



Diana Maris

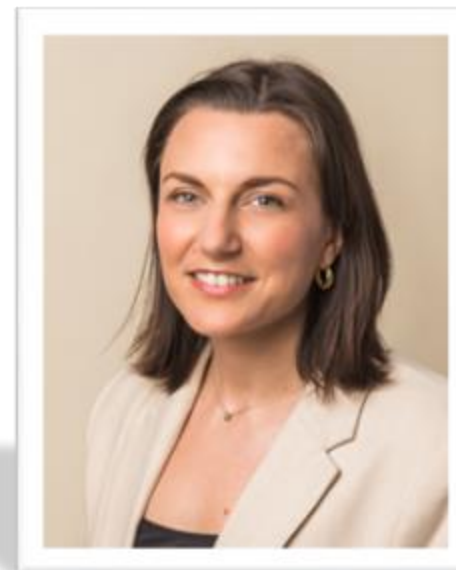
Getting Full Value Out of the AI & Analytics Lifecycle with SAS Intelligent Decisioning

Getting Full Value Out of the AI & Analytics Lifecycle with SAS Intelligent Decisioning

Diana Maris, Product Strategy

Diana Maris is a Product Manager in the Product Strategy Division at SAS, covering the SAS Intelligent Decisioning product – a leader in the Forrester Wave: AI Decisioning Platforms, Q2 2023.

Diana supports customers in getting the most value out of their investment in analytics, through defining and implementing decisioning processes that lead to actions in the moments that matter.



Organizations are **complex ecosystems** of decisions with **increasing levels of interconnectedness**



Augmented



Automated

Getting Value from Analytics

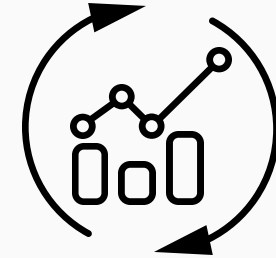


By **building ML into processes**, leading organizations are **increasing process efficiency by $\geq 30\%$** while also **increasing revenues by 5 to 10 %**. (McKinsey Global Survey, 2020)



On average, only **53%** of AI/ML projects are **eventually deployed**. (Gartner 2020)

Only **15%** of businesses' ML projects **ever succeed**. (Forbes, 2020)



We can activate the **value of analytics** with a **framework** to **integrate ML models** with **business rules** and **streamline** their deployment and management for **decisioning**.



To fully realize the benefits [of investing in analytics], organizations need to not only invest in capabilities, but also make insights effective.

“

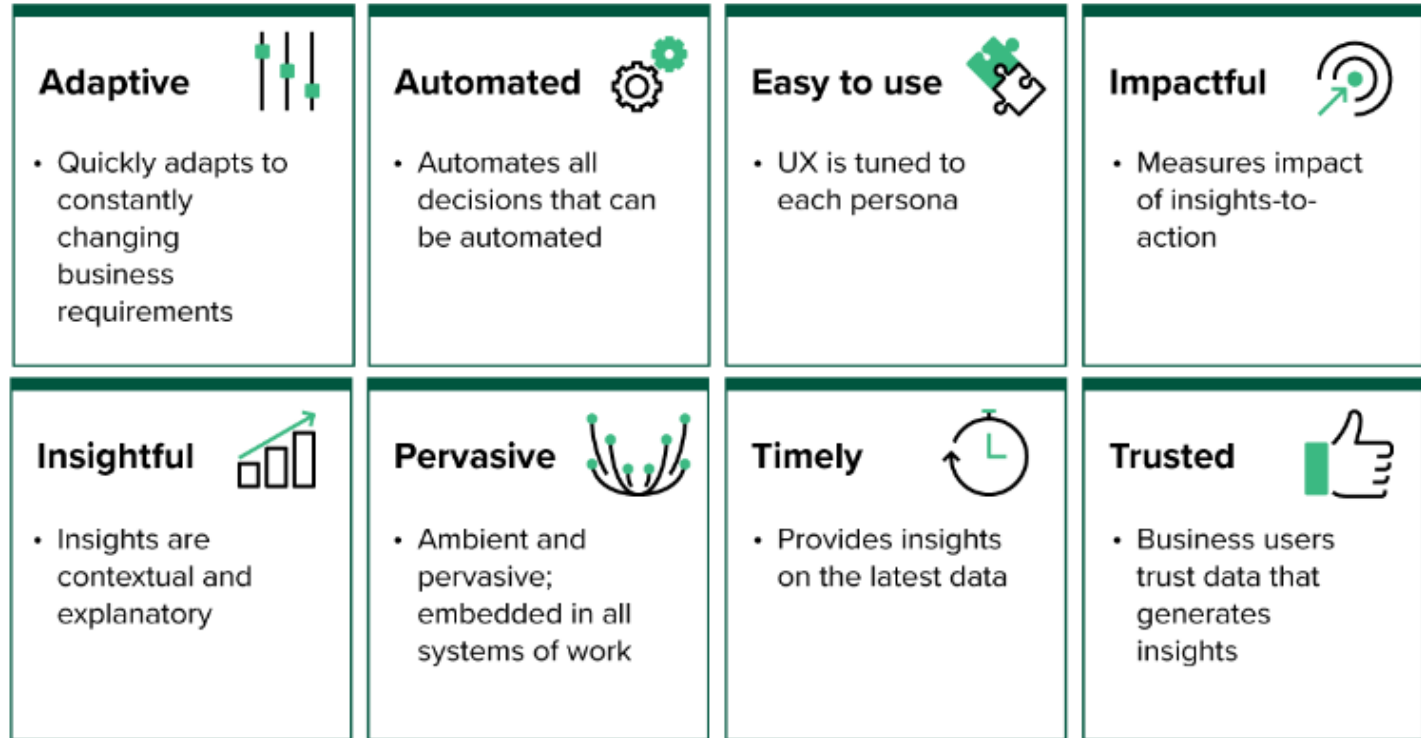
-- *Making Insights Effective Is A Differentiator For Insights-Driven Businesses*, Forrester Research, April 2023



65% companies with mature IDB (Insights-Driven Business) report increased revenue in the past year vs 54% of companies that are just getting started with IDB

8 Ways for Measuring Effectiveness

Effectiveness is the ability not just to produce insights, but to **deliver them pervasively** and in a way that they can be **easily acted upon**.



Source: *Making Insights Effective Is A Differentiator For Insights-Driven Businesses*, Forrester Research, April 2023.

What is SAS Intelligent Decisioning?



Insights-Driven



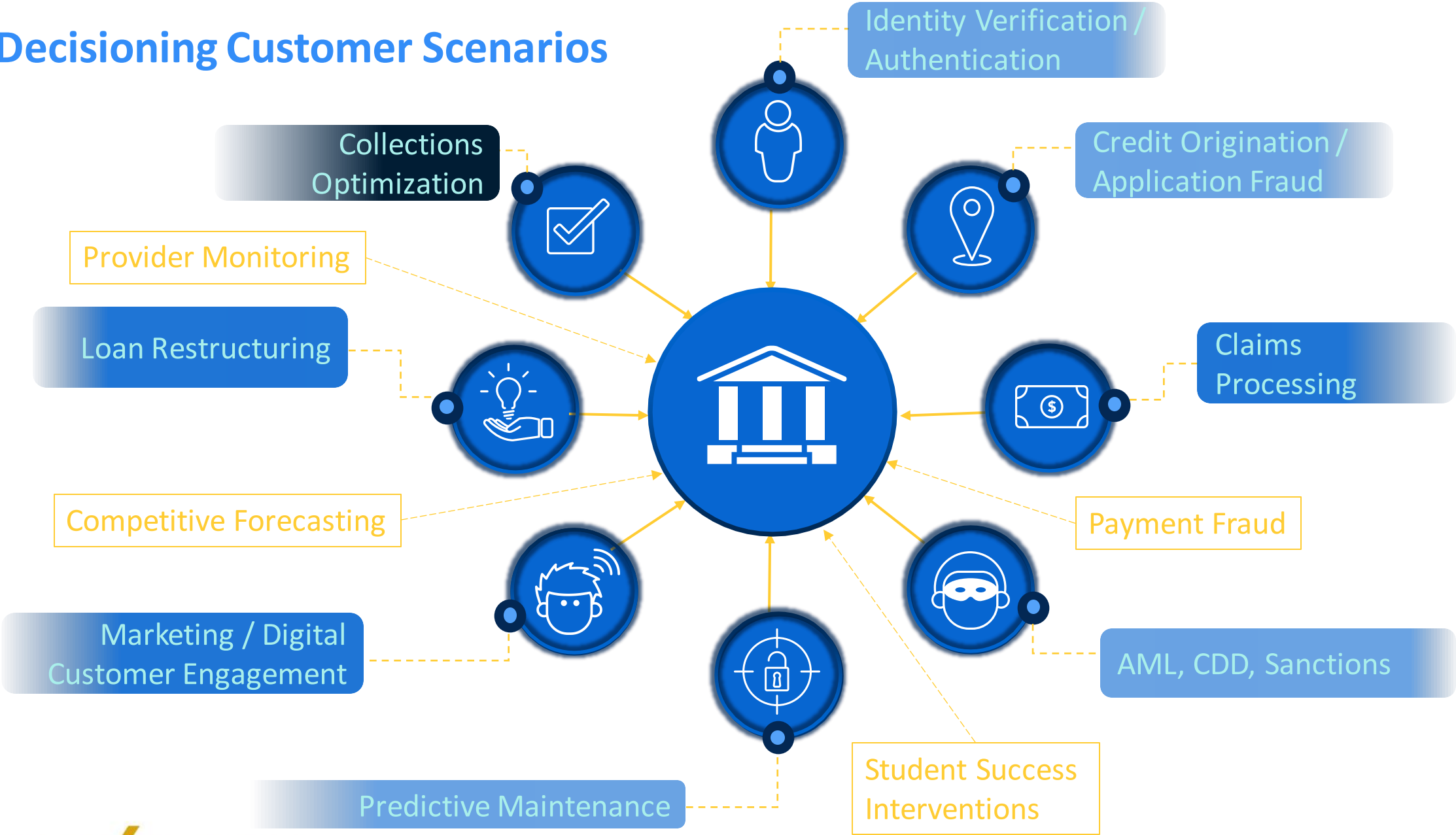
Tools and
Technologies

Business Rules
Machine Learning Models
(Domain Specific) Data



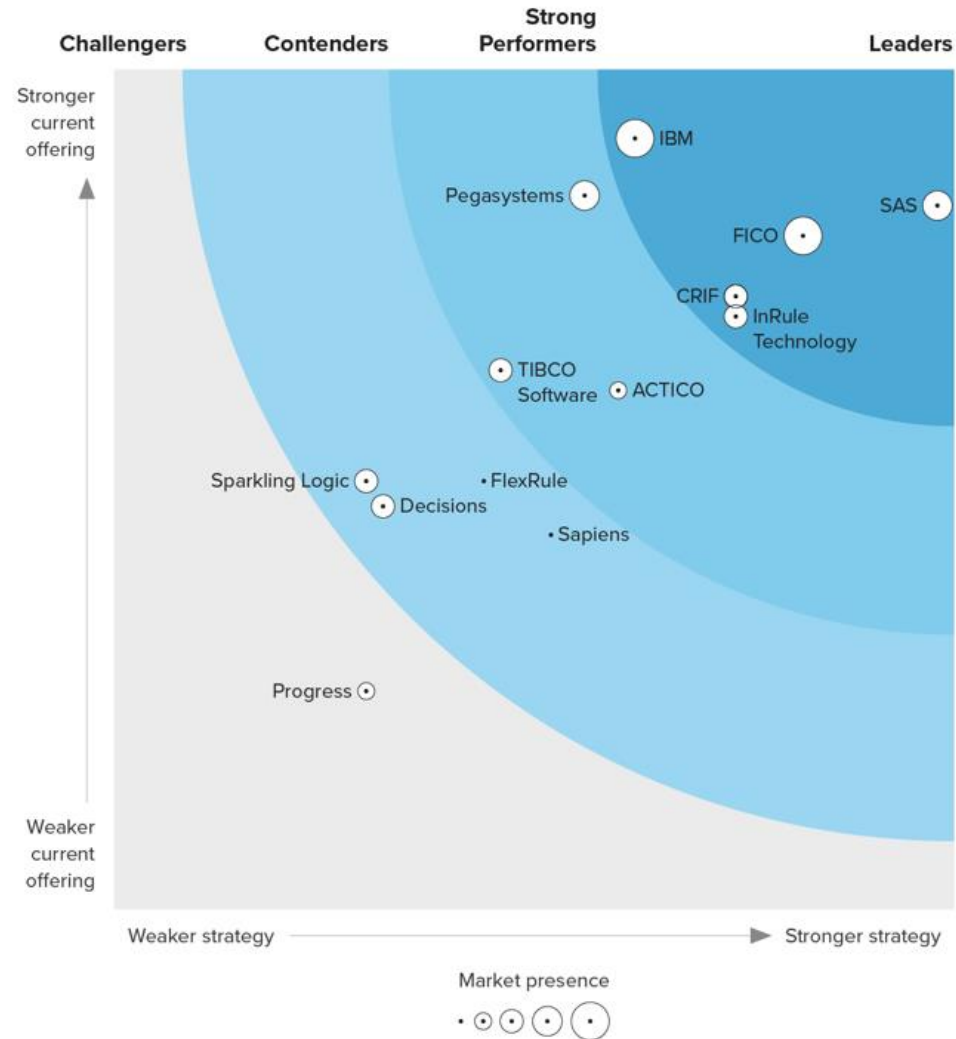
Actions for Improved Outcomes

Decisioning Customer Scenarios



SAS is a Leader in The Forrester Wave™

AI Decisioning Platforms, Q2 2023



FORRESTER®

The Forrester Wave™:
AI Decisioning Platforms, Q2 2023 ([link](#))

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SAS EXPLORE



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“SAS’s flagship Viya platform includes **beautifully designed interfaces** across the entire **data-to-decision lifecycle.**”

“SAS leverages its already formidable AI capabilities to offer enterprises sophisticated and **easy-to-use AI decisioning platforms.**”

“SAS has strengths in **comprehensive data capabilities, decision intelligence technologies, user experience, breadth of authoring tools, and ModelOps.**”

SAS **EXPLORE**

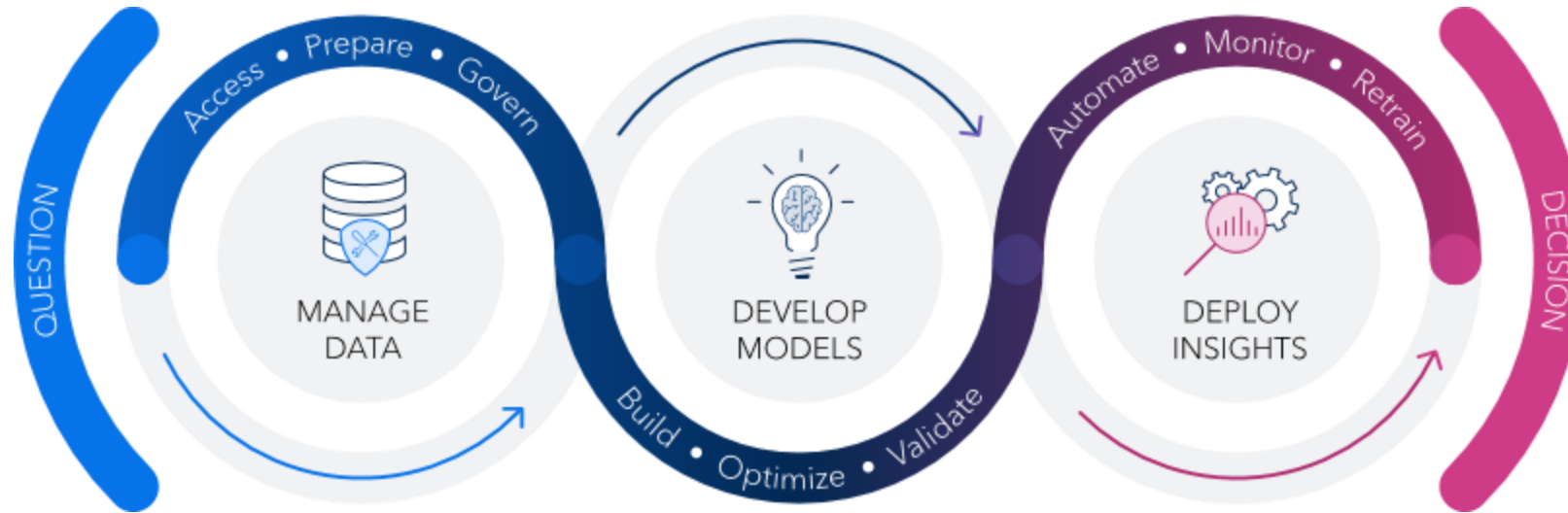


Decision Building Blocks

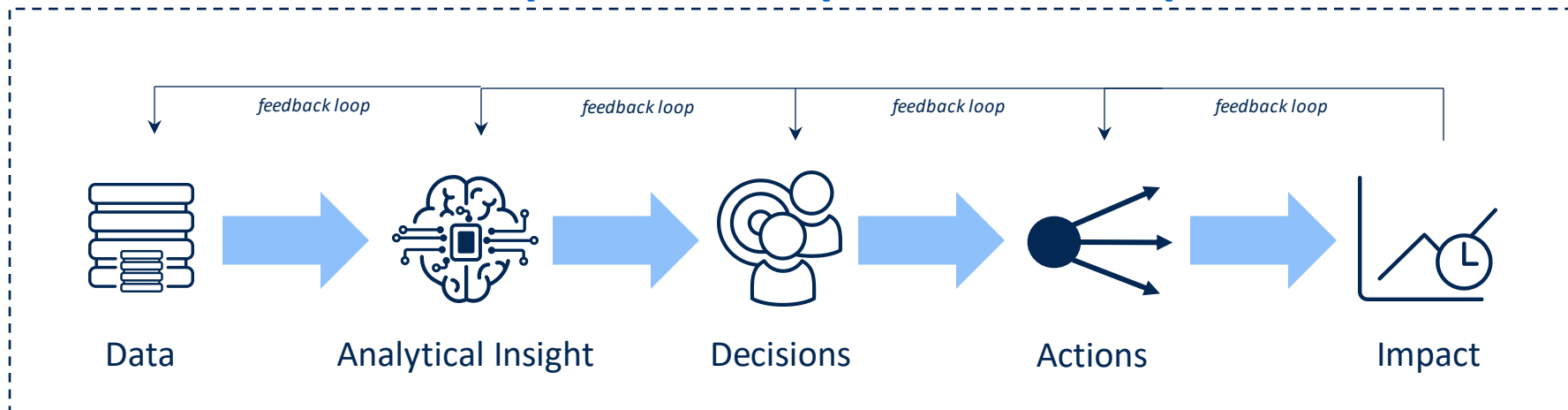
in SAS Intelligent Decisioning



Decisioning for the Entire AI & Analytics Lifecycle

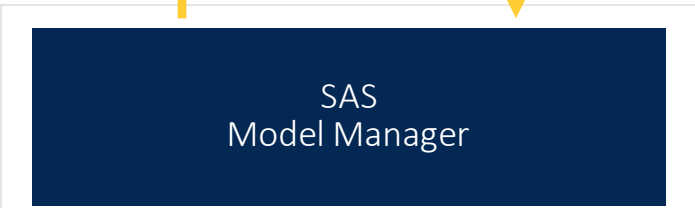
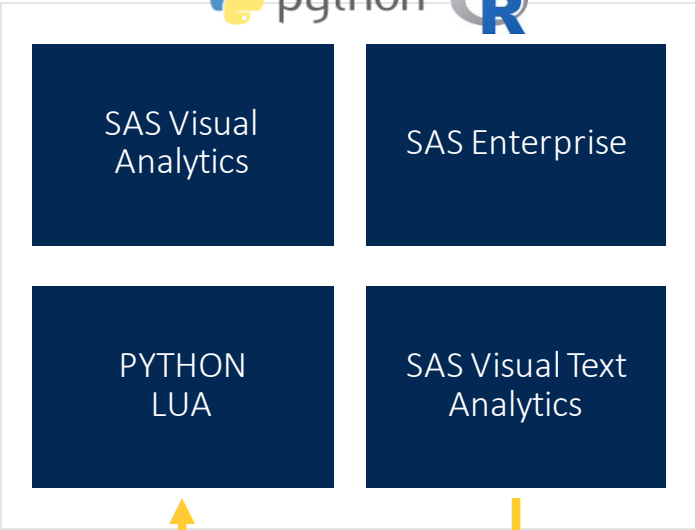


DataOps + ModelOps + DecisionOps



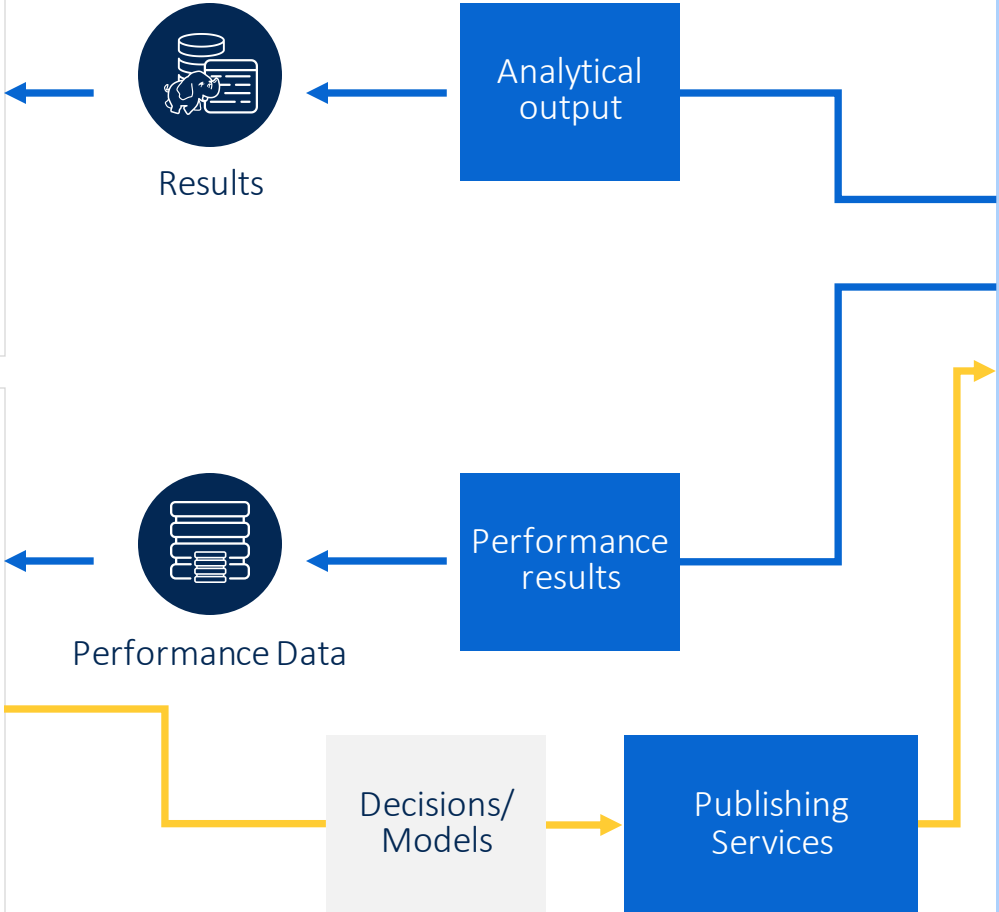


Analytic Model Development

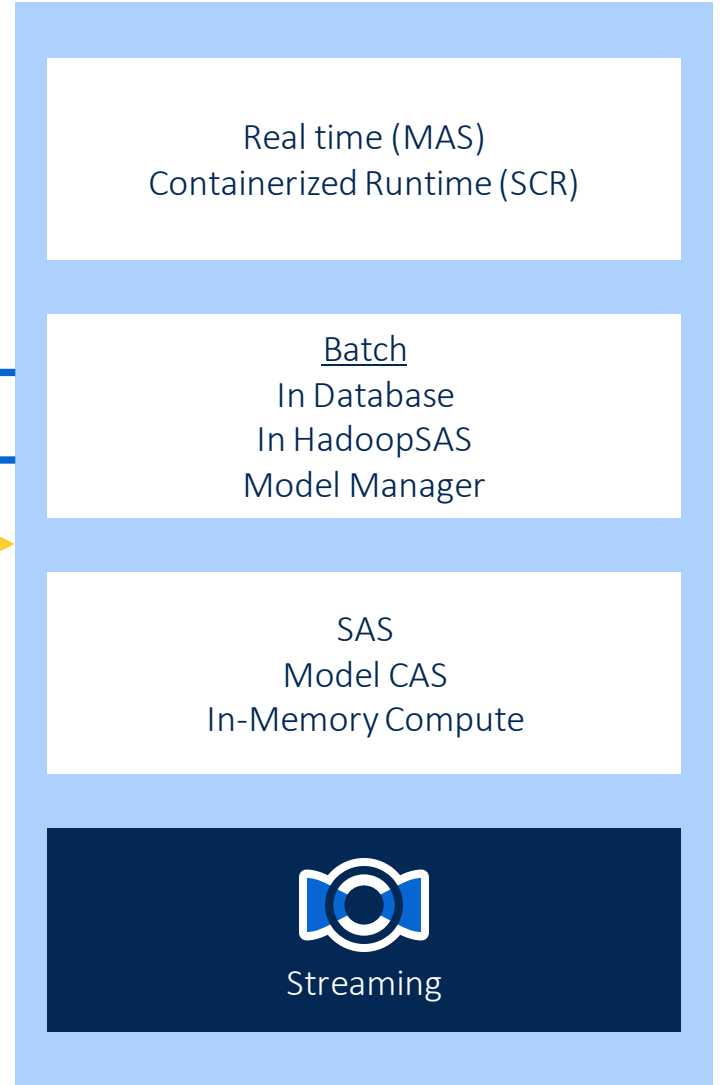


Intelligent Decisioning

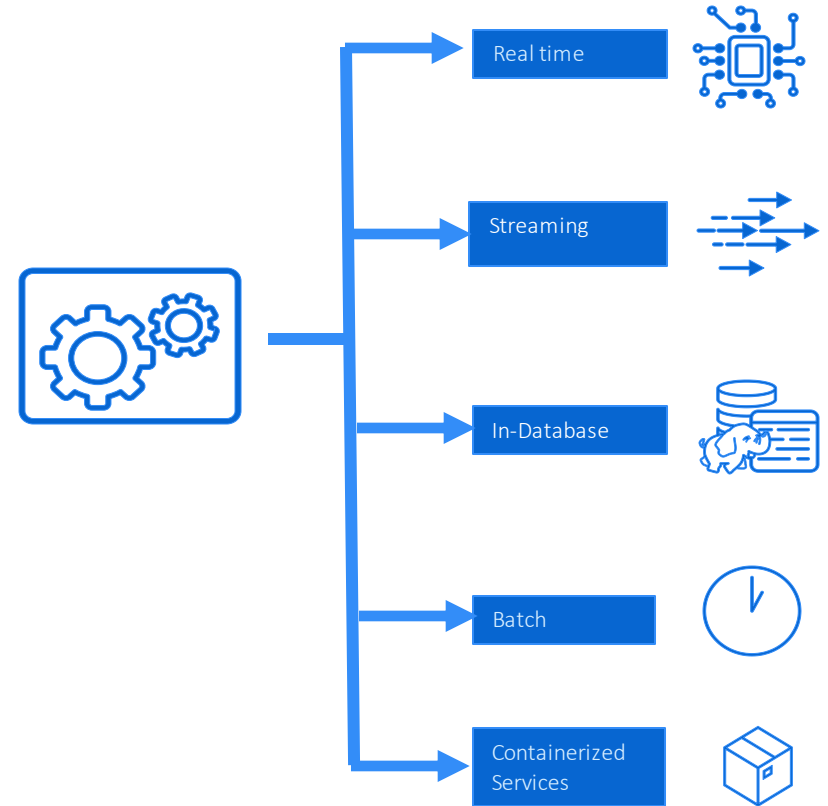
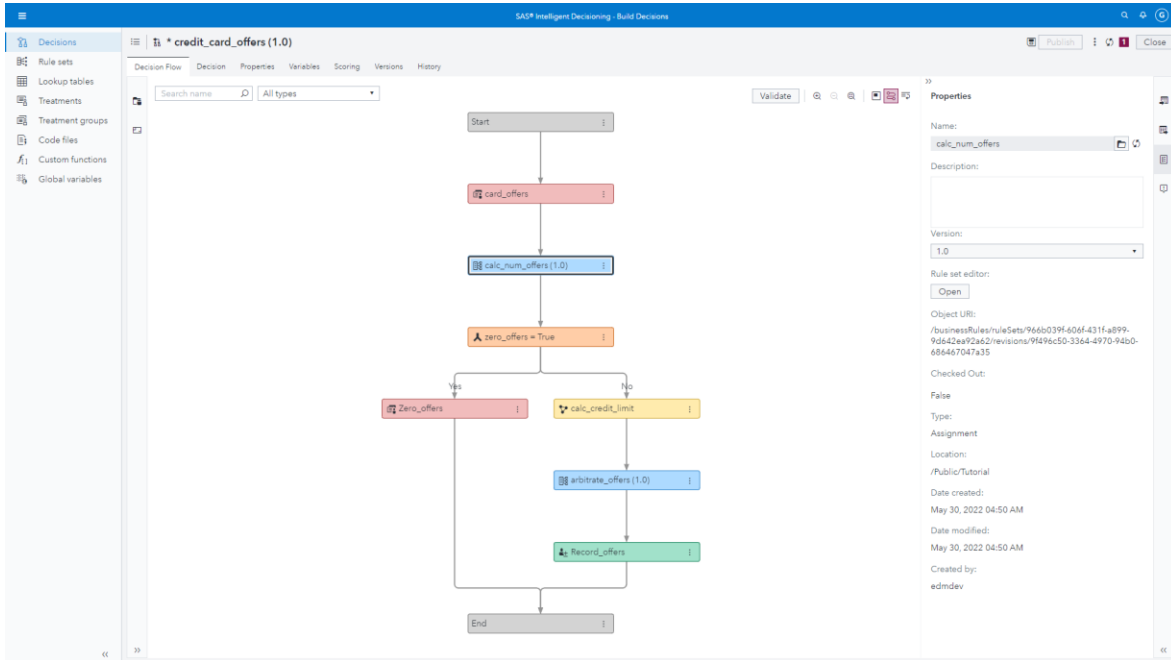
Fully Operationalizing Analytics with SAS Viya



Analytic Execution



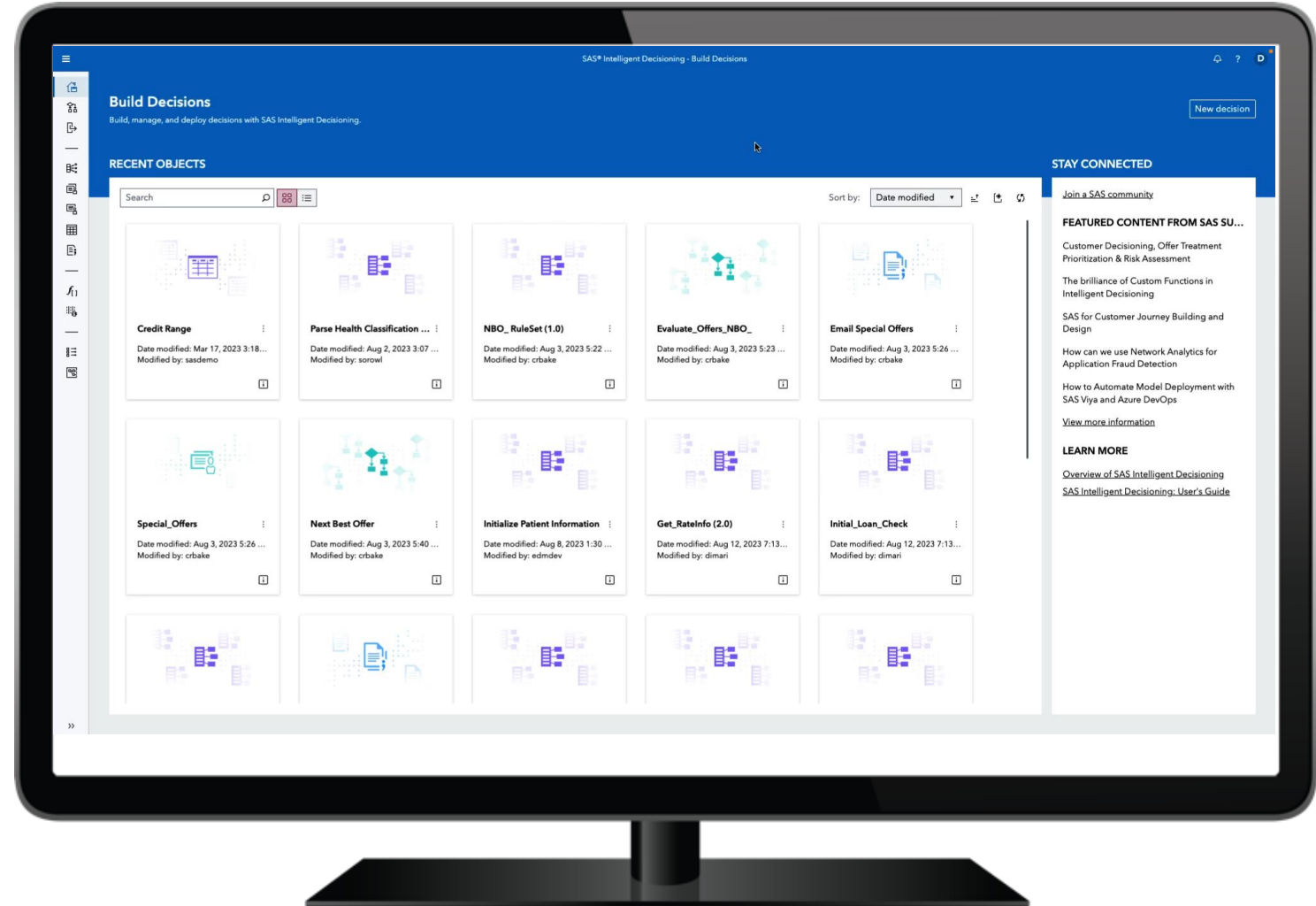
Design Time / Runtime



Design Time

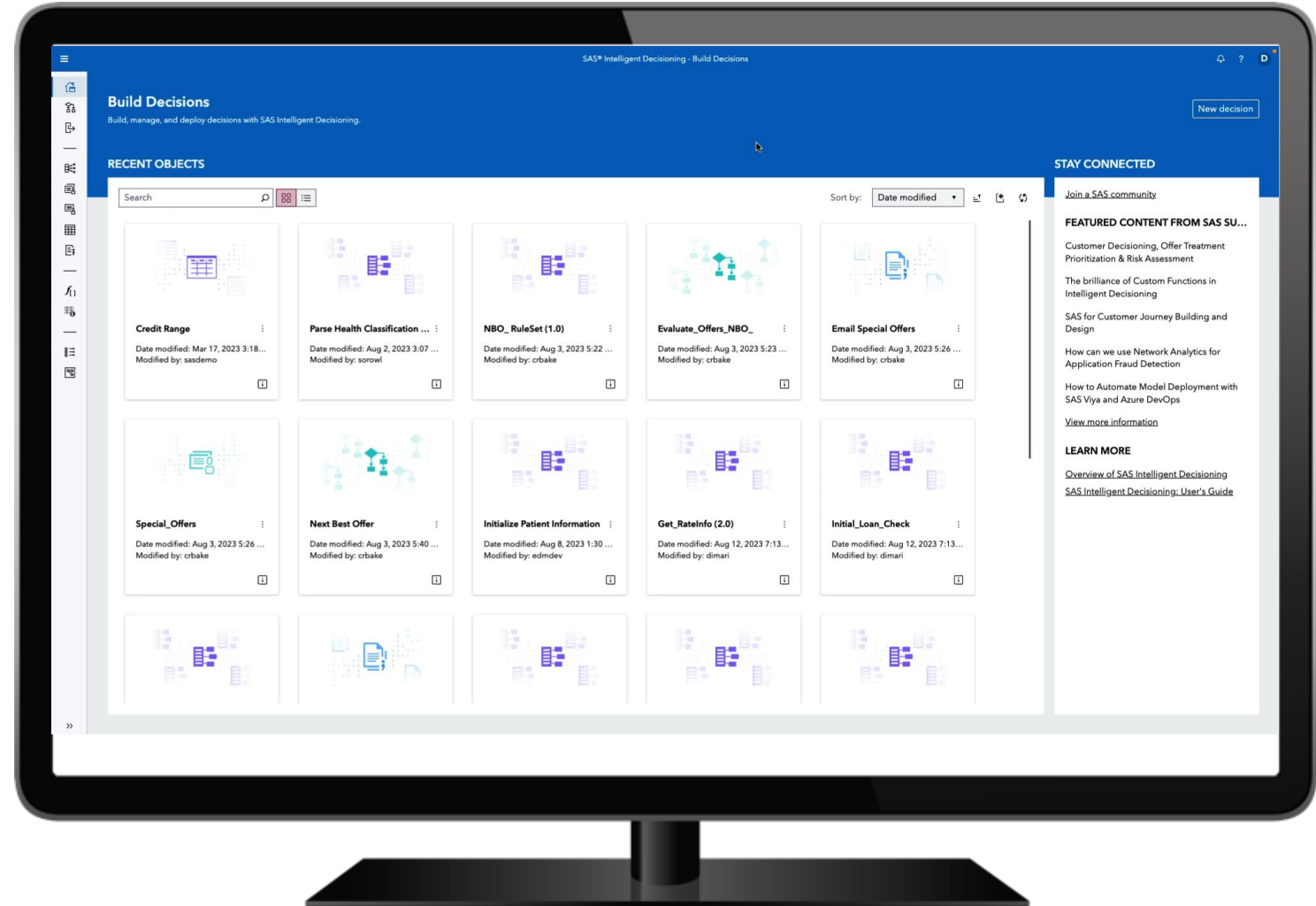
User Friendly Decision Builder

- **Low-code UI** for the non-technical persona
- **Intuitive flow display (DAG)**
- **Reusable business logic** through business rule repository, variables, custom functions
- **Automated tasks** like variable mapping and error validation
- **Data enrichment** through data query node and http calls to 3rd party applications
- **Governance and collaboration** through **versioning** and **checkout/commit** capabilities for all decision objects
- **Change management** and **auditing** through **usage report**



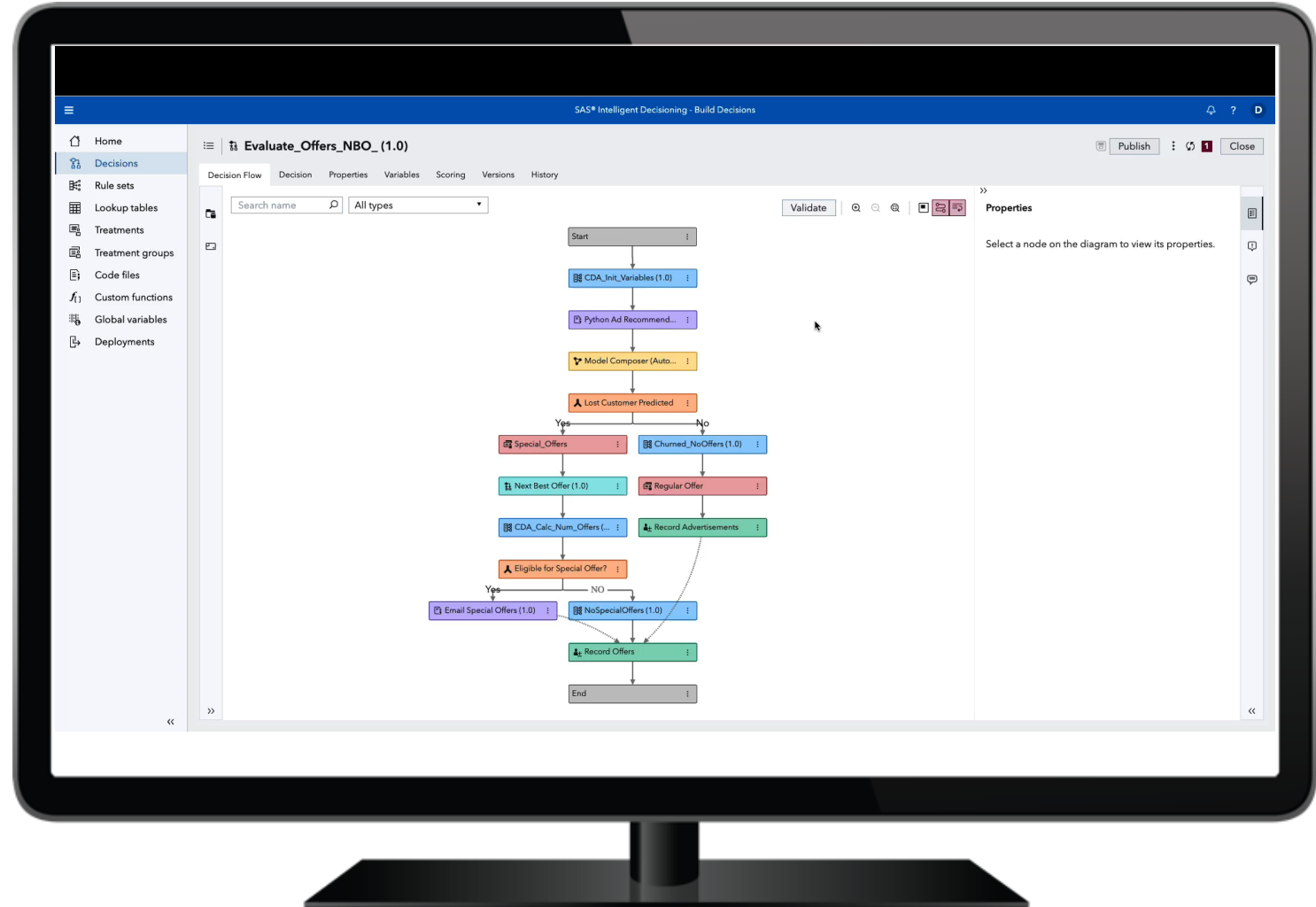
Seamlessly Integrate Analytics

- **Model Manager integration**
- **Open-Source** (Python) governed under the same umbrella as SAS models and code
- **No re-write** necessary
- **Auto-mapping** of variables
- **Unified pre-production testing**
- Easily incorporated in the **business context** (with business rules)



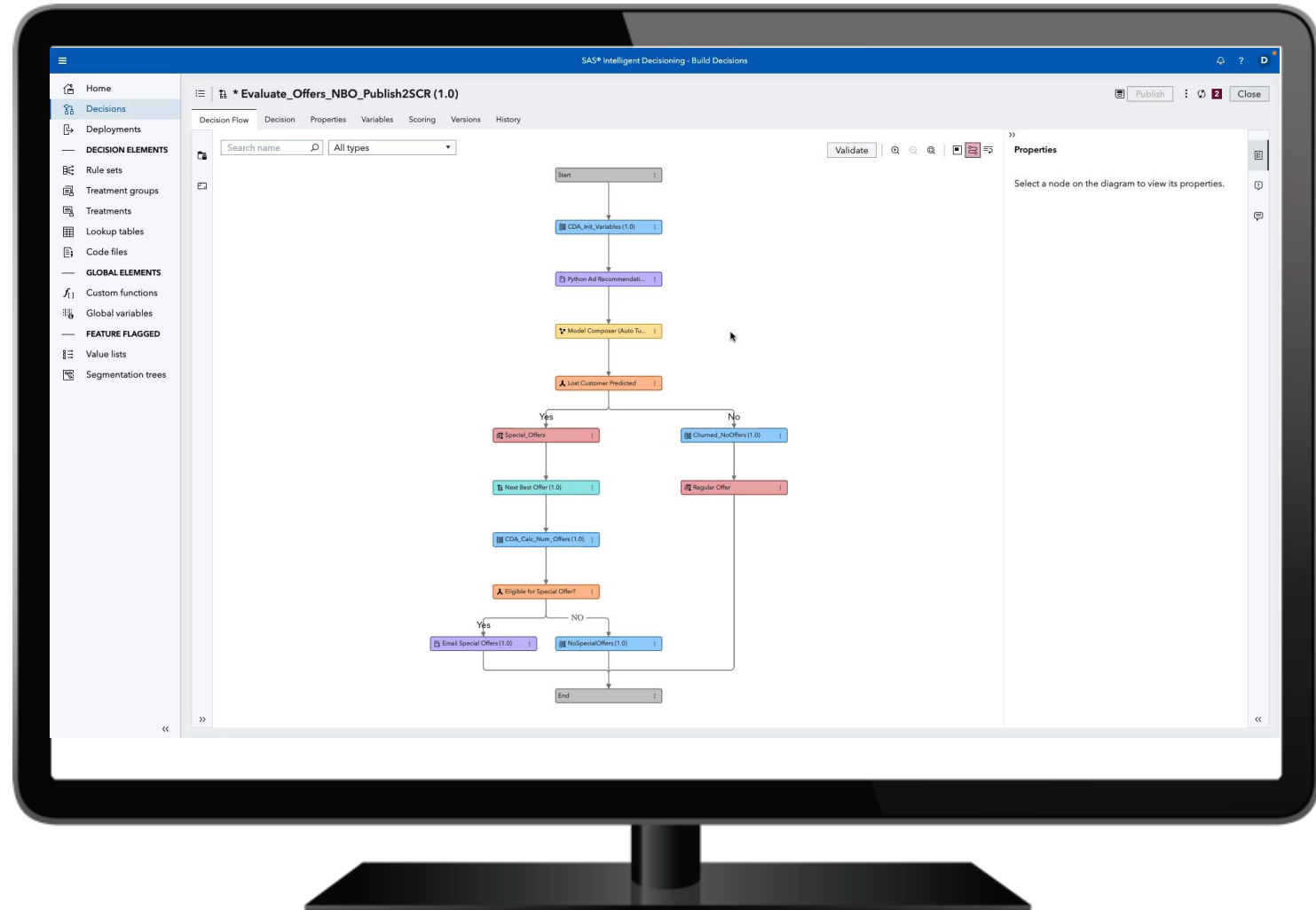
Pre-production Testing and Validation

- **Variety of tests** to meet different use case need: **Scoring/Scenario/Publish Validation**
- **Identify and audit** applicability of business rules with **Rule-fired Analysis**
- **Track** the path each transaction takes through the decision flow with **Path Analysis**
- All contribute to **decision transparency and explainability**, and support **meeting regulatory compliance**



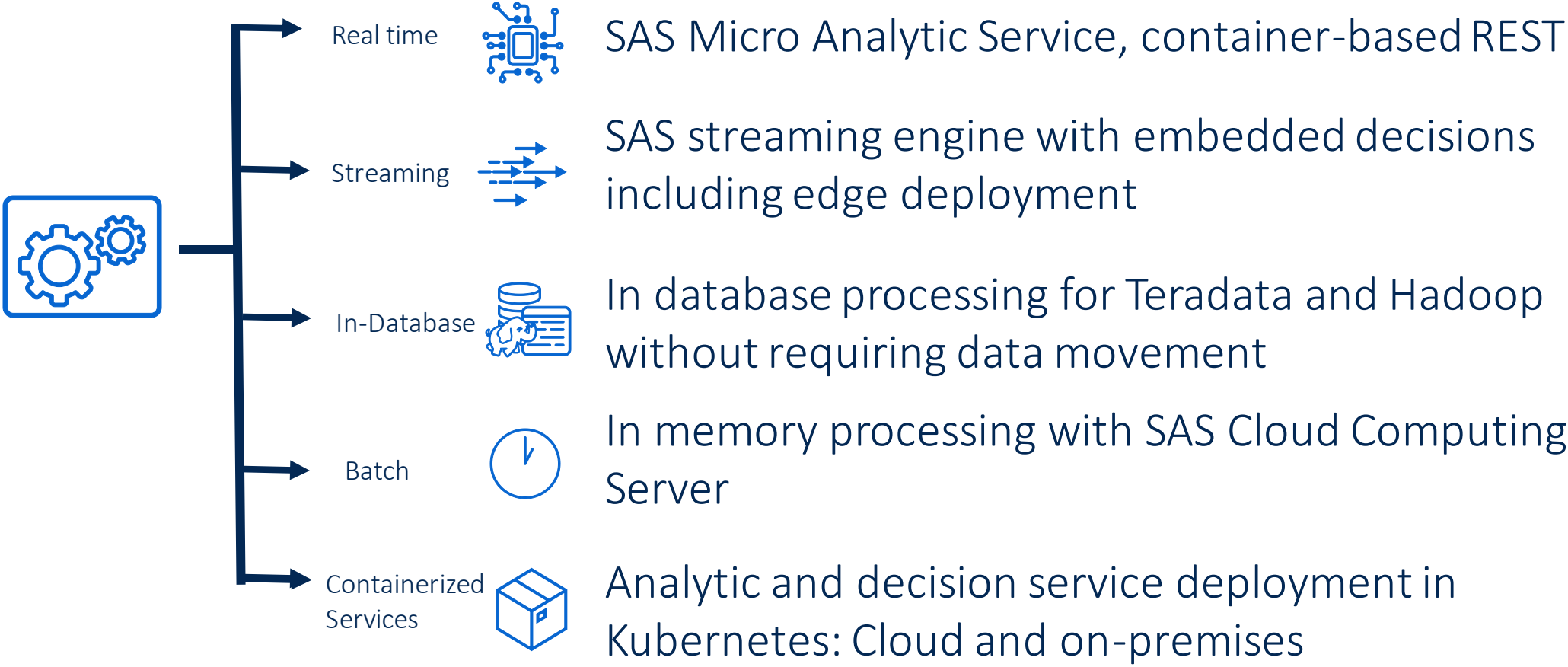
Publish Decisions & Record Results

- Make decisions **available to different channels** your organization uses
- **Variety of publishing destinations** to adapt to varying needs; “**write once, deploy multiple times, to multiple destinations**” paradigm
- Same decision suitable for **both batch and real-time**
- Ability to **record decision and response** for **identifying improvement paths** or **abnormalities**, as well as **recording historical data** and **reporting on decision impact**
- **Change management** and **auditing publish manifest**
- **Tracking published decisions**



Runtime

Designed for Scale



SCR Deployment Process

Admin sets up registry and k8s

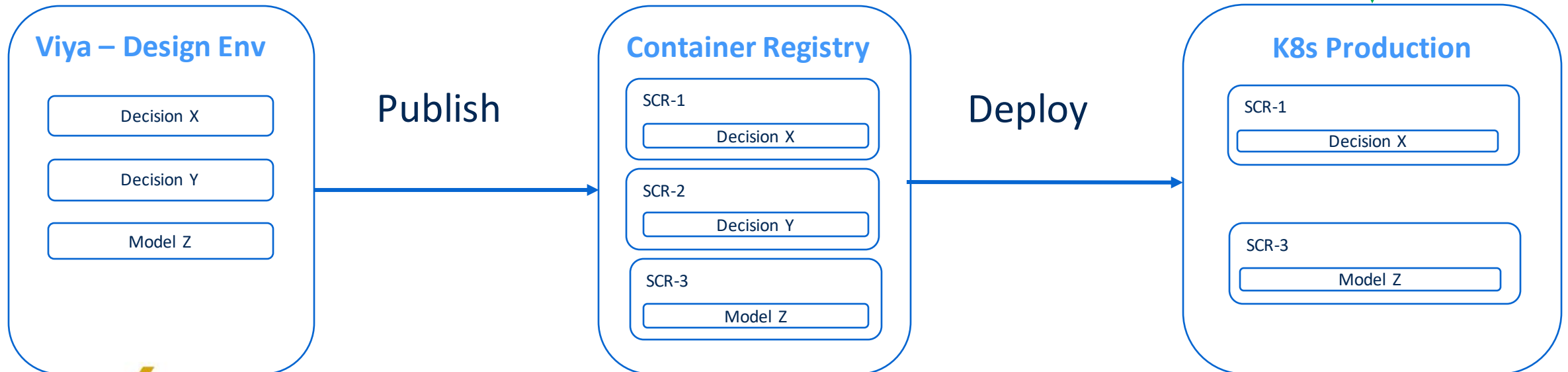
User builds decision and publishes to registry

Sys user deploys container to k8s

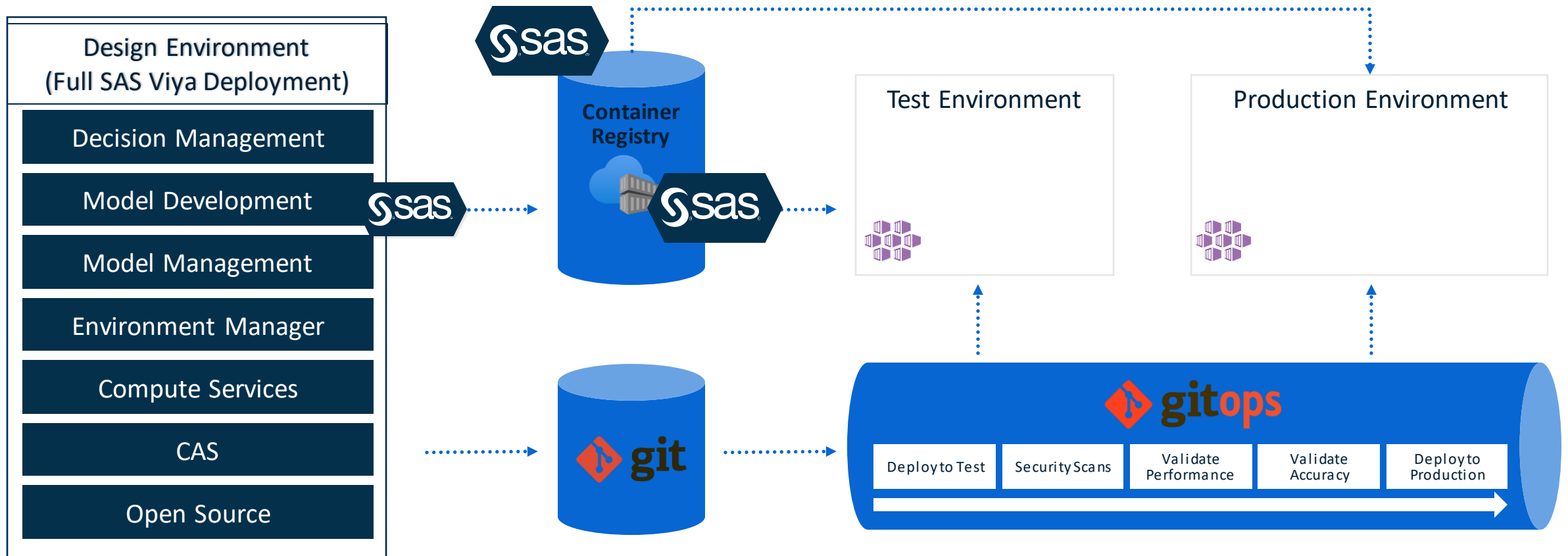
Business application uses new decision container

External Business Application

Sales, Banking, Credit Fraud,
Manufacturing, Advertising,
Medical, Automation,...



Continuous Integration – Continuous Delivery



SAS Explore 2023

Unified ModelOps and Containerized Deployment for All Models

Sophia Rowland and Glenn Clingroth



SAS Intelligent Decisioning: What's New



SAS **EXPLORE**

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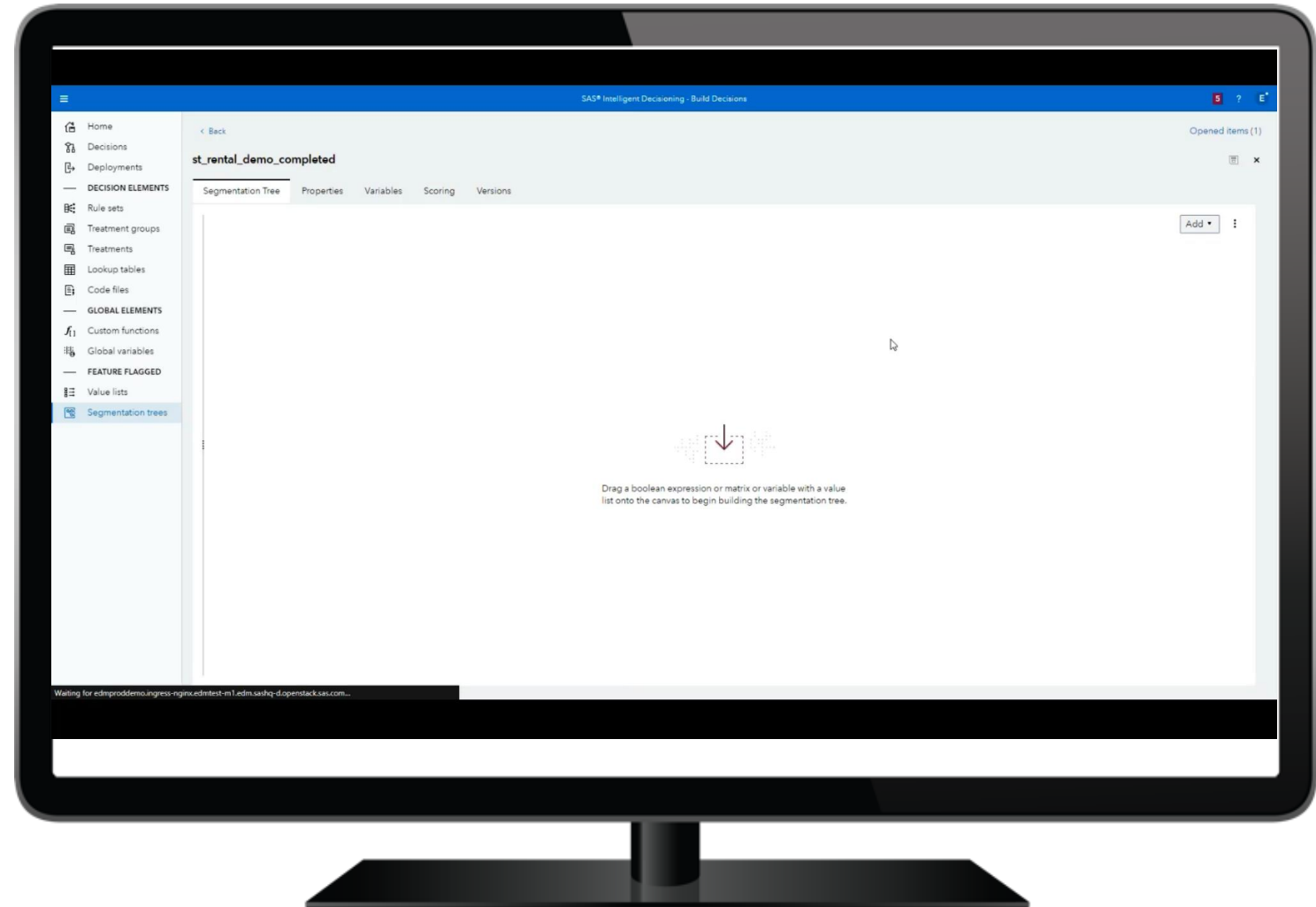
What is a Segmentation Tree?

Segmentations are **low-code constructs** which allow **business users** to quickly **define outcomes** based on **nested value comparisons** at scale.

Name	Leaf Id	Outcome
host_is_superhost		
true		
property_meets_plus_criteria		
true		
host_is_superhost		
true		
host_acceptance_rate_decimal		
acceptance poor	Leaf 1	not_plus_eligible
acceptance fair	Leaf 2	not_plus_eligible
acceptance average	Leaf 3	not_plus_eligible
acceptance good	Leaf 4	plus_eligible
acceptance plus eligible	Leaf 5	plus_eligible
Other	Leaf 6	not_plus_eligible
false	Leaf 7	not_plus_eligible

Leveraging Segmentation Trees

- Segmentations are intended for **fine grained-branching at scale** through an **intuitive, low-code interface**



Features

Outcome – action taken at the leaf node.

- Variable assignment outcome - outcome in which a variable is assigned a value
- Code assignment outcome - outcome in which a specified code is executed to assign values to variables

Value Lists – predefined enumerated lists of variable values

- Reduce user error
- Fully governed lists for easy tracking and regulatory compliance

Node - contains a value or condition in the segmentation tree

- Variable node - a node with a variable and its value list id
- Boolean expression - expression which evaluates to a Boolean value

Matrix - two-dimensional array with down-and-across variable values and their intersection outcomes.

- Matrix node - a node with a matrix
- Get to outcomes faster and reduce the size of your segmentation tree

SAS Intelligent Decisioning

Key Takeaways



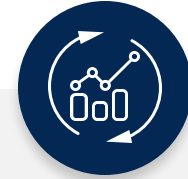
Effectively leverages analytical insights for augmented and automated decisioning that **enables quick responses to market changes**

1



Connects business, data scientists and IT via easy to use low code development and deployment tools **increasing agility and reducing time to value**

2



Streamlines work across the enterprise under a unifying decisioning process which **results in increased efficiency and revenues**

3

Learn More on the SAS Decisioning Home Page:



Decisioning Sessions

Access the Power of SAS®
Decisioning From Snowflake

9/13 3:15 – 3:35, Starvine 10

AlgoWatt: Leveraging Analytics for
Energy Community (EC) Planning
and Operation

9/13 4:00 – 4:20, Starvine 6 & 7

Getting Full Value Out of the
Analytics Life Cycle with SAS®
Intelligent Decisioning

9/13 4:00 – 4:50, Starvine 3 & 4

Event-Based Intelligent Decisioning

9/14 10:15 – 10:35, Starvine 1 & 2

Using SAS® Decisions to Generate
Batch Responses from Azure OpenAI

9/14 10:15 – 10:35, Starvine 3 & 4

Decisioning Demos

Creating a Seamless Customer
Journey With Enterprise Decisioning

9/13 11:30 – 11:55, Demo Station #4

Creating Decisions With
Segmentation Trees

9/13 12:00 – 12:25, Demo Station #4

ModelOps Sessions

ModelOps in SAS® : Putting Machine
Learning into Operation

9/13 4:00 – 4:45, Juniper 4

Santander US Customer Tool for ESG
Transactions

9/13 4:30 – 4:50, Starvine 6 & 7

Ultra-Agile Approach for the Deployment
of Real-Time Analytics Projects

9/14 10:15 – 11:05, Juniper 3

MLOps Uncoiled: Python's Path on SAS®
Viya® With SAS Model Manager

9/14 11:15 – 11:35, Starvine 6 & 7

Streamlining SAS® Model Deployment to
Azure: Leveraging SCR, Azure DevOps and
App Service

9/14 11:15 – 11:35, Starvine 5

ModelOps Demos

Performant Python Model Batch
Execution

9/13 12:30 – 12:55, Demo Station #4

MLOps for Pirates: R SASCTL

9/13 1:00 – 1:25, Demo Station #4

ModelOps and Finding Value in
Analytics

9/13 5:00 – 5:25, Demo Station #4

SAS® Container Runtime: Your
Midfield Specialist for Containerized
Models

9/13 5:30 – 5:55, Demo Station #4

Useful Links

- [SAS Communities: Decisioning](#)
- [SAS Intelligent Decisioning Home Page](#)
- [SAS a Leader in the Forrester Wave for AI Decisioning Platforms Q2 2023](#)
- [Webinar – How Do I Use SAS Intelligent Decisioning?](#)
- [SAS Containter Runtime Home Page](#)
- [Getting Started with ModelOps – E-Book](#)
- [**Decisioning Booth at Innovation Hub**](#)



Thank you!

Contact Information
diana.maris@sas.com