed and developed that system. The client had to move from reviewing a snapshot of "today's data feeds" to reviewing data lineage on a quality-control basis. We provided mentorship and guidance on moving to a data lineage model. Data lineage-based quality control both improves data quality and clarifies how prior corrections and updates created today's data state.

We designed and built a Data Quality Aggregate Scoring Model and BI dashboard to visualize data quality on an up-to-date basis, and we socialized the use of this critical quality tool with senior management. We accelerated our client's move to increased BI maturity simply because their data could be validated and was visible to managers of the project. Our client's data owners now had total transparency of the data collection and validation process, data lineage, and data quality.

We improved our client's Return on Investment (ROI). All of the direct (three headcount) and indirect (25 headcount) individuals associated with manual data validation and



correction were relieved of their duties with respect to data validation. They were then available for partial or full reassignment. Our client avoided regulatory fines and avoided the shutdown bullet that would have killed their research organization. Our client's research arm also avoided reputational destruction of the type that follows a Wall St. Journal investigation. Ultimately, our client achieved a "Managed" Data Governance and BI maturity Final state. This entire collaborative effort took six months of calendar time.



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