

Case study

# Standard Chartered Bank enhances ML modeling and analytics with Fosfor

Operationalizing ML at scale helped the global banking giant  
improve the efficiency of their ML-powered risk analytics

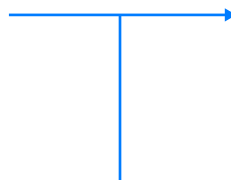
# An overview

Discover how Fosfor helped Standard Chartered Bank



## Go from attempting to organize

Management of multiple unorganized models was time-consuming and required massive effort to be done manually.



## To productivity

3x faster automated and organized ML lifecycle to boost productivity and accelerate ML model delivery and management

## Using the Fosfor Decision Cloud

Fosfor automated model monitoring and execution with a fast, frugal, and flexible ML platform

# The results

**4x**

improvement in end-to-end process efficiency

**30%**

saving in TCO using open-source ML technologies

**60%**

reduction in processing time for model monitoring

**25%**

reduction in timelines for Technical Design Document (TDD) and Tech Validation Report (TVR) documentation

**30%**

reduction in effort for Enterprise Risk Analytics and Group Model Validation

# Challenges

## Efficiently managing multiple machine learning models to ensure their accuracy

As banks increasingly embrace technology and data to enhance capabilities, they've also expanded the use of machine learning (ML) across their organizations. Large financial institutions implement hundreds of ML models to help make important processes such as loan approvals and customer relationship management fast and efficient. Adopting ML-led risk management practices also help banks stay compliant with regulations and more focused on improving the customer's overall banking experience. The challenge now lies in ensuring all the models run as expected. The performance of ML models can diminish over time and become less accurate. This can ultimately lead to revenue loss, regulatory risks, and many other challenges. ML models need periodic checks to ensure that the output continues to help the organization take better action.



Standard Chartered Bank had deployed multiple ML models but struggled to derive value from the system due to many roadblocks:



## Legacy stack

Standard Chartered Bank faced a longer time-to-market due to its fragmented legacy ML stack. The stack consisted of standard software components, leading to a higher total cost of ownership (TCO) and limited scalability. Moreover, the architecture was rigid and did not allow for much collaboration between model developers, validators, and the model monitoring team, making the ML model development process inefficient.

---



## Model monitoring

The bank needed heavy manpower to manage multiple models. Regular maintenance and updates help keep the models accurate, reliable, and aligned with changing circumstances. However, the 350 data scientists who monitored these models worked independently without central governance. Their reports were not standardized, leading to inconsistent results and unreliable insights.

---



## Manual processes

The bank's data scientists manually generated all their reports. This left their reports open to errors without the proper checks to ensure accuracy. Their tasks also became repetitive, hampering productivity by taking up time they could have spent on other work.

# Solution

---

## Automated model management with the Fosfor Decision Cloud

Standard Chartered Bank needed a solution that would operationalize their ML initiatives at scale and help them:

- Monitor a large number of models in a central place to ensure they run smoothly and efficiently
- Reduce the time taken to run the models
- Automate ML lifecycle management to reduce manual dependencies
- Bring in an environment of standardization, collaboration and governance of ML model analytics

Using Refract, the Fosfor Insight Designer, allowed the bank to address all of these challenges. It helps businesses prepare, build, train, and deploy ML models efficiently and cost-effectively. The Insight Designer enables organizations to scale ML concepts as required using a personalized build-to-run workflow.



# How the Insight Designer works

Fosfor leveraged the Insight Designer to address data science and ML engineering-related challenges. This went a long way in effectively monitoring and managing their Internal Ratings-Based (IRB) and International Financial Reporting Standard (IFRS) 9 models.



## The Fosfor Decision Cloud allowed Standard Chartered Bank to:

- Centralize code versions for models using an integration with CI/CD tools for standardization
- Implement a single entry point for models with country-specific and risk-based rerouting for efficiency
- Automated model monitoring and consolidation on a single platform to reduce dependency on manual execution
- Schedule reports to ensure timelines and compliance with regulatory requirements
- Deploy models across countries 24x7 using the Insight Designer's Model-as-a-Service feature to manage risk in real-time
- Establish an intuitive no-code GUI interface to enable better collaboration between users

## The impact

---

### Operationalizing ML at scale for wider benefits

**4x**

improvement in end-to-end process efficiency

**30%**

saving in TCO using open-source ML technologies

**60%**

reduction in processing time for model monitoring

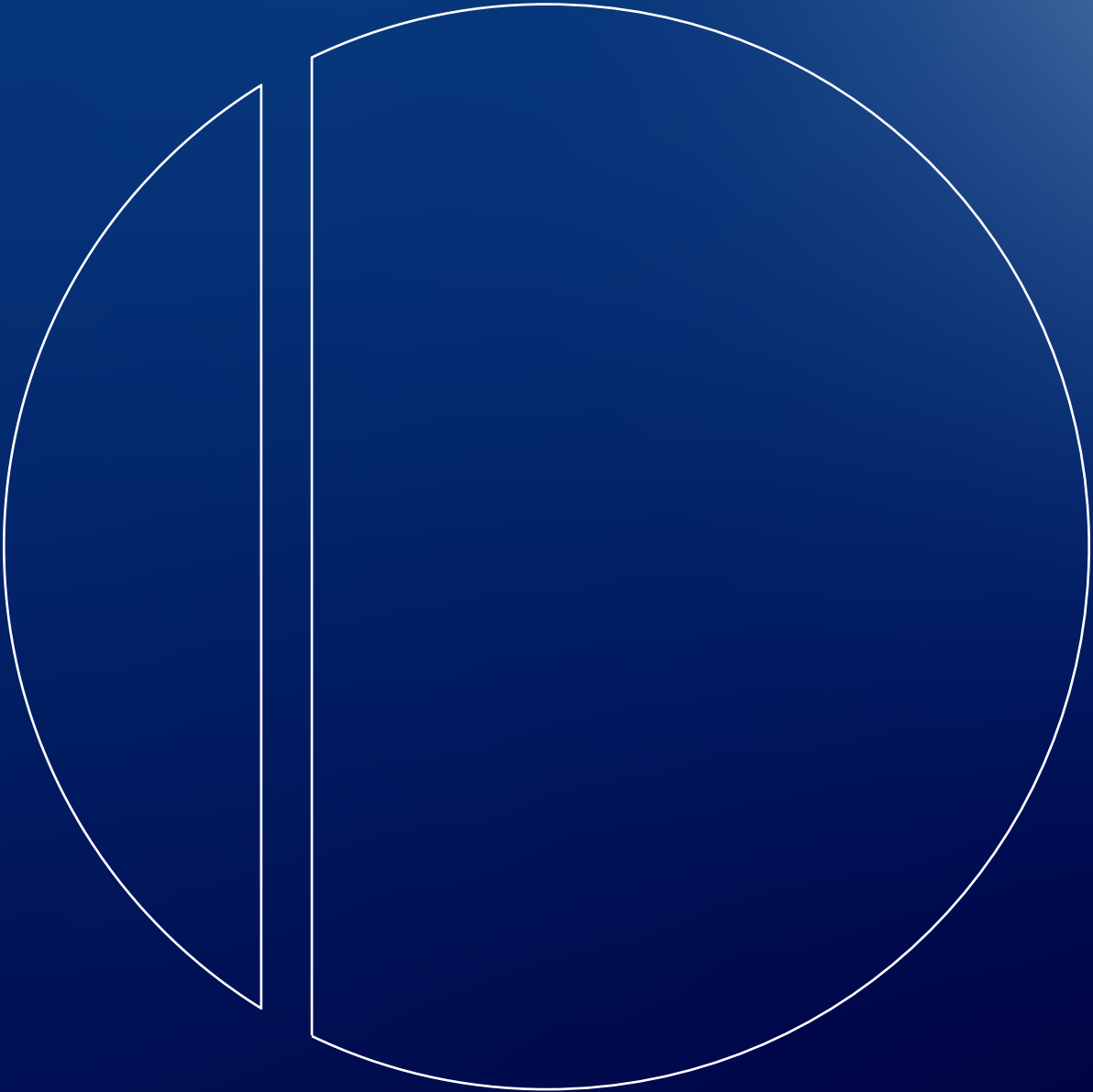
**25%**

reduction in timelines for Technical Design Document (TDD) and Tech Validation Report (TVR) documentation

**30%**

reduction in effort for Enterprise Risk Analytics and Group Model Validation

Automating the entire model monitoring and execution process with the Fosfor Decision Cloud helped Standard Chartered Bank streamline ML building processes and seamlessly scale its ML investments across regions. It also ensured that its enterprise risk management ML modeling and analytics platform performed robustly and delivered consistent ROI despite changing market conditions and technology advancements.



The Fosfor Decision Cloud is a connected fabric that unifies and amplifies the value promised by the modern data ecosystem, which is made up of infrastructure, data, and application clouds. Fosfor enables organizations to effectively curate data, generate impactful insights, and formulate effective decisions to deliver the long-sought promise of data and AI: optimal business outcomes. Fosfor is part of LTIMindtree, a global technology consulting and digital solutions company. For more information, visit [www.fosfor.com](http://www.fosfor.com).