



Making AI real,  
From the lab to the real world



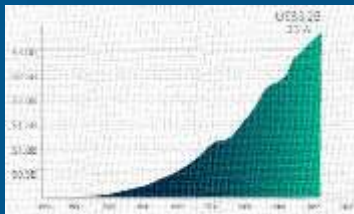
# 43

Years of  
 BUSINESS ANALYTICS ANALYTICS

# #1

World's  
LARGEST  
privately held  
software company

32% market-share for Advanced and Predictive Analytics Software



## US \$ 3.2 b

Continuous Revenue Growth since 1976

# 14,000

SAS employees worldwide



TOP

World's Best  
Multinational  
Workplaces list



# 94%

Annual customer retention rate. Local Rate at 99.8%

# 93

of the top  
100  
on the companies

## FORTUNE

GLOBAL 500 LIST



# 26%

Annual reinvestment in  
R&D

# 80,000+

Customer sites in 140 countries



Leader in Business Analytics Software

“ *Only* **8%**

*of companies effectively scale  
their analytic initiatives.* ”

McKinsey May 2018

*WHY IS IT SO DIFFICULT?*

# Why is Deployment Important ?



## Movie Rating Prediction Model

NETFLIX

- 2006 – Announced \$1M prize to whomever improved the accuracy by 10%
- 2009 – Prize won by 7-person team
- Winning model never implemented

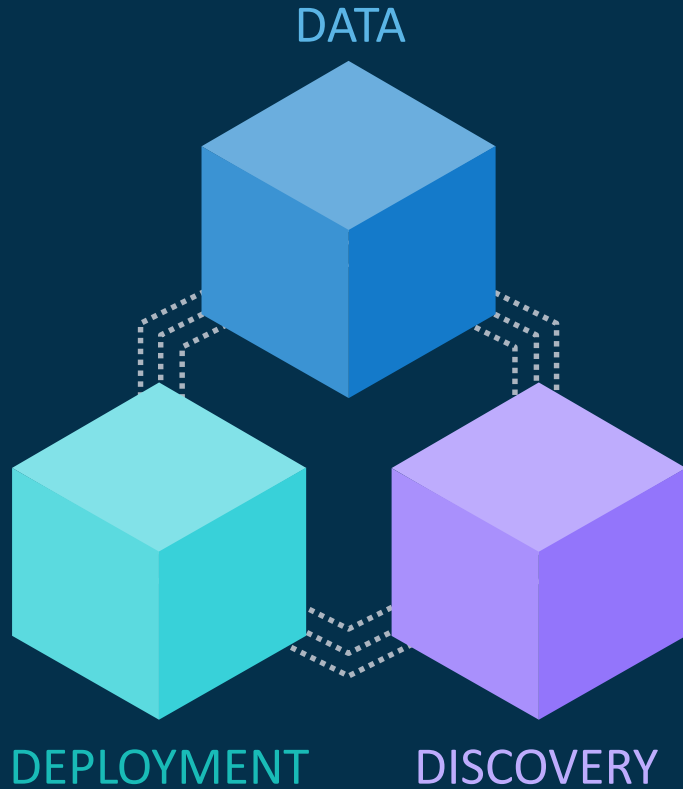
*“We evaluated some of the new methods offline but the additional accuracy gains that we measured did not seem to justify the engineering effort needed to bring them into a production environment.”*

Source: <https://medium.com/netflix-techblog/netflix-recommendations-beyond-the-5-stars-part-1-55838468f429>





WANTED, A LEADER! - THE LABOR-AGITATION ORCHESTRA ON THE GO-AS-YOU-PLEASE PLAN.

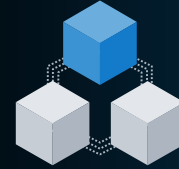


# ACCELERATE

## The Analytics Life Cycle



# Accelerate the Analytics Life Cycle



# DATA



Streamlining  
data  
provisioning



Confidence in  
the Data



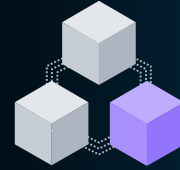
Accessibility &  
Collaboration



Transparency &  
Lineage



Accelerate the Analytics Life Cycle



# DISCOVERY

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Breadth & depth  
of analytics



Programming-  
language  
flexibility



Analytics  
accessible to  
everyone

Accelerate the Analytics Life Cycle



# DEPLOYMENT

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Model  
management



Faster &  
easier model  
deployment



Ability to build  
once and deploy  
anywhere

### Source-based Engines

#### In-Stream



#### In-Hadoop



#### In-Database

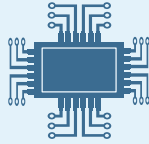


Parallel & Serial, Pub / Sub,  
Web Services, MQs

Data Enablement

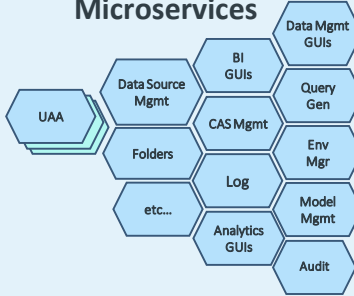
# SAS® Viya™

## In-Memory Runtime Engine



## Cloud Analytics Services (CAS)

## Microservices



IT Enablement

Solutions

## Solutions Enablement



APIs

## Developer Enablement



Cloud Enablement

## Platform



Azure



vmware

ORACLE  
CLOUD

## European Banking and Insurance Group



### Key Challenges

- Sought to be a leader in customer digital experiences amid increasing competition around digital transformation.
- The business community lacked access to data and self-service capabilities to prepare and enrich data, resulting in late and even non-existence delivery of required insights to steer their digital initiatives.

### How SAS® supported the process



#### Expected Results

- Increased efficiency and accuracy of its entire analytical life cycle.
- Greater business insights, reduced data silos, integration with open source and compliance with regulatory requirements.
- A single platform to manage the scale and diversity of its data.
- Improved customer satisfaction provided by the ability to deliver the right message to the right people at the right time and through the right channel.

Powered by  
The SAS® Platform

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## Volvo Trucks and Mack Trucks

Volvo Trucks and Mack Trucks are both subsidiaries of the Swedish Manufacturer AB Volvo.



### Key Challenges

- Enhance remote diagnostics and monitoring of critical engine, transmission and after-treatment trouble codes.
- Minimize unplanned downtime - which creates a tremendous toll on fleet operators and their customers who depend on timely deliveries.
- Improve vehicle efficiency and uptime to keep trucks running - or ensure the least disturbance to the business if something happens on the road.

### How SAS® supported the process



#### Results

- 175,000 trucks are supported with remote diagnostics.
- Millions of records are processed instantaneously - reducing diagnostic time by 70% and repair time 25%.
- Thousands of events on each truck cabinet streaming out, stream in real time to provide the context needed for more efficient diagnosis.
- SAS enables Volvo and Mack to maximize uptime, optimize and reduce the costs of operation for operators by detecting connected vehicles more efficiently, accurately and proactively.
- Able to help operators recover from problems faster while preventing problems from arising in the first place.

Powered by  
SAS® Advanced Analytics and AI

"With SAS, we're working smarter - we're seeing things that exist in our information that we couldn't find before, so we can do things more efficiently and effectively, and drive better results for our customers." -David Hesse, VP of Connected Vehicles and Digital Services for Mack Trucks

"Our engineers can now see issues before they impact customer operations and change the truck's design, so we have the best product on the road." -Gael Lebel, Director of Connected Vehicle Services for Volvo Trucks North America

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## ATB Financial

Alberta Treasury Branches (ATB) is a financial institution and Crown corporation owned by the Province of Alberta. ATB operates in Alberta and provides financial services to over 740,000 Albertans and Alberta-based businesses.



### Key Challenges

- ATB Financial leadership sought to transform into a digital organization - to not only build new channels to reach customers but also communicate with their customers in their preferred channel.
- With disparate analytic tools and a fragmented analytic landscape, it needed a unified and agile end-to-end platform deployed in the cloud that would easily allow for new capabilities to be added.
- As the company moved to a data lake, ATB sought to minimize costly and inefficient data movement and replication.

### How SAS® supported the process



#### Results

- Now powered with a modernized and agile SAS Viya infrastructure in the Google Cloud, ATB will be able to quickly analyze big data to improve the customer experience and produce business value.
- With in-memory and in-database processing, ATB has cut processing time in half.
- All users regardless of coding language preference can visualize analytics.
- ATB has transformed into a digital enterprise that provides a top-notch customer experience.

Powered by  
SAS® Viya®

"We partnered with Google, Hortonworks (Databricks) and SAS to create a new adaptable data science platform. This platform delivered our programs by about 1 month (but the accelerator to the cloud has paid us almost a year ahead of schedule compared to what we would have been with IBM."

Mervin Van der Spuy  
CDO, ATB

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## Large US Health Care Group

### How SAS® supported the process



#### Expected Results

- With more robust capabilities at their fingertips, the analytical community can more effectively address the company's goal of increasing the quality of health care while lowering the overall cost.
- Reduced "question to answer" cycle time in a complex data landscape.
- Able to provide doctors with reports daily showing new insights that will inform better care.
- Analytic have advanced capabilities for the entire analytic life cycle: data extraction and transformation, analysis and modeling, and reporting and visualization.

Powered by  
SAS® Advanced Analytics



### Key Challenges

- Build a centrally-managed and highly-performant analytics infrastructure to support the use of analytics across the entire enterprise.
- Increase overall analytical output from a technology and personnel standpoint in a business environment where analytical resources are in-demand and very expensive.

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According to SciSports, Neymar is simply worth the €222 million

- *Giels Brouwer, Founder of SciSports*

The SAS logo is centered on a dark blue background. It features a stylized white 'S' symbol on the left, followed by the lowercase letters 'sas' in a white, sans-serif font. Small registered trademark symbols (®) are positioned below the 'S' and the final 's'.

# Key Take-Aways



## One Platform orchestrating the full analytics lifecycle

*Accelerate the analytic lifecycle, from Data to Insight to Decision to Value*



## Analytics for all

*Flexibility of programming languages + Visual Interfaces*

*Enabling collaboration between the business, the IT and the data scientists*



## Analytics operationalization

*Deploying analytics with the right balance of choice & control*



# Thank you

[sas.com](https://sas.com)