FLYING PHASE

Optimizing Critical Business Processes Through Emerging Technology

CAPABILITIES COVERED

Data Engineering
Cloud Migration
Digital Process Automation
Model Implementation
Model Governance
SOX Compliance

FEATURED CONSULTANTS

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THE SITUATION

A TOP 10 BANK'S credit loss forecasting infrastructure was cumbersome and outdated. The modeling process provided limited insight to a portfolio comprising tens of billions in assets, running on legacy modeling tools and manual processes. It took 11 analysts almost four months to generate a quarterly forecast, and the process, which was subject to regulatory scrutiny, was complex and inadequately governed, limiting the bank's ability to grow.

CHALLENGE

Establish a best-in-class loss estimation system by redefining data, process and analytical approaches to generate rapid, well-managed forecasts with immediate insights.

We proposed a cloud-based infrastructure that could provide unlimited computing and data storage.

OUR APPROACH

We began by collaborating with all stakeholders to understand the business outcomes and review data, models and procedures. Leveraging this knowledge, we mapped the full of data preparation steps, assumptions and models.

To more deeply define the problem, we conducted empathy interviews with analysts and business leaders, and helped them define the underlying problems. We shadowed analysts performing the loss-estimation cycle, further shaping and defining process documentation. From that exercise, we were able to pinpoint key frustrations and aspirational objectives from the analyst community.

We designed and implemented a flexible and robust cloud-based infrastructure that could provide unlimited computing and data storage to enable deeper insights. In order to fulfill on compliance obligations, we re-imagined the existing SOX control framework to be applied to all subsequent cloud-based forecasting processes.

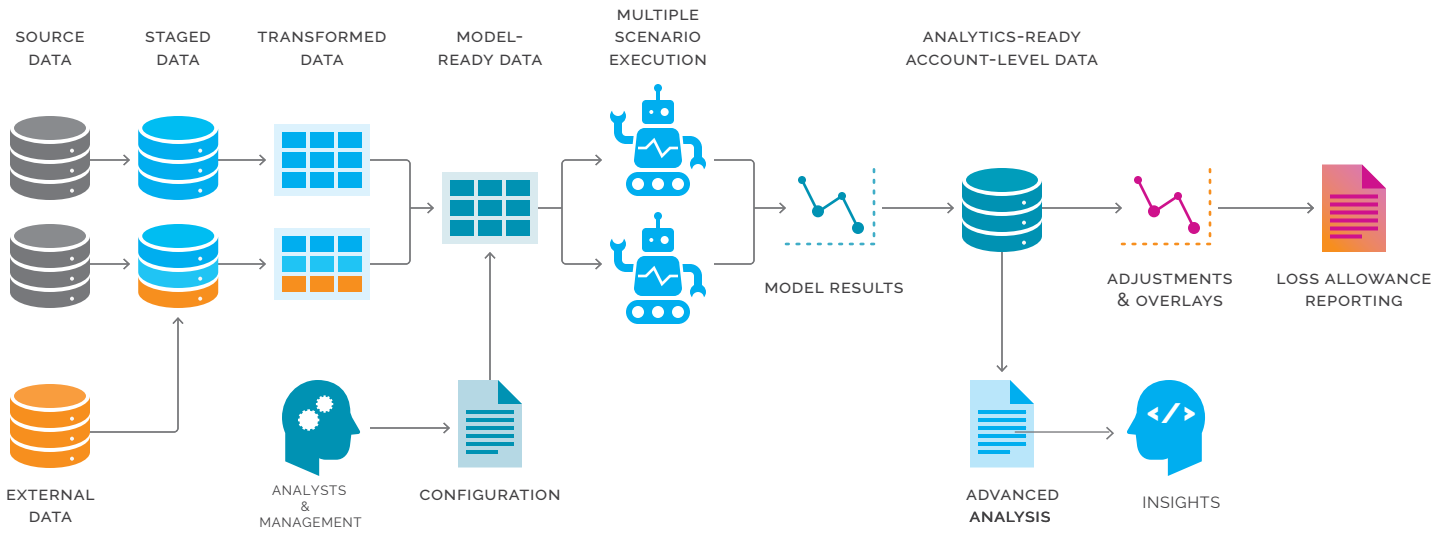

FIGURE 1: *Data flow from source to loss allowance and reporting*

MEASURABLE RESULTS

- **Delivered the first open-source, cloud-based product** for loss estimation in the enterprise.
- Condensed more than **20 different processes and methods with 40 inputs from various formats** and granularity into a single system.
- **Created end-to-end process automation** that significantly reduced execution errors and improved the accuracy of business metrics.
- Leveraged the power and efficiency of the cloud and modeling system to **decrease execution from three weeks to two hours.**
- **Enabled same-day loss attribution analysis** through redesigned outputs designed for analytics and insights.
- **Provided loan level visibility** into results, which was not computationally possible in the legacy environment.

OUR APPROACH *(continued from pg. 2)*

With the architecture finalized and approved, we developed an open-source application to enable configuration-driven deployment. A pre-processing component created an intermediate data layer to streamline, stage and validate data and abstract the process from upstream data changes.

Next, we optimized the model code to run in open-source. The model execution component used the staged data to score the data for the post-processing components, including result aggregation and allowance calculations. Along the way, we led model validation and SOX teams to ensure that the entire system satisfied model governance and financial reporting standards.

Leveraging a nimble and transparent Agile approach and partnering closely with the model owner allowed for continuous reevaluation of critical priorities while providing incremental value with every iteration to arrive at a robust solution in only months.

	LEGACY, ON-PREM APPLICATION	CLOUD-BASED, OPEN-SOURCE APPLICATION
COST	Significant licensing costs for server and databases	Open-source software is free; compute and storage costs are pay-per-use
TIME TO EXECUTE	2-3 weeks	Less than 2 hours
CHANGE MANAGEMENT	Intent changes took six months	Less than three weeks (including all third-line validation)