

Operationalizing automated decisions

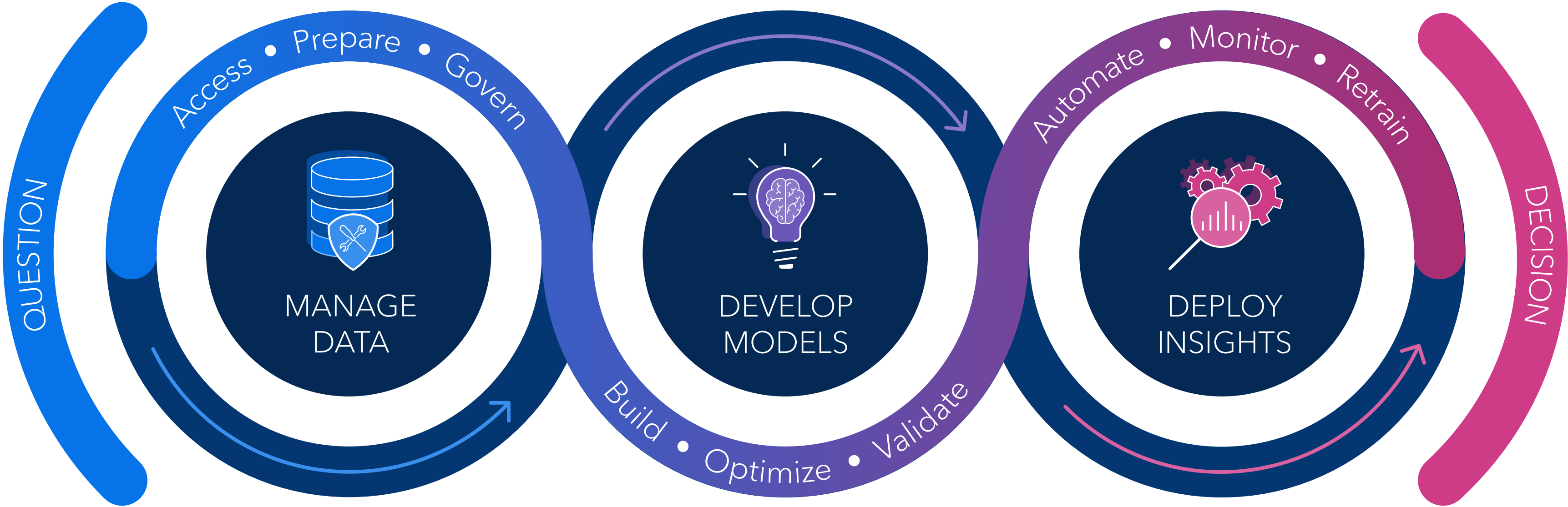
Why, What and how?
FANS – Februar 2024

Lars Arne Skår, Solution Architect @ SAS
















The Analytical Life Cycle

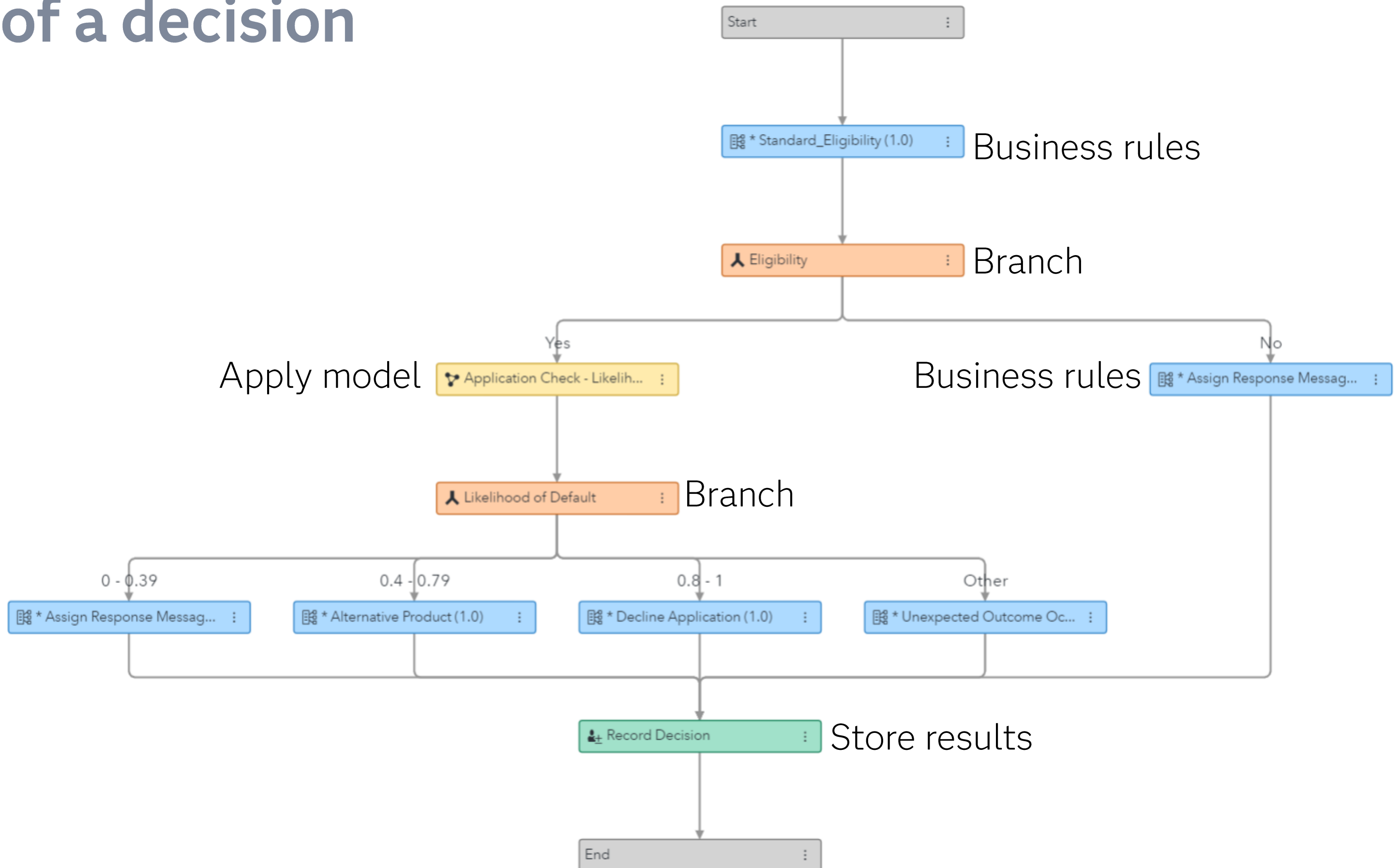
– the journey from data to insight



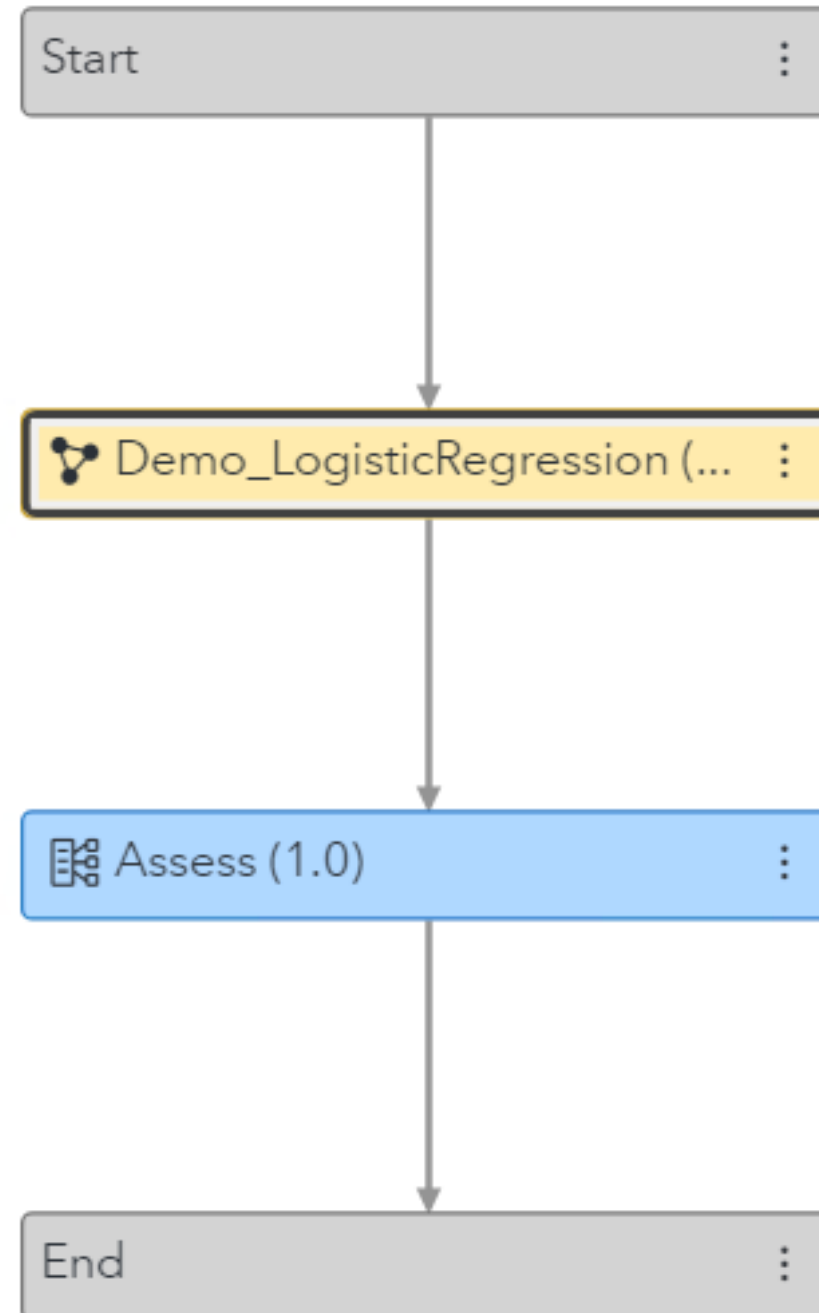
Anatomy of a decision

-  Branch
-  Cross-branch link
-  Data Query
-  Decision
-  DS2 Code File
-  Micro Analytic module
-  Model
-  Parallel process
-  Python Code File
-  Record contacts
-  Rule set
-  Segmentation tree
-  Treatment Group

Business rules

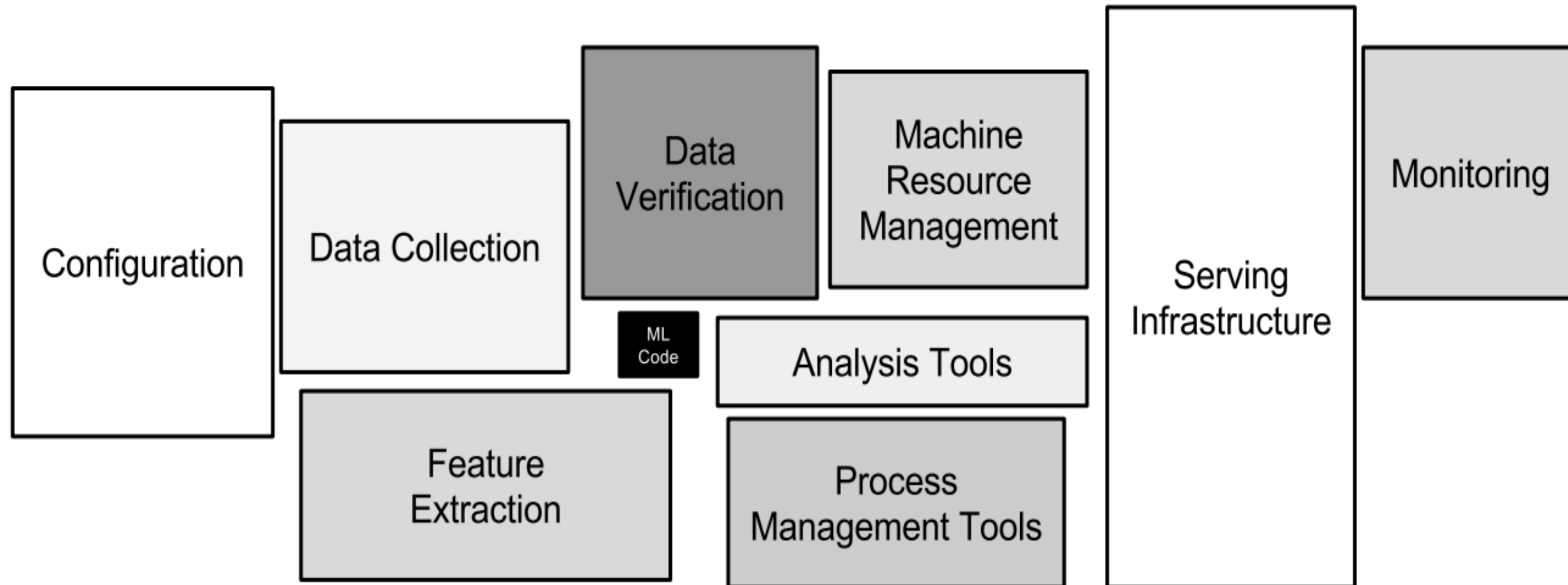


A simpler decision – used in our demo



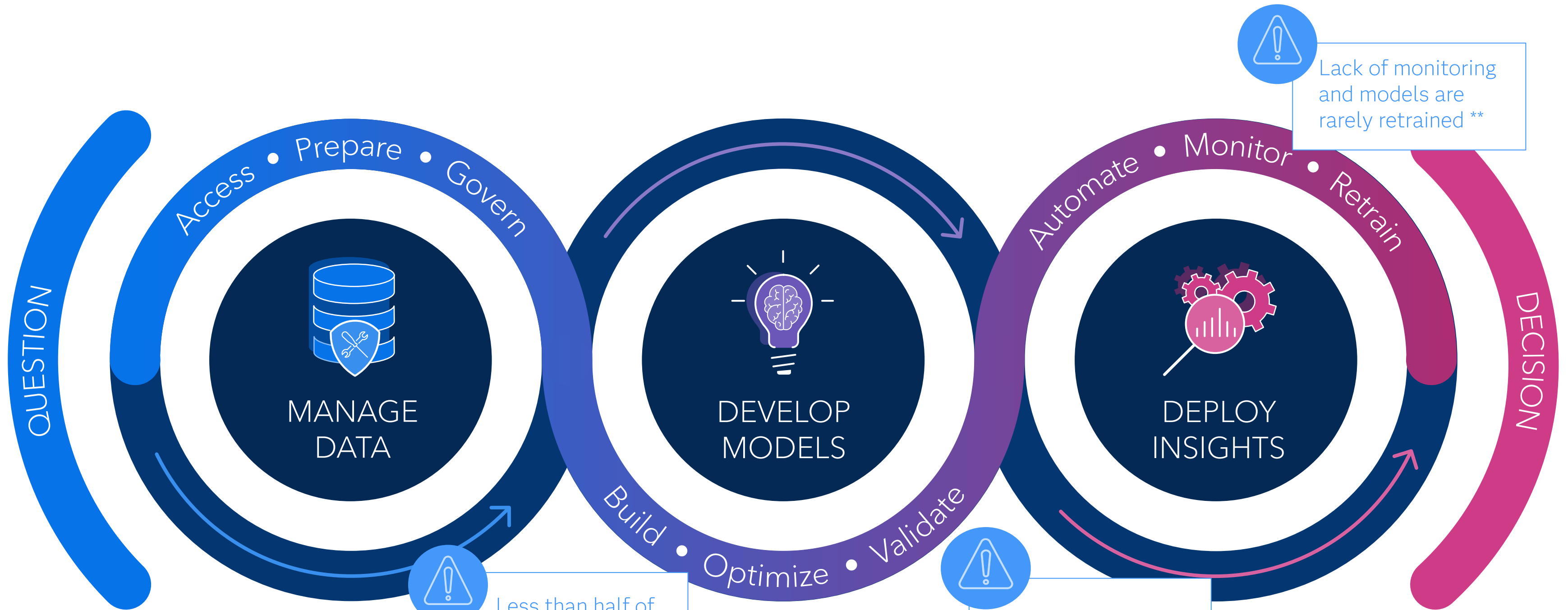
Well-known challenges needing to be solved

There is more to ModelOps than ML Code



- *We find it common to incur massive ongoing maintenance costs in real-world ML Systems*
- *Developing and deploying ML systems is relatively fast and cheap, but maintaining them over time is difficult and expensive*
- *ML packages may be treated as black boxes, resulting in massive “glue code”..**

Challenges in the ModelOps Process

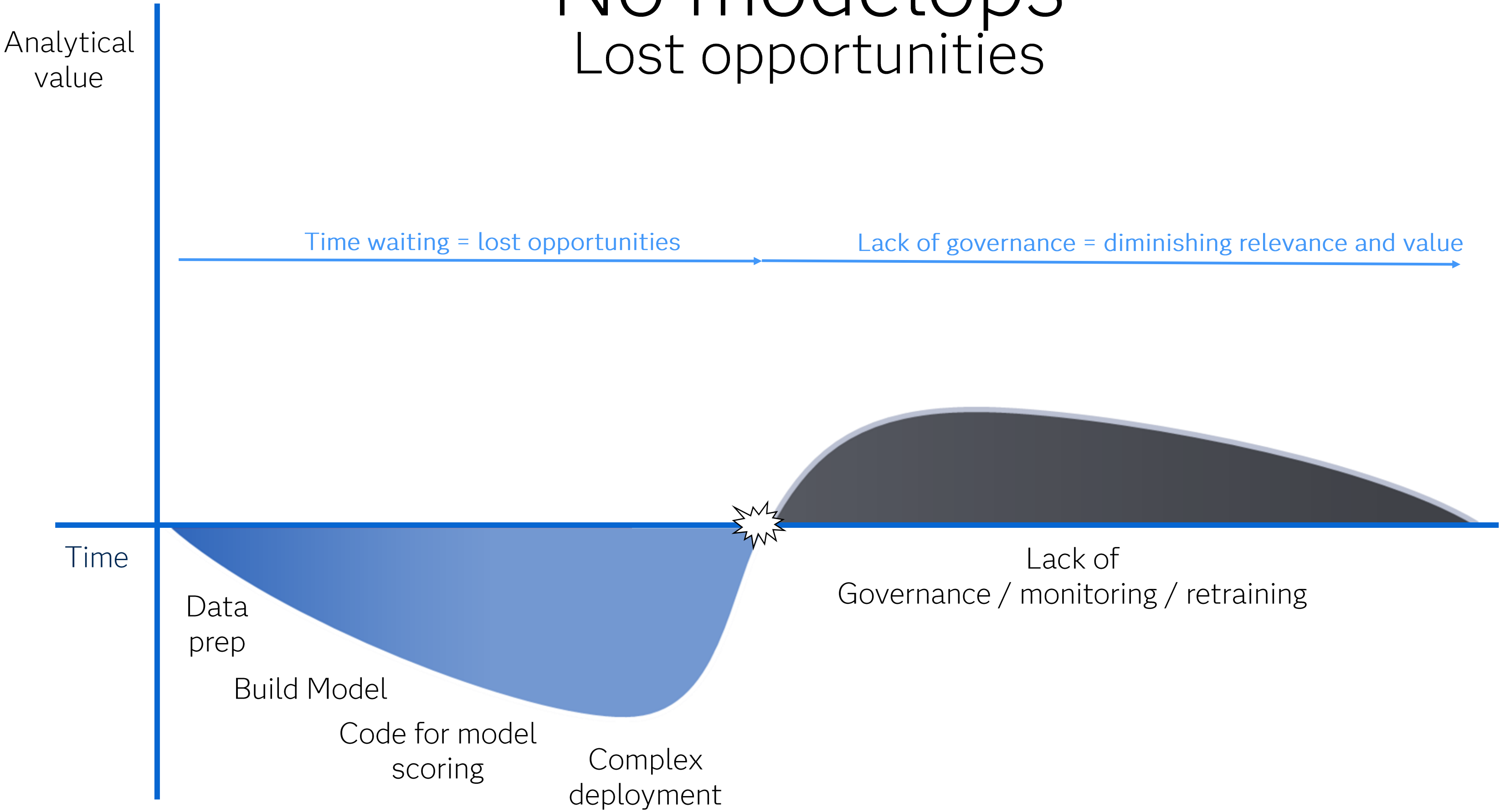


* Said Gartner 3 years ago - and this is still challenging

** Many mention monitoring and retraining as challenging practices

ANALYTIC'S LAST MILE

No modelops Lost opportunities



Benefits of a ModelOps Approach

To achieve your strategic objectives



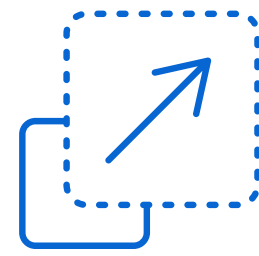
More accurate business outcomes



Scale analytics

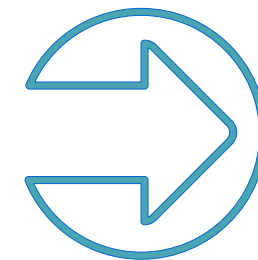


Faster time to value



Scale

Volume & speed



Operationalize

From insight to action/decision



Responsible

Fair, Accountable, Safe, Transparent, Explainable, Sustainable...



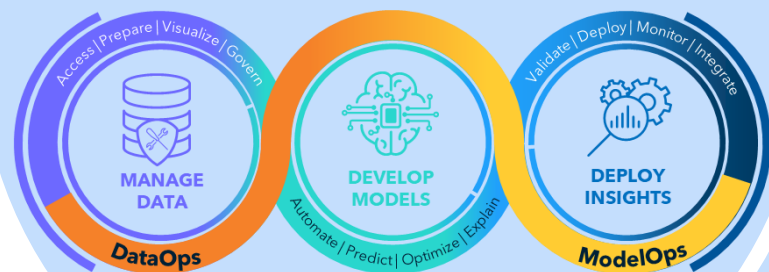
AI Governance Framework

People & Organization

Processes

Technology

ModelOps



Data & Analytics Engineering



ModelOps

*Serving models
to decision
points*

DataOps

to predictive analytics

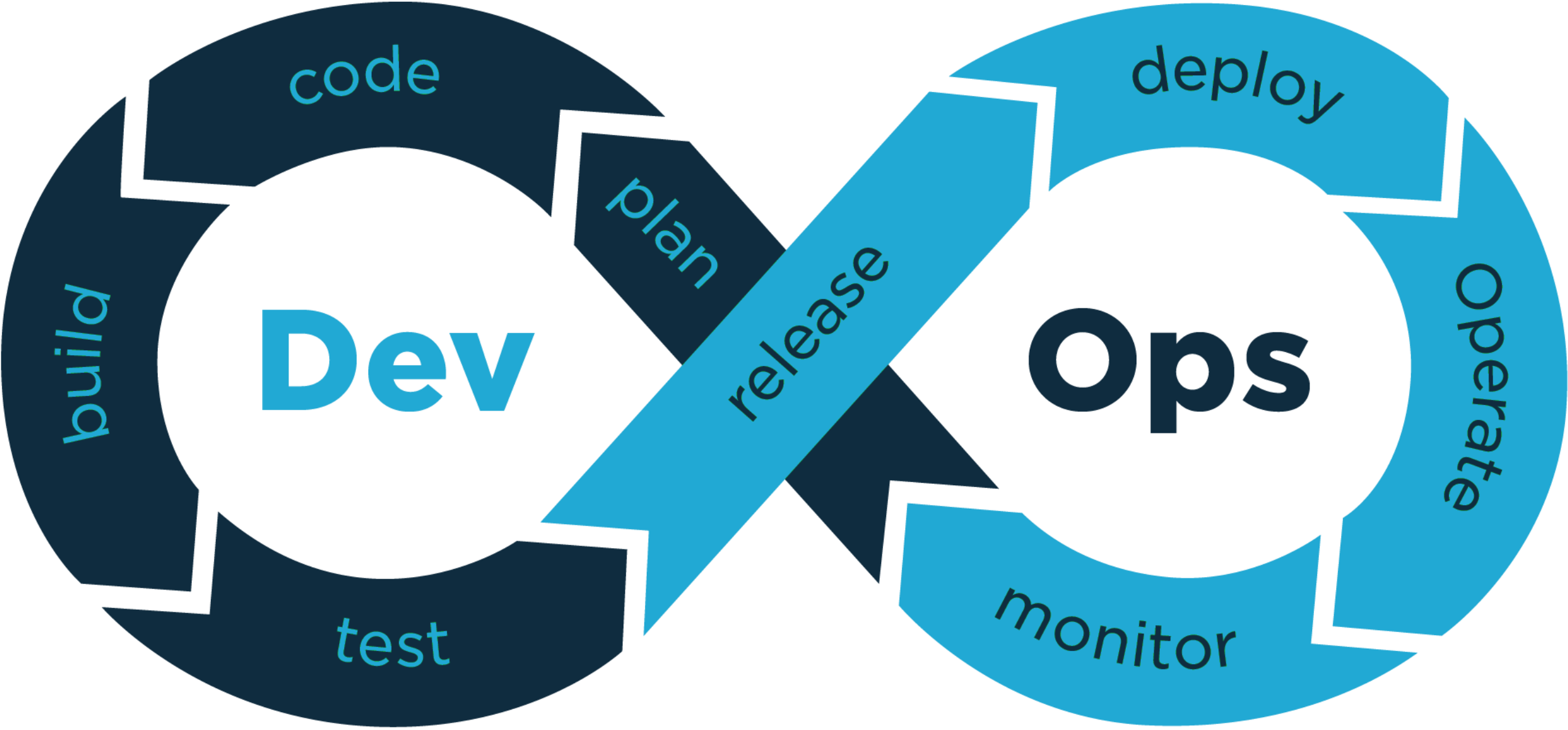
*Serving data
to the
business*

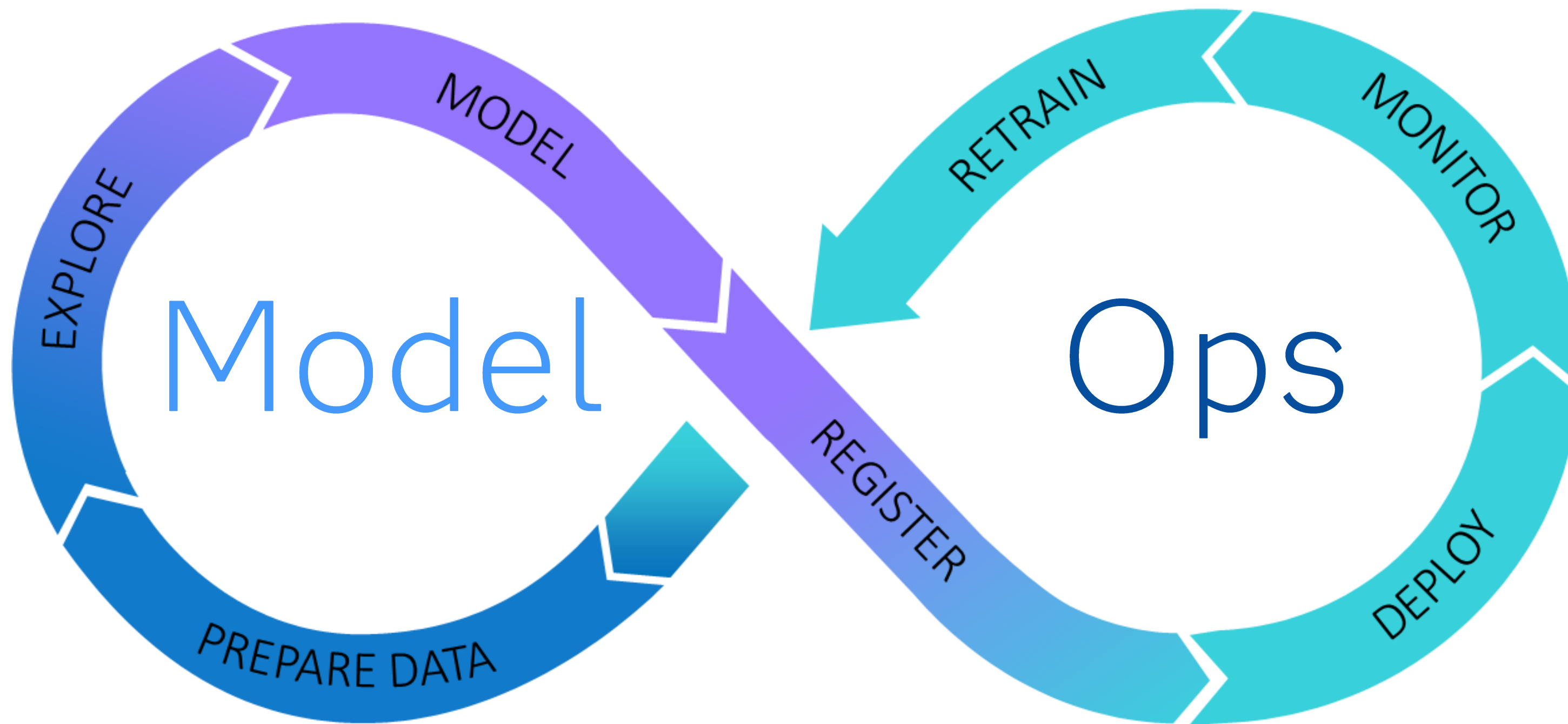
to applications
(inc. reporting)

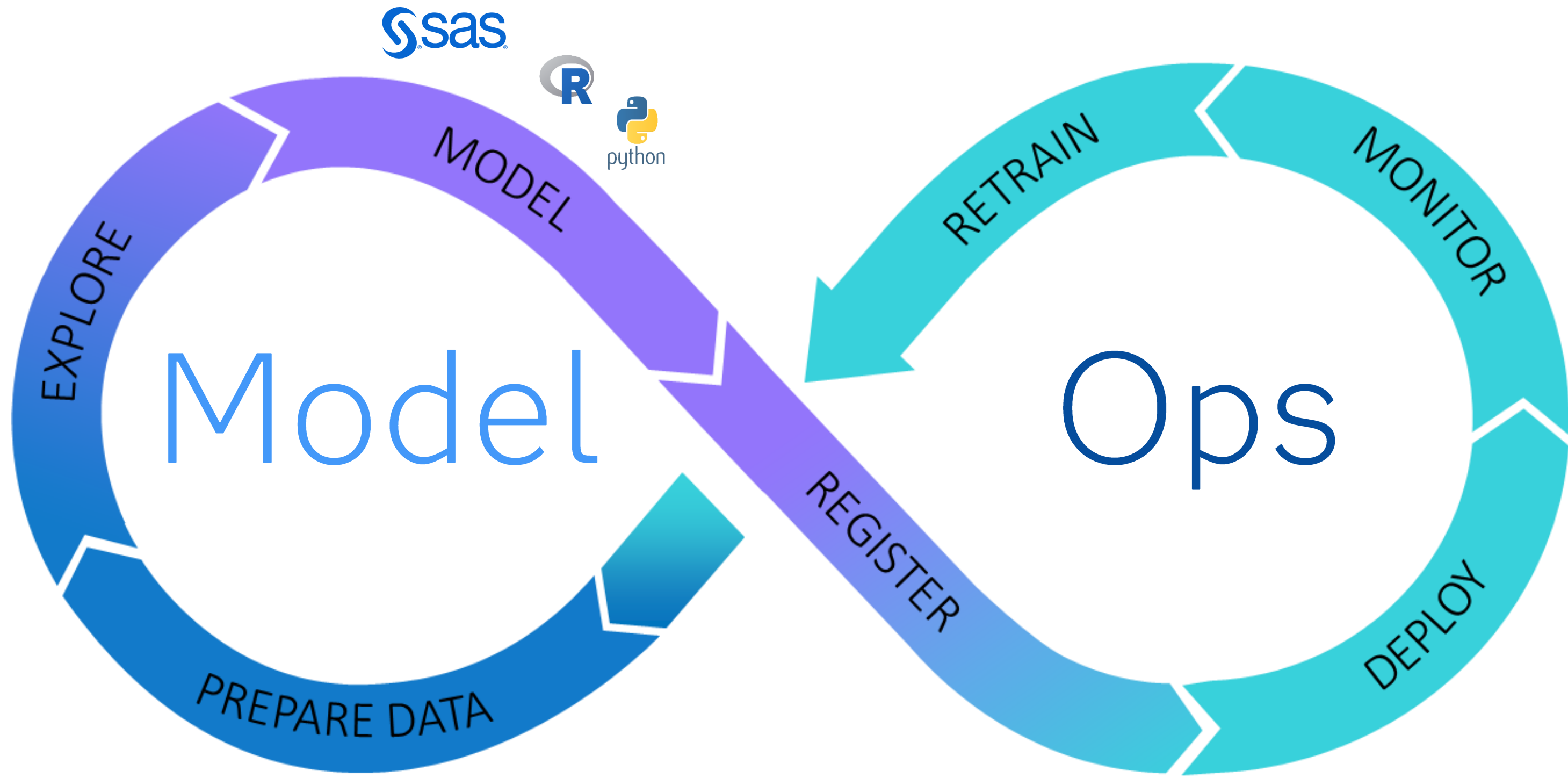
DevOps

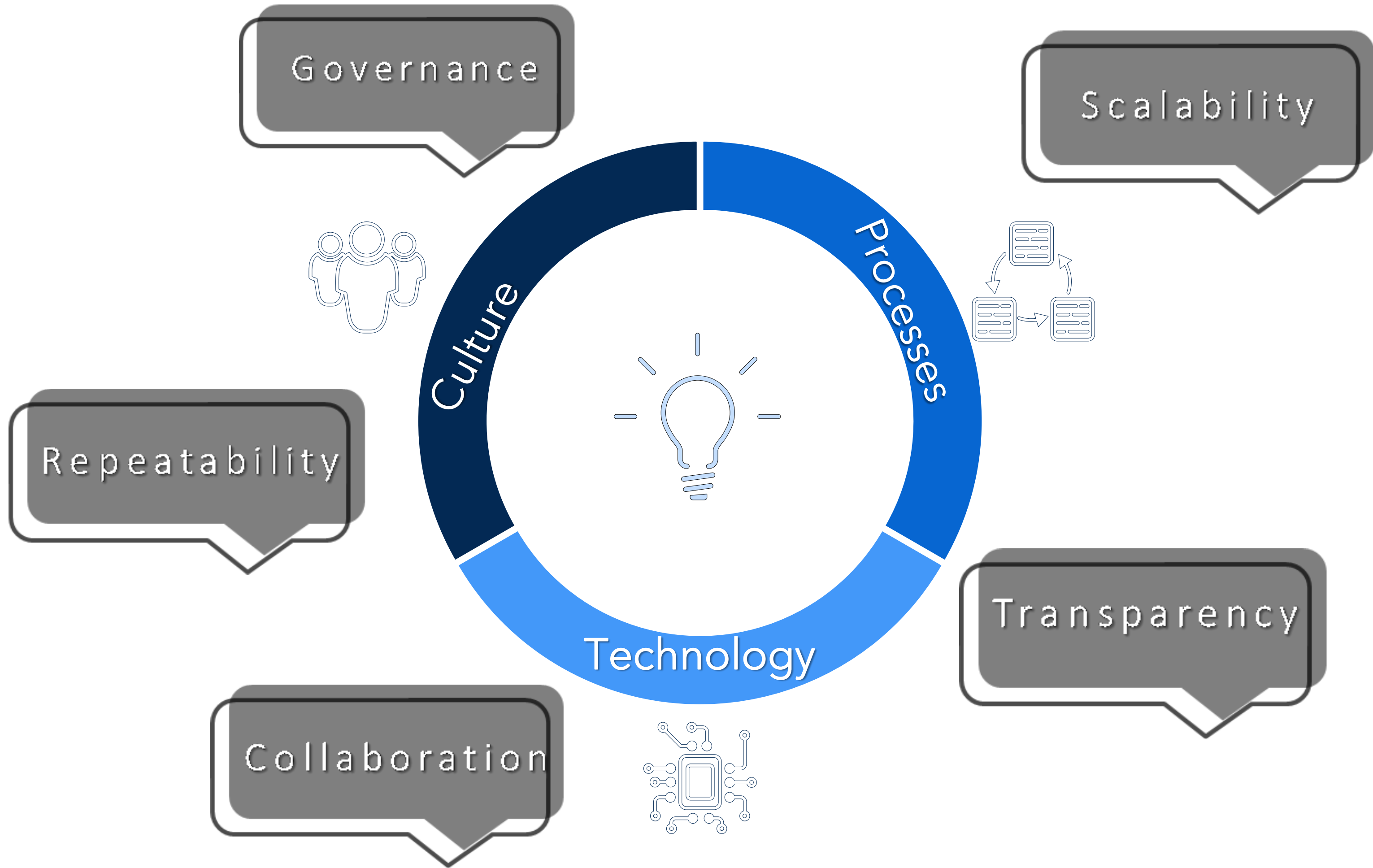
To applications

*Serving apps
to the
business*

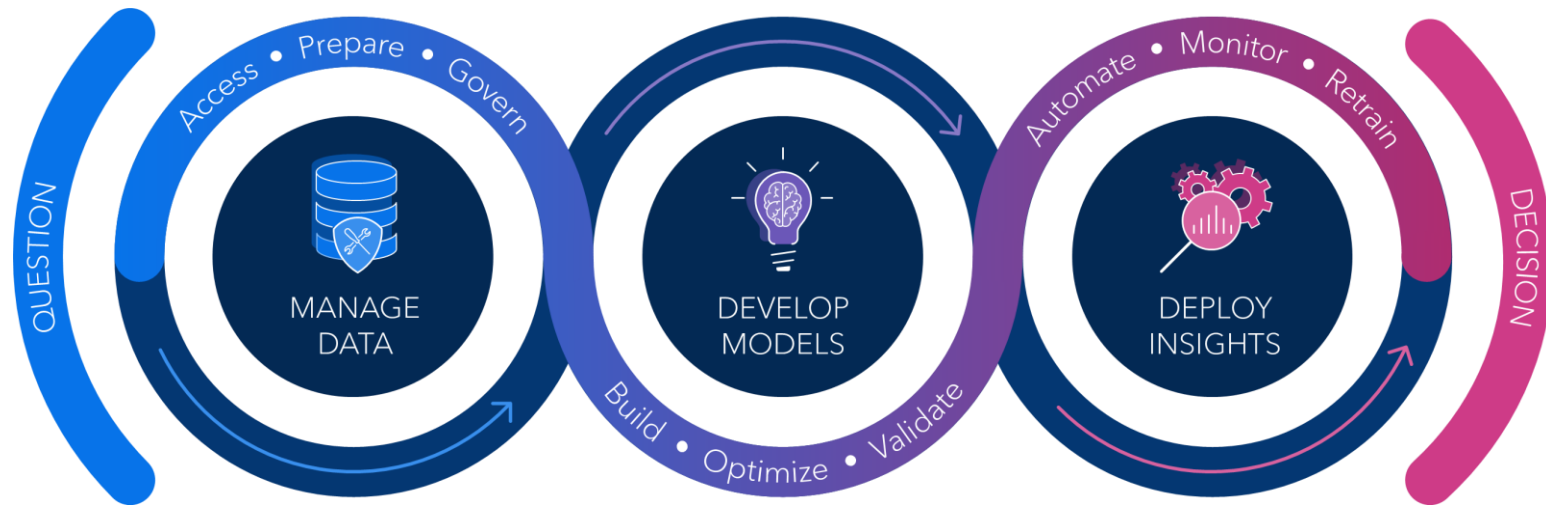




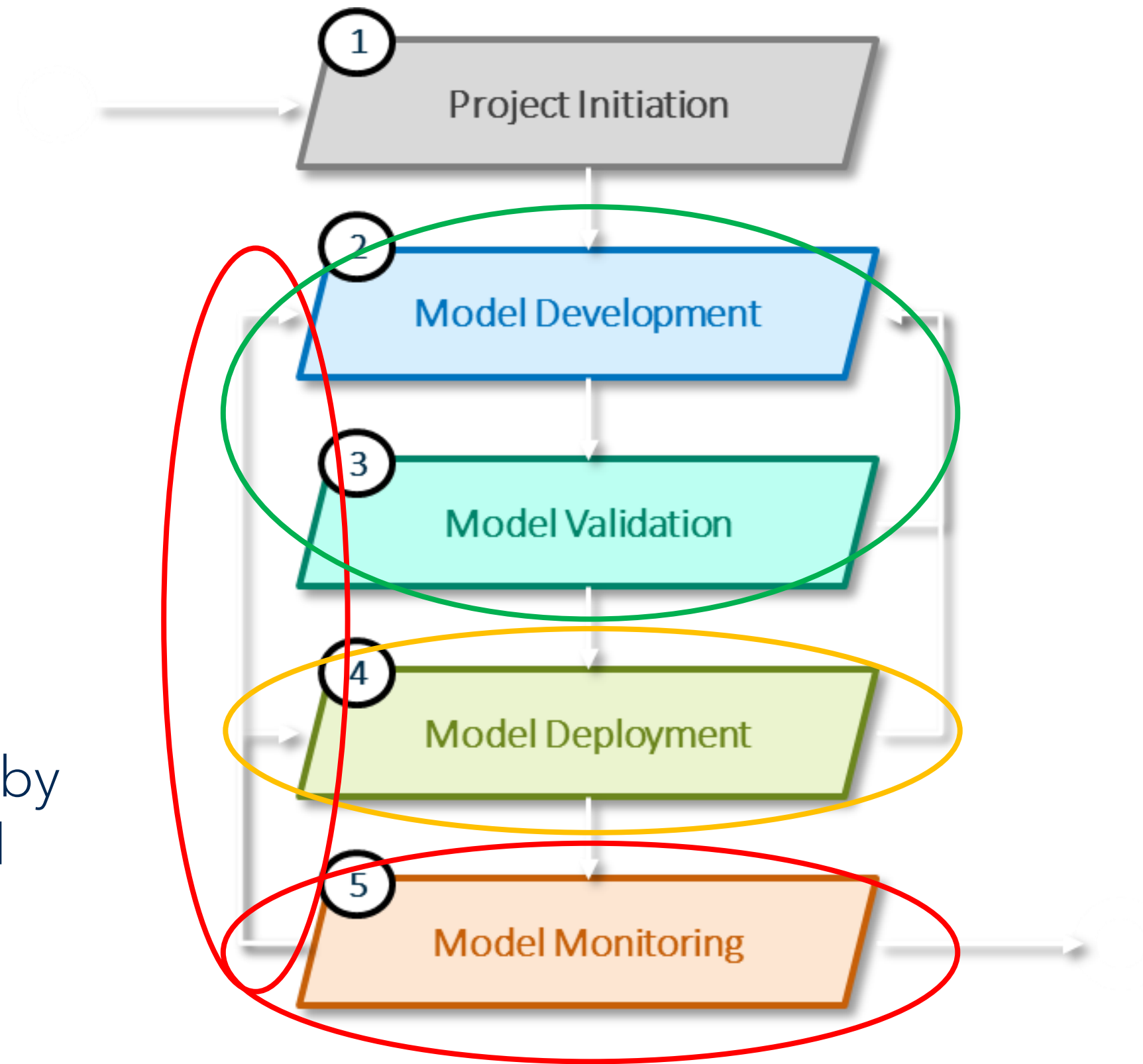




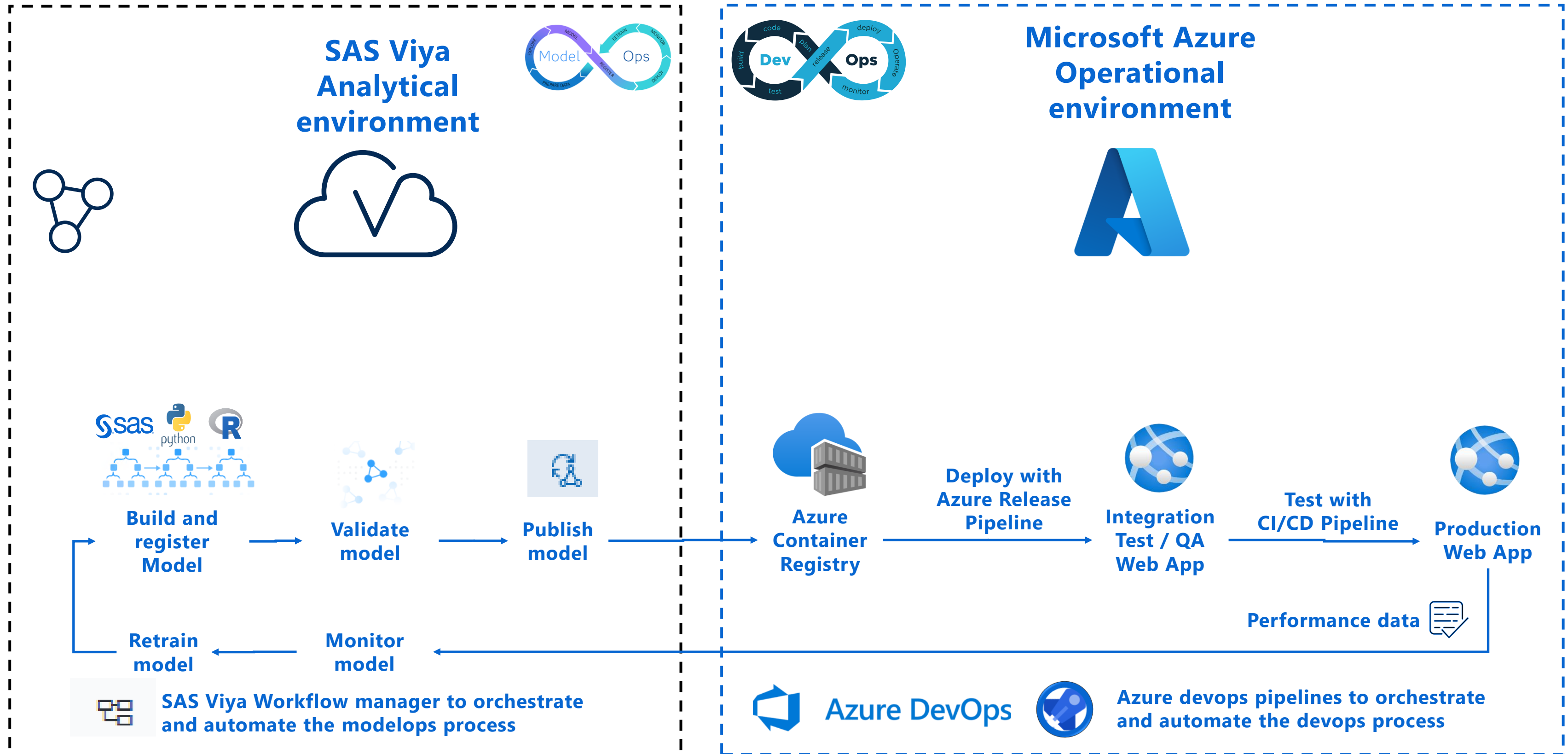
ModelOps Process



Tuning of the specific processes will vary by organisation, depending on their desired outcome.



The life of a model – from analytics to operations and back

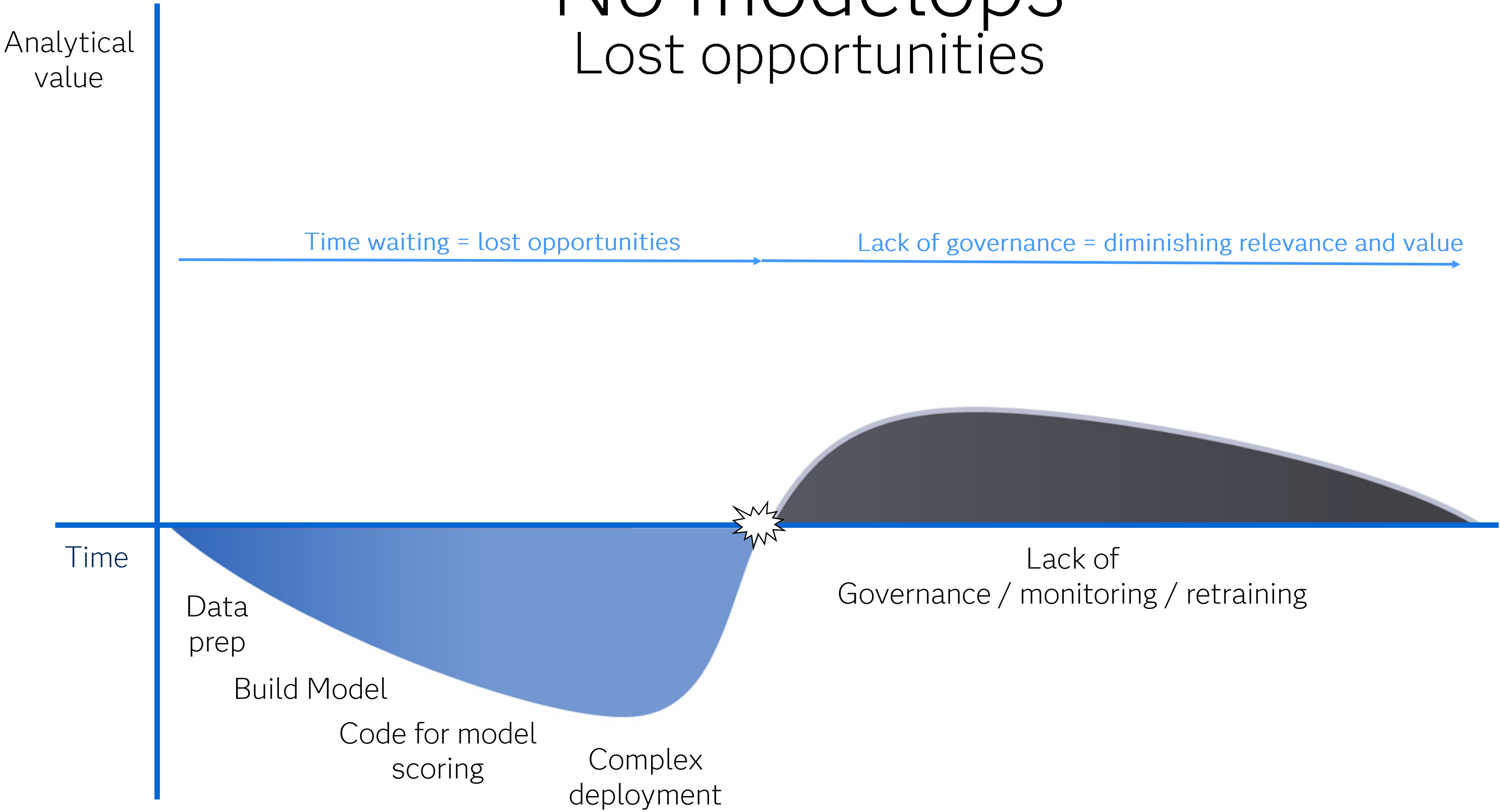


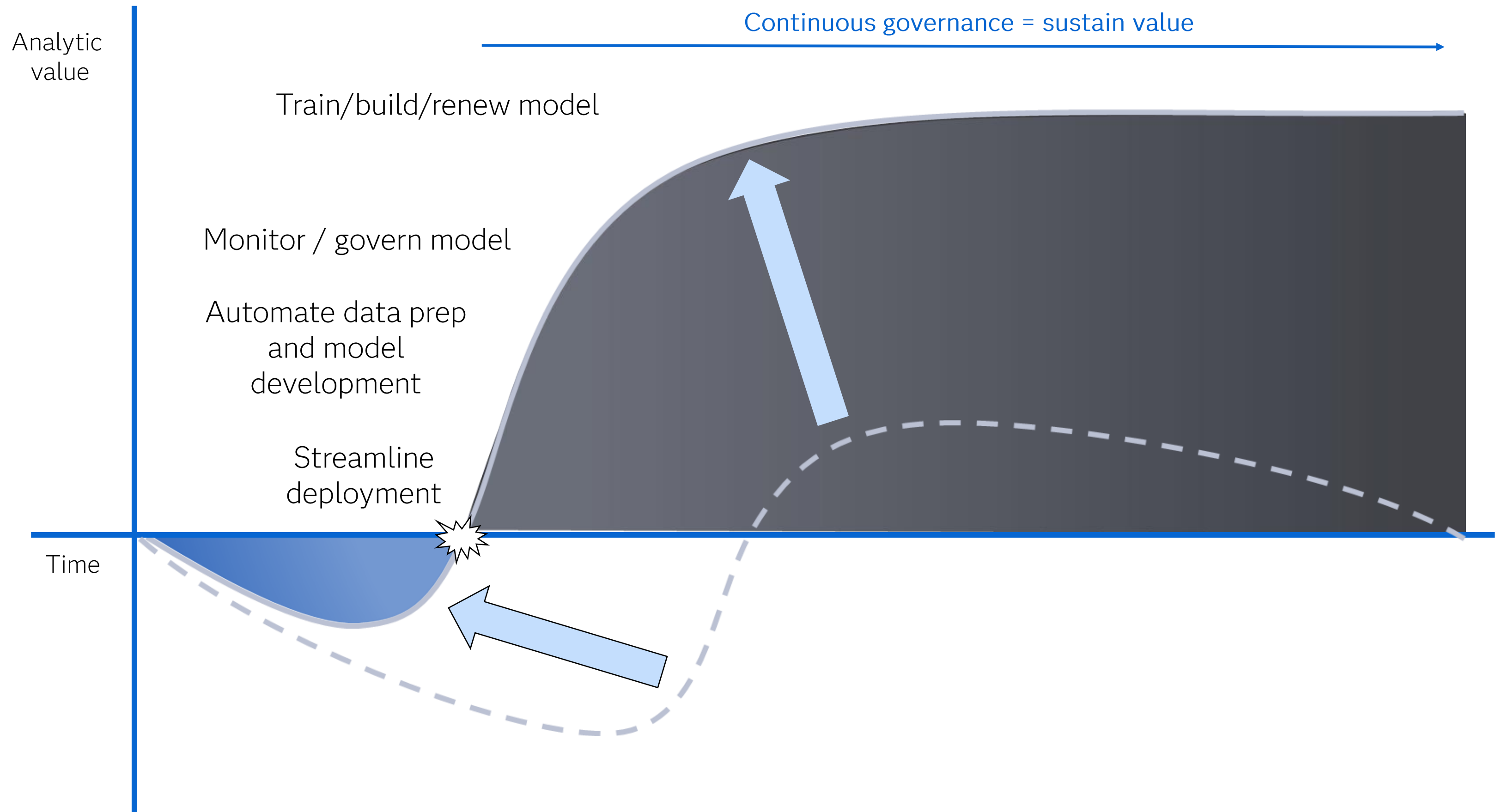
Demo

Based on previous slide

- Build a model in MS – register in MM
- Validate model in MM
- Deploy model in 2 stages – publish to ACR, then have azure devops deploy to web app test
- Monitor model by visualizing performance in MM
- Retrain model

No modelops Lost opportunities





The life of a model – from analytics to operations and back

