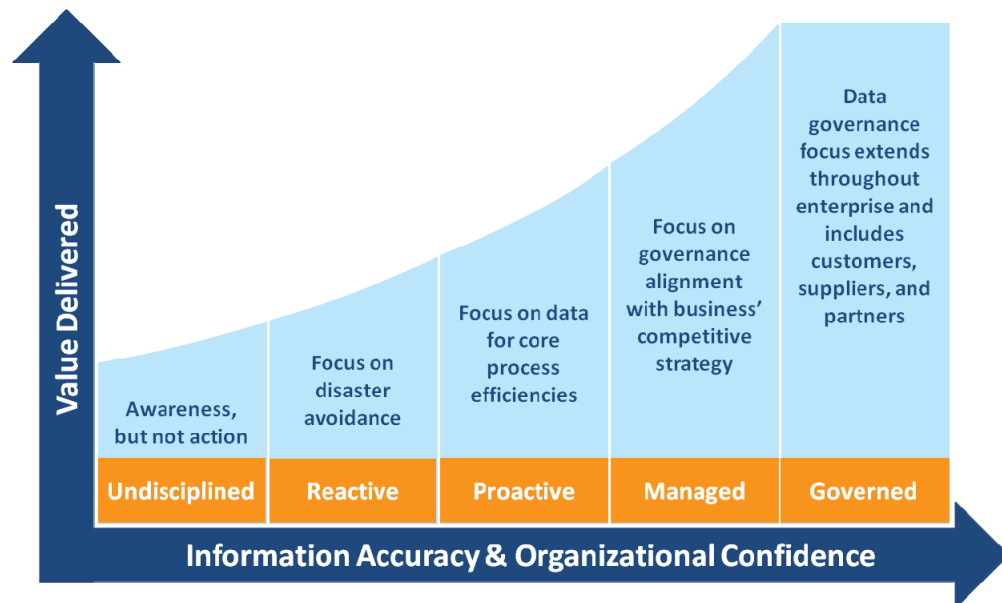


LUXOFT CONSULTING HELPS A HEDGE FUND TO ACHIEVE DATA GOVERNANCE AND BUSINESS INTELLIGENCE MATURITY

Business Challenge

Our client, a data-dependent Hedge Fund, was operating somewhere between the immature “Undisciplined” and “Reactive” levels of Data Governance Maturity (see Figure 1) when managing their Reference and Pricing Data. Not surprisingly, their costly and complex quantitative models were not performing as expected. The client stated, “We might have bad data, so tell us what’s going on.” We assessed their data governance, quality, and data management practices, determined the root causes of their quantitative model performance failures, provided a roadmap for enhanced data process maturity, and helped the client execute that roadmap.

Figure 1
Data Governance Maturity Levels



Solution

Our assessment process began with a review of the client's stated problem: Their quantitative model results were inconsistent with their significant investment in those models. The models were not making money for our client, and that was a problem. The client had already checked the formulae, but had not checked the quality and consistency of the data feeds on which the models depended. Luxoft discovered there was no single source of pricing uniformly used within the organization.

For example, the Accounting group used one market price for IBM shares, the Quantitative Analysis team another, while Investor Relations used a third.

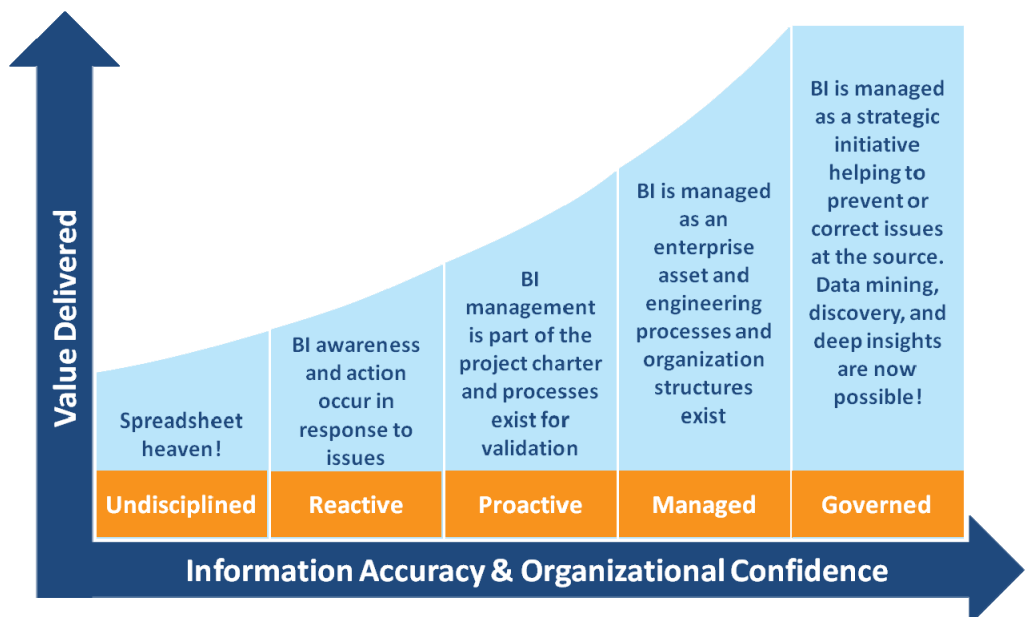
We reviewed the business practices for handling data feeds, considering who handled each feed, how the feed was obtained and validated, in what type of information environments the feed was processed, and what type of permanent storage the feed received. We also profiled each feed’s data quality, examining consistency, availability, depth, completeness, and recency.

After reviewing our findings, we determined that the client’s Data Governance maturity was slightly better than “Undisciplined,” but had not reached “Reactive.” We learned that even when the client detected data anomalies, they did not apply corrections to the bad data.

We found their Business Intelligence (BI) Maturity to be “Proactive” (see Figure 2). The client was very proactive on slice and dice, with solid quantitative models, but the models were operating on junk data.

We also found that the client’s Information Management and Storage environment suffered from underinvestment. The huge investment on the BI side delivered no or negative returns because the data and operational environment were all wrong. Consequently, the client’s entire three-year investment and effort in BI was in jeopardy. In a common example, bad pricing meant traders went home at night believing they had a positive profit and loss (P&L) and returned the next morning to find they had a negative P&L, with no warning or opportunity to adjust positions overnight. As the result, our client faced a huge opportunity cost as well as actual trading losses.

Figure 2
Business Intelligence Maturity Levels



Our ultimate goal was to move the client to a “Managed” maturity level for data governance, but they struggled to reach the “Reactive” level. Part of our solution comprised reviewing and changing unsatisfactory data vendors, when they could not fix their feed problems at the source. A much bigger part of our solution was changing our client’s operating philosophy. They operated in a “just in time” pricing refresh mode and built their historical pricing information episodically. Selectively pulling prices builds erratic historical information with inconsistent pricing timeframes. We discovered large gaps in pricing information. The client suffered both horizontal gaps of missing information in time series, and vertical gaps of missing data attributes, frequently retrieving only 30-40% of their desired attribute set. Beyond these issues, they had no validation rule set for their data. Instead, they loaded their pricing, in whatever state of completeness and correctness, into their database. We took the following corrective actions to dramatically improve our client’s processes and quantitative model performance:

Luxoft addressed underinvestment in their physical data management environment.

The client’s disaster recovery and high-availability environments were undersized and could not respond in an overload or a disaster. Our capacity tests revealed the inadequacies. The as-is production environment was nearly saturated at 89% capacity, when a 45% capacity utilization would have been safe. Accordingly, we upgraded the underlying database software, upgraded the physical server and data distribution environment, and migrated from SQL server 2000 to 2005 to remain within the product support window.

Luxoft addressed the client’s data vendor problem. We changed vendors, monitored and reported to vendors on feed-quality lapses, and moved to a bulk download of pricing for a consistent price image. The client abandoned their “just in time” price-refreshment model. We avoided scaling problems associated with bulk operations as software and hardware upgrades took care of the additional loading.

Luxoft addressed the absent internal data validation problem. Now, the client certified all inbound data by comparing feeds against one another, comparing new data against trends to identify outliers, and through use of other quality and sanity tests. We reported lapses to vendors and insisted that they implemented their own quality improvements.

Results

The client’s quantitative models now point at single source of certified information for reliable reporting and results. Their costly quantitative models are making money for them and are now conforming to their expectation of results. P&L and Positions are now accurate, with less unexpected overnight movement. Losses receive prompt action, and wins remain wins.

The client’s Investor Relations team is now able to respond to investor queries in an intelligent and consistent manner. From a trading perspective, the P&L and Risk

Management are now accurate, and business remains in control. The client is able to stay on top of Capital, Control, Capacity, and Compliance, while finally enjoying rising profits. While the effort took 18 months for a team of experts, the client achieved the results they had intended with their quantitative models, reduced their operating risks, and improved client relations, while achieving “Managed” maturity in both Data Governance and Business Intelligence.



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