

## platform x

# Model Risk Management

Monitro is a comprehensive Model Risk Management (MRM) platform where all the steps in a model's lifecycle are properly defined, allocated to specific owners, monitored, documented, and traced for validation.



Standardization and automation of model validation & monitoring process



Seamless tracking of model performance over time



Assuring independence of model validation from model development processes



Internalizing model validation function with lesser costs and with limited skillsets

Through its easily customizable and flexible multi-layered architecture, it assures the independence of model validation from model development and generates automated reports.



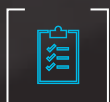
# Focus Areas

Financial Institutions have started automating routine tasks and eliminate inefficiency, but higher-order and expensive analytical processes requiring intelligence and human decision-making are not automated at all. Presently, analytical processes are highly inefficient, largely manual, resulting in increased cost of operations operations, quality, and scalability challenges.



## Regulatory Compliance

With increasing regulatory requirements Banks are exposed to accounting credit impairment reporting (IFRS 9/CECL), evolving stress testing programs that affect capital planning, and new regulatory compliances such as Basel III and IV all require comprehensive model validation.



## Quick Compute & Smart Reporting

How can Banks reduce turnaround time of computations to produce all analyses at the start of each business day for better informed decision making and automate production of management decks thereby avoiding repeated manual work.



## Integrated Governance

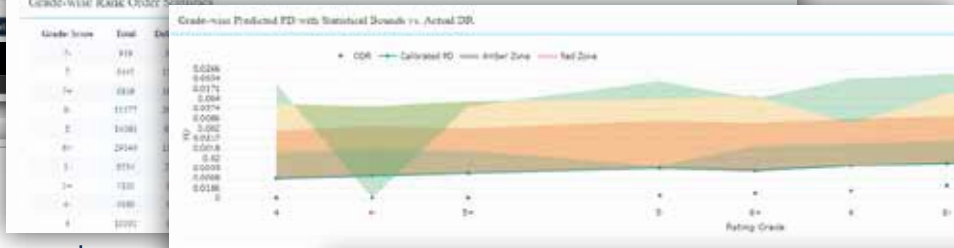
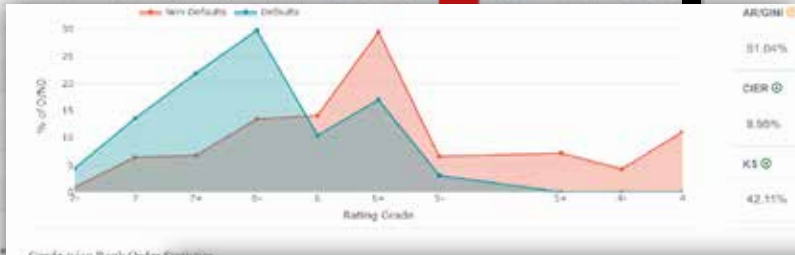
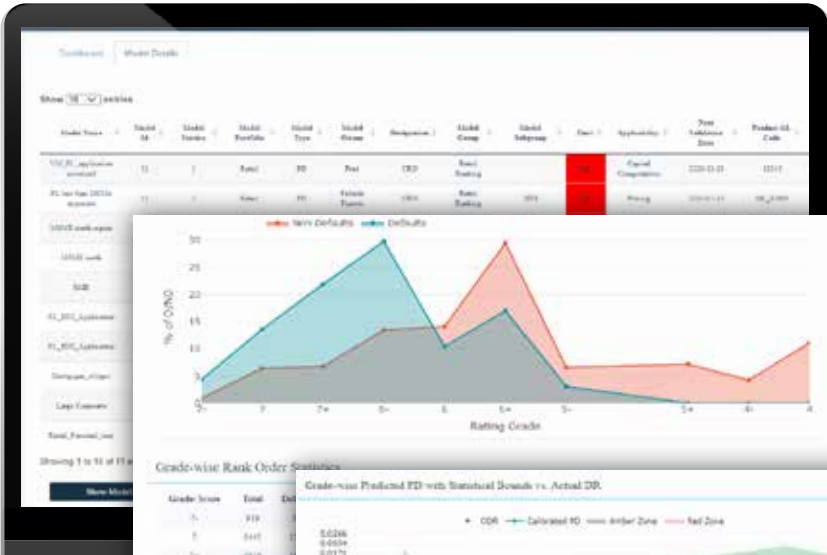
Managing the model risk and governance challenge posed due to a highly fragmented data, number of models ranging from dozen to hundreds, and lack of appropriate solution.



## Advanced Analytics

Ability to optimize model performance and enhance underlying data quality with the use of advanced AI/ML algorithms.

# Solution Snapshots



Model Inventory

Model Validation Tests

Data Insights

Home

Module

- Model Inventory
- Data Wrangling
- Anomaly Detection
- PD Validation
- IFRS Validation
- Qualitative Validation
- IFRS Builder
- Challenger Models

Framework & Tools

- Configure
- Data Lineage
- Data Preparation
- Reports Download

User and System Admin

- User Management

# Key Solution

## Features

With Monitro, you can understand and control model risk by creating a fully integrated model risk life cycle. Now you can **manage, document, validate**, monitor models to **support** internal decision-making processes.

It uses Artificial Intelligence (AI) and Machine Learning (ML) to automatically generate model validation and model monitoring reports that can be shared with internal and external stakeholders.

### 1. Model Inventory and Tiering

- Monitro is designed to manage the entire model inventory and perform intelligent tiering required for validation rigor.
- Model inventory captures each model's information and provides the user with the relevant set of information to track the entire lifecycle of the model and potential areas of intervention.
- Model Inventory captures information of all model attributes such as status, development date, modifications log, current phase in the model lifecycle, etc.

### 2. Data Insights

- Exploratory data analysis, anomaly detection, and data impute algorithms enabled on the platform help understand data, its anomalous or missing values and enhance the data.
- Flexible integration with internal/ external data sources.
- Generate various alerts for poor data quality and missing data attributes.



### 3. Management Dashboard

- A comprehensive and completely customizable dashboard providing key insights to the model risk management team and senior management.
- Tracking model performances, key actions, controls effectiveness, and overall model lifecycle with the help of powerful graphical representations and drill-down capabilities.

### 4. Validation & Monitoring

- Comprehensive coverage of model performance evaluation tests for discriminatory power, rank-ordering, calibration, benchmarking, and stability of classification & regression models.
- Independently review and validate all models to support existing supervisory guidance and business requirements.

### 5. Documentation and Reporting

- Natural language processing enabled automated reports generated in custom templates for analysts, senior management, and regulators to reduce regulatory risks against inconsistent or inadequate reports.

The graphical user interface is powered to deliver the ability to customize and host multiple report formats as per the requirement.



# Key Solution Features



## 6. Challenger Benchmarks

- Ease of creation of challenger models using AutoML feature that automatically builds challenger models using various Machine Learning capabilities such as random forest, boosting, elasticnet, deep learning as well as automated model ensembling and hyperparameter tuning.

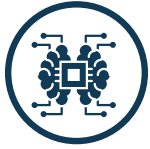
## 7. Flexible Workflow Designer

- Activities are designed via drag and drop interface, wherein user can define, for each model, the appropriate processes via a set of steps to be executed and their sequences.

Adapt and implement policies to accommodate changing requirements on model development, validation, implementation, monitoring, and change management.

Define the expected timeline in the process execution including the support of Scheduler, Reminder, Alerts, and Task Notifications.

# Technical Features



**Powered with AI/ML -**  
with robotic process automation, data wrangling, and anomaly detection capabilities the platform reduces time and cost footprint of analytical tasks, realizing efficiency & explainability gains



**Comprehensive & Adaptable Data Model -**  
Having been designed on a unified ERM data model, platform delivers multiple applications leveraging cross-functional data dimensions which are extendable to meet ever-changing requirements



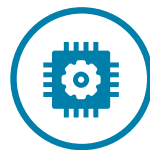
**Advanced Metadata -**  
technology allows for rapid changes to the methodology, automatically traces versions, compares, and details of all results



**Dynamic Dashboard & Workflows -**  
Powered by dynamic and responsive dashboard and workflow design capabilities



**Low Code -**  
Platform framework creates new computation sequences, models and result datasets without coding



**New Age Technology -**  
engineered for dynamic, responsive in-memory computations at extreme scale enabling what-if analysis and rapid exploration of alternatives



**Flexible Deployment -**  
Built for on-premise as well as Cloud-based deployment and concurrent, interactive work-group

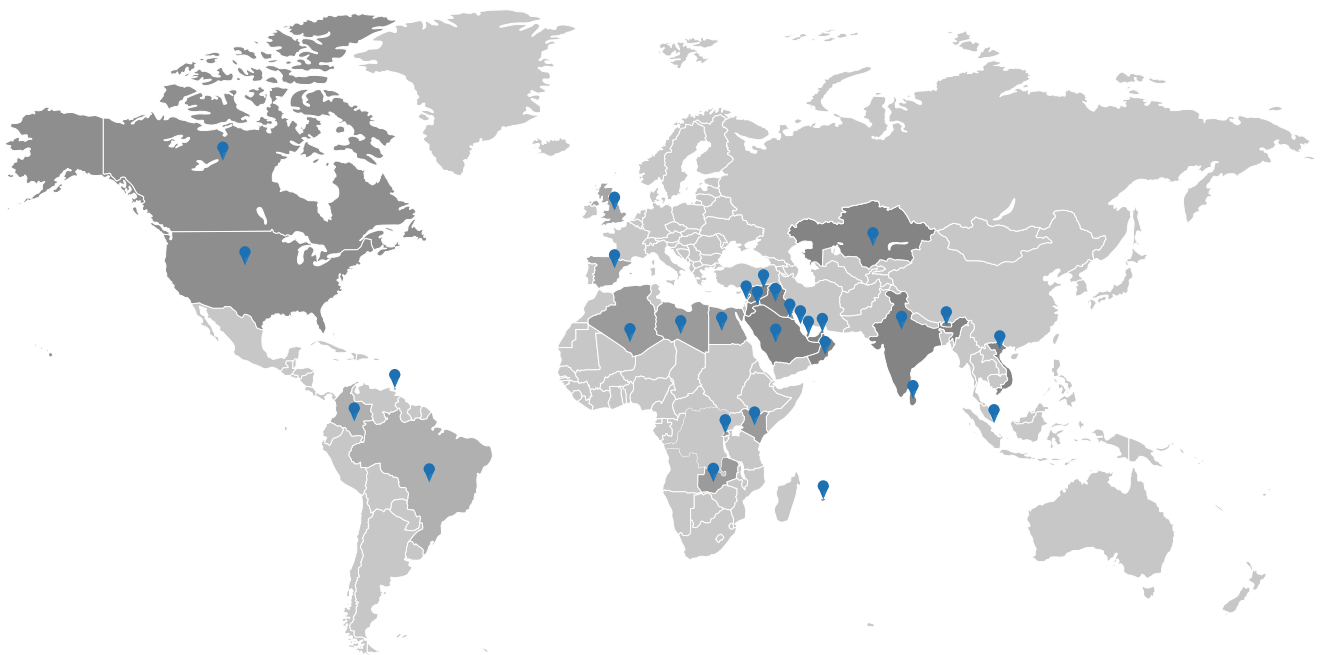


**State-of-art User Experience -**  
The graphical user interface and experience is architected to mitigate the change management process and reduce dependency on additional resources

# About Us

Financial Institutions have started automating routine tasks and eliminate inefficiency, but higher order and expensive Analytical Processes requiring intelligence and human decision-making are not automated. Generic automation platforms would not be able to handle Analytical Processes that require deep-domain knowledge.

CogNext, incubated by Aptivaa, intelligently incorporates cognitive technologies such as AI-ML and NLP into robotic process automation. Combined with our domain knowledge, CogNext brings Automation at Scale for Financial Institutions, thus assisting the knowledge worker by removing repetitive, replicable and routine analytical tasks.



 **100<sup>+</sup>**  
Clients

 **30<sup>+</sup>**  
Countries

 **15<sup>+</sup>** Yrs  
Experience

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