

SAS® Viya®

Get more done with a faster, more productive AI and analytics platform



Overview

Organizations face increasing demands for high-powered analytics that produce fast, trustworthy results. Whether it's providing teams of data scientists with advanced machine learning capabilities or delivering mobile applications that give decision makers real-time answers, several things are critical to meeting your organization's analytical needs:

- Super-fast processing for large-scale data manipulation, exploration, advanced analytics and artificial intelligence (AI).
- Analytical assets that can be easily managed, maintained and governed.
- Scalable, dynamic and optimized analytics processing in any environment.
- Customizable access to the entire analytics life cycle – from data to discovery to deployment.
- Orchestration of all analytics activities to help ensure tangible results.
- A comprehensive suite of analytics for any data of any size and for any user.

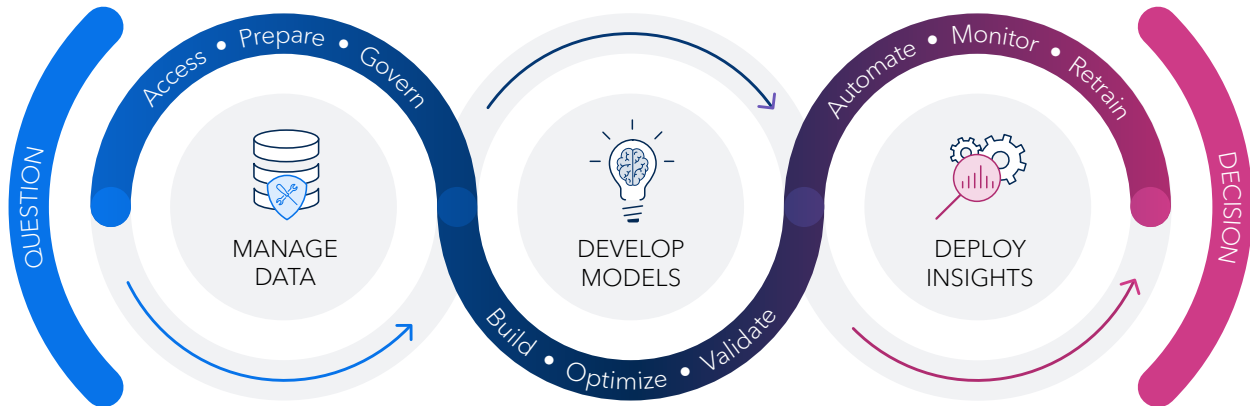
Challenges

Some of the common analytical challenges or obstacles that must be overcome to maximize your chances of success include:

- **Computational issues with big data.** Data sets continue to grow, and problems get more complex every day. You need a way to prepare and analyze diverse data, improve performance and get fast answers to any analytical question.
- **Pressure to provide scalable solutions within constrained budgets and rising cloud costs.** IT organizations with unlimited budgets for technologies just don't exist. Does an affordable, agile enterprise architecture exist that can keep pace with user demands?
- **Ever-changing everything.** With constantly evolving business requirements and an onslaught of emerging technologies, how do you determine the best long-term solution that can adjust to your changing needs?
- **Lack of analytical governance.** Open source technologies are dispersed, need customized support and often aren't integrated. This lack of control over data and analytics heightens risks associated with maintenance, hidden costs, governance and compliance.
- **Difficulty managing portfolios of diverse technologies.** Multiple tools are used for managing data and applications across organizations. As a result, it's hard to trace data lineage and know which version of a model is in use, whether it reflects current deployments and if it's being refreshed as needed.
- **Suboptimal technologies impede decision making.** Slow tools and technology silos make it impossible to consistently discover insights and move from innovation to operations in a timely manner.

Digital business demands a comprehensive data and analytics platform

SAS Viya is a cloud-enabled, in-memory analytics engine that provides quick, accurate and reliable analytical insights. Viya makes it possible to integrate teams and technology, enabling all users to work together successfully. AI-based automation aligns to the needs and talents of your team, connecting all aspects of the analytics life cycle and helping turn critical questions into trusted decisions.



Our data management capabilities let you access and integrate data from virtually any source. A suggestion engine simplifies data prep. And data governance tracks data and model lineage, so if your data changes, you'll know which models need retraining.

Our AI solutions include comprehensive, intuitive machine learning tools with automated feature engineering, providing you with intelligent recommendations for faster, smarter decision making.

Deploy complex analytics projects into production and keep them there. SAS can help you automate tasks, govern decisions and deploy every type of model quickly.

Our capabilities

Innovate faster

The automation capabilities of Viya enable:

- Seamless processes and integrations across the entire analytics life cycle that increase productivity and accelerate time to value.
- AI-driven automation across data wrangling, exploration and ModelOps.
- AutoML to accelerate model development and deployment - no recoding necessary.
- Faster time to optimal results.

Elevate everyone

You control access and integration with:

- A shared space where all user types - data scientists, business analysts and IT - work together.
- User preference to code or drag and drop to create best-in-class AI models your way.
- The language of your choice and open data formats on one platform.
- Access across a wide range of disciplines, experts can use and combine a variety of techniques, from statistics to computer vision, on one platform.

Results you trust

Accountability is crucial. With Viya, you can:

- Enable governance through automated data and model lineage and robust model management.
- Use embedded model interpretability, fairness and bias monitoring.
- Automatically generate repeatable explanations of data and models in simple language.

Analytics you need, delivered on your terms

SAS provides the flexibility you require:

- From individuals to large enterprises, anyone can access powerful analytics at the click of a button, anytime.
- Quickly access powerful machine learning when needed for specific short-term projects and use cases.
- Cloud-native and cloud-agnostic with complete portability across on-premises, hybrid or multi-cloud environments.
- Execute analytics however you choose - using APIs in a containerized or self-managed infrastructure.

Benefits

For end users

If you are a SAS Viya end user, here's how it can help you:

- **Provide data and analytics access for everyone.** Help ensure that everyone can make faster, better decisions.
- **Move quickly from start to finish - without the hurdles.** Viya includes end-to-end capabilities that unify disparate technologies, people and processes.
- **More easily embed open source models.** The ability to add open source models into your workflow expands opportunities for collaboration.
- **Make transparent and explainable decisions.** Being able to show your work builds trust.
- **Use proven AI that delivers results.** Viya helps you discover new opportunities.

For IT

If you are managing the SAS Viya environment, Viya can help you:

- **Put AI and analytics into production quickly.** Seize opportunities before the competition.
- **Provide governance that equals trust.** Viya includes data and analytic governance to ensure trustworthy decisions.
- **Balance costs and agility.** With a cloud-native platform, your organization can run more efficiently and smoothly.
- **Use your tech stack more effectively.** Call SAS using APIs to interoperate with other world-class technologies to maximize all your IT investments.
- **Take advantage of built-in automation.** Strengthen your operations and reduce labor-intensive jobs.

SAS Viya foundational offerings

The SAS Viya platform offers packaged solutions for every data and analytics need and for every use case. Choose the offering – SAS Viya, SAS Viya Advanced, SAS Viya Enterprise or SAS Viya Programming – that meets your requirements now, with a path to the future in a single, expandable environment.

CAPABILITIES	SAS® Viya®	SAS® Viya® Advanced	SAS® Viya® Enterprise	SAS® Viya® Programming*
Data access, data preparation, data quality and information cataloging	✓	✓	✓	✓
Advanced flow steps and information governance	✓	✓	✓	
Visualization and reporting	✓	✓	✓	✓
Conversational AI and chatbots	✓	✓	✓	✓
Statistics	✓	✓	✓	✓
Matrix programming		✓	✓	✓
Machine learning and deep learning	✓	✓	✓	✓
Model deployment and management	✓	✓	✓	
Forecasting		✓	✓	✓
Text analytics		✓	✓	✓
Optimization		✓	✓	✓
Econometrics		✓	✓	✓
Digital decisioning			✓	
Event streaming analytics			✓	

*Programmatic interface only; no visual interface

To learn more about SAS® Viya®, please visit us at sas.com/viya.

And to see who's working smarter with SAS Viya, please visit [SAS customers](#).

