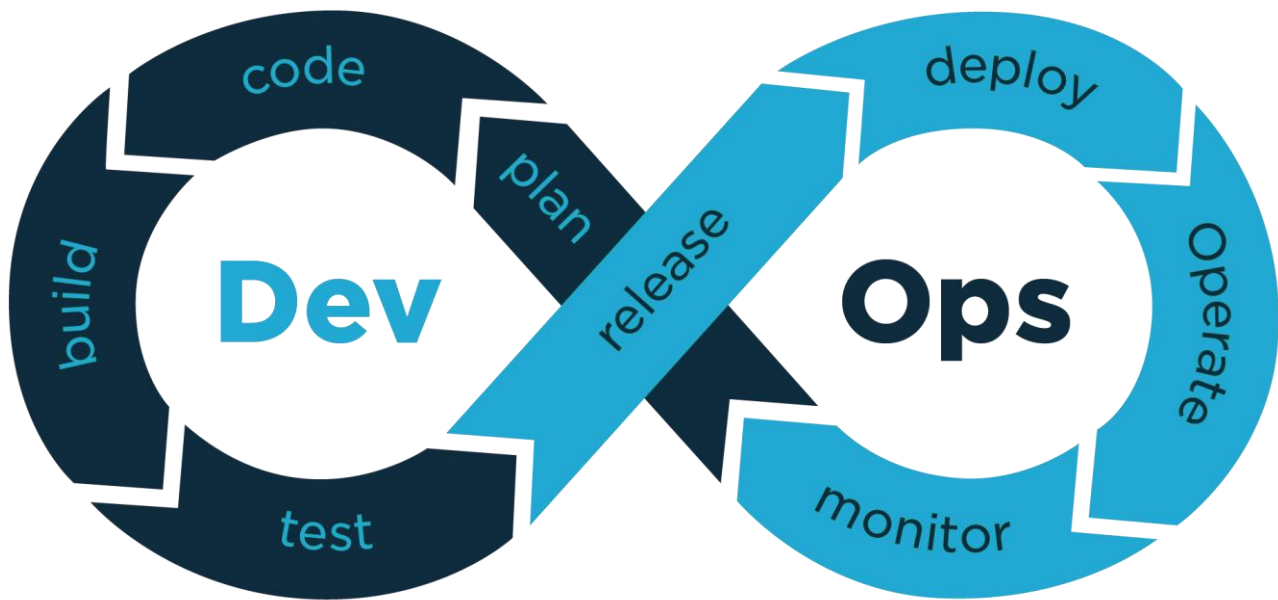


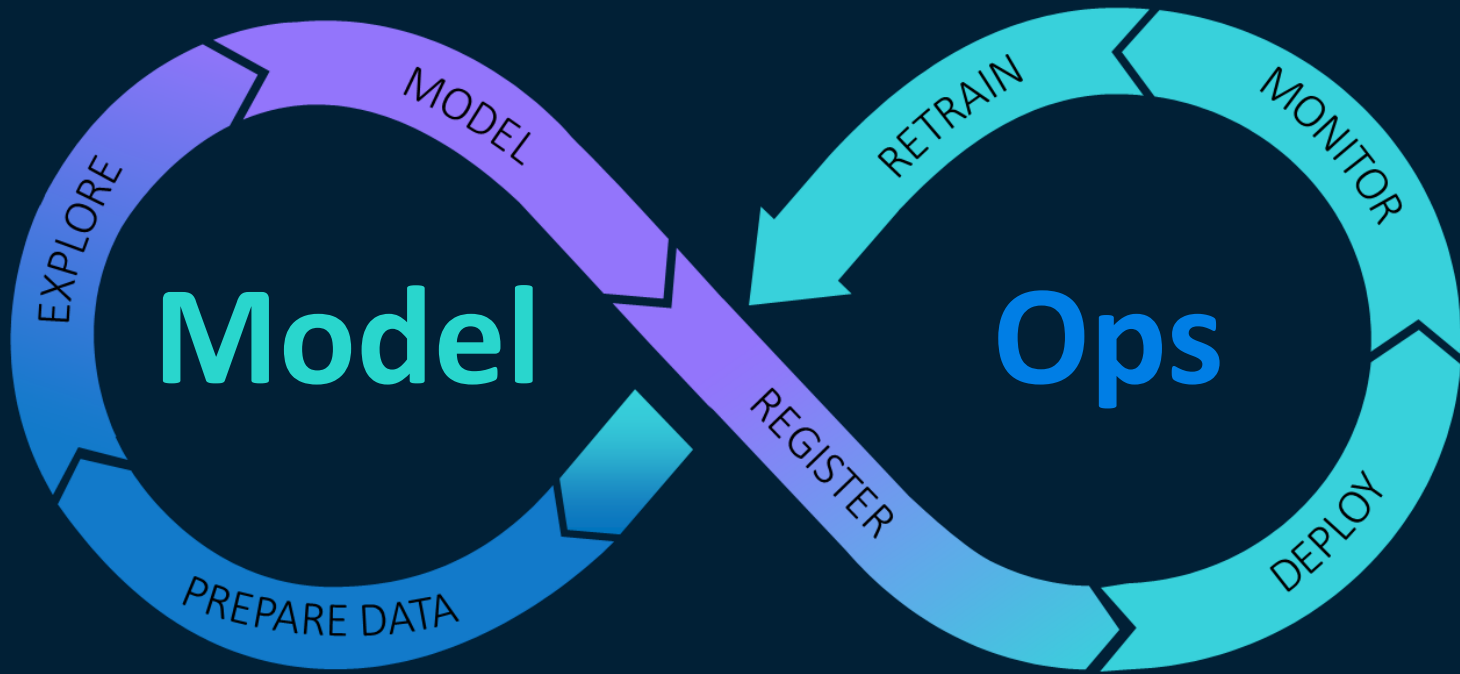


Få modellene ut

Mens de er relevante







Modeller av høy kvalitet driver viktige forbedringer i alle bransjer



Effektiv
markedsføring i
sanntid

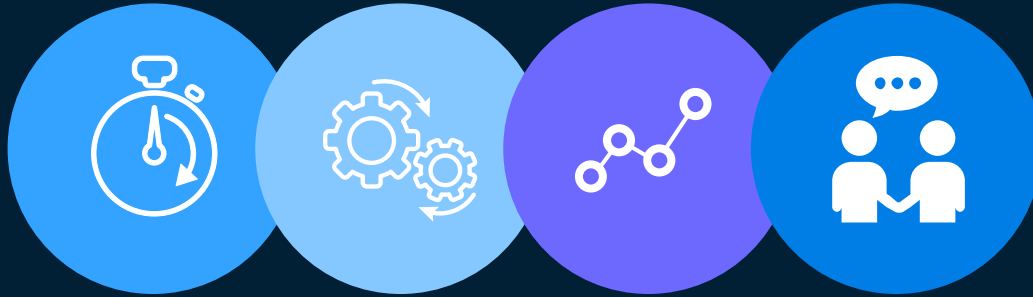


Produktkvalitet og
sikkerhets-
vurderinger



Avsløring av
svindel på garanti,
oppgjør og
transaksjoner

Viktige spørsmål



- 01** Hvor lang tid tar det å få en modell produksjonsrett? Hvor gamle er de data modellen ble trent opp på?
- 02** Hvor mange modeller har dere? Hvordan er du trygg på at beste modell blir brukt?
- 03** Når og hvordan ble modellen som er i produksjon oppdatert?

Utfordringer under overflaten

Modeller i produksjon

Tapte muligheter

Færre enn 50% av de beste modellene blir produksjonssatt

90% av modellene tar mer enn 3 måneder å få i produksjon

Mangel på repeterbare prosesser og samarbeid

Manuell modellutrulling

Tapte muligheter

ANALYTISK
VERDI

MEDGÅTT TID = TAPTE MULIGHETER

MANGLENDE STYRING = MINKENDE RELEVANS OG VERDI

TID

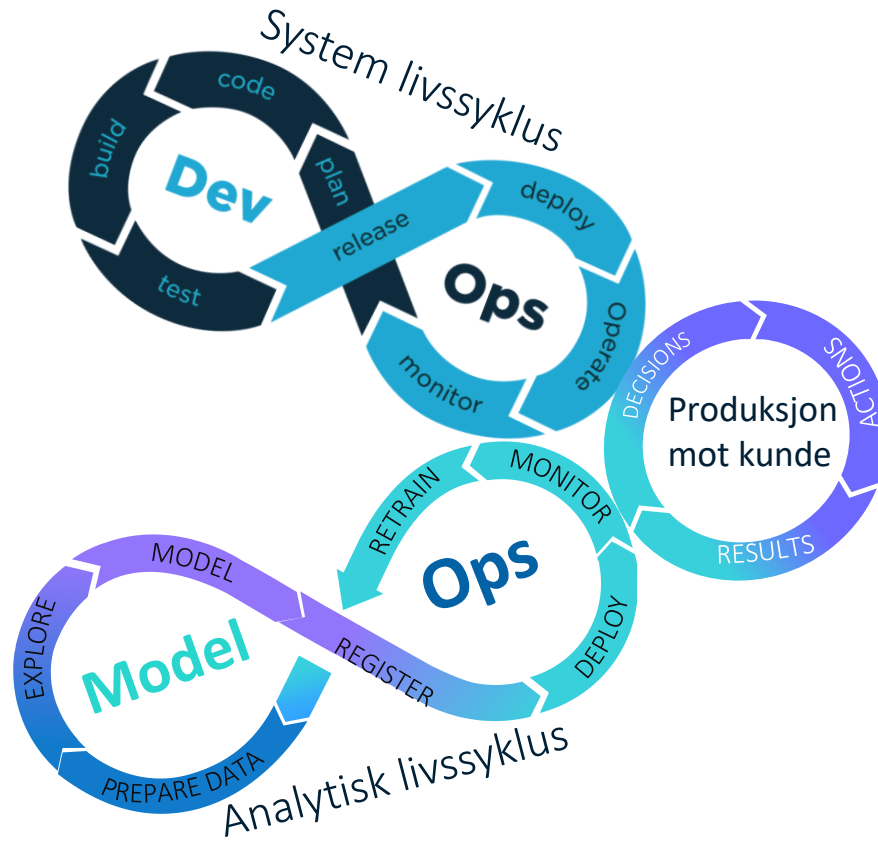
Data
prep

Bygg Modell

Omkode Modell

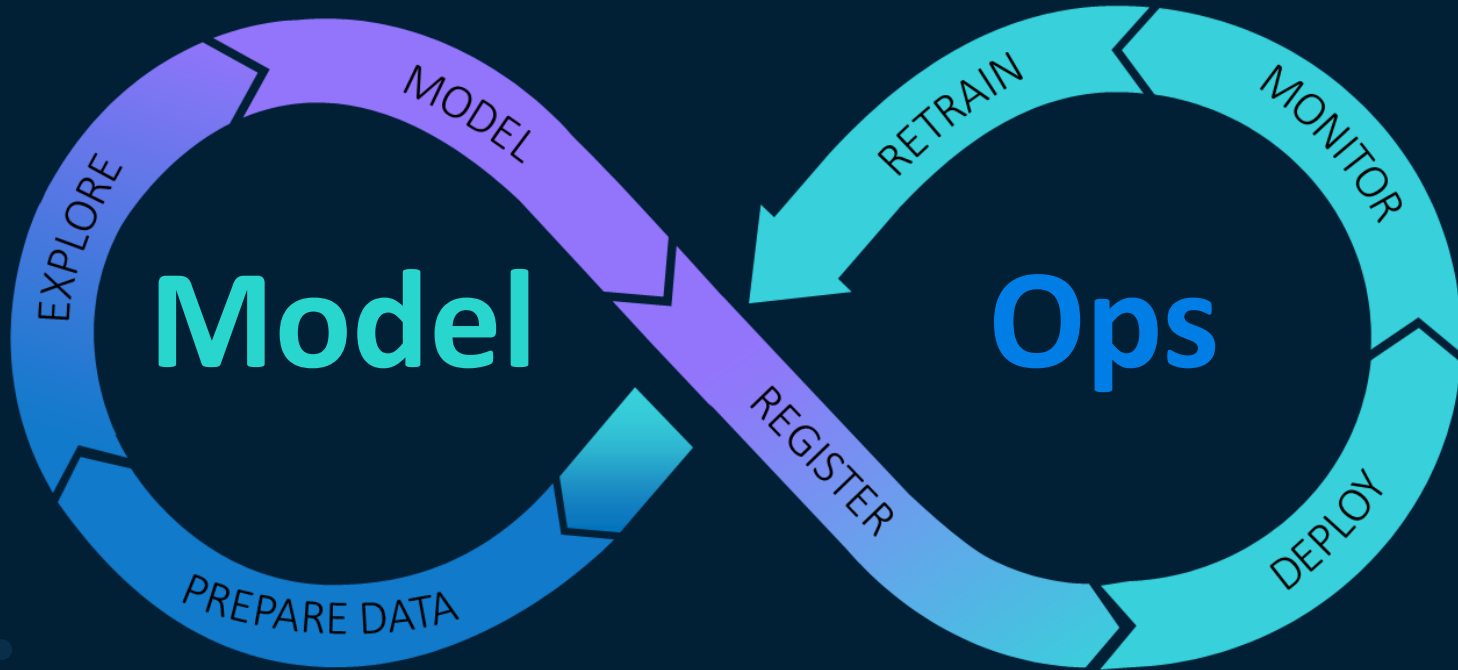
Manuell utrulling

Manglende
Styring / Overvåking / Retrening



Operasjonalisering av analyse

Analytisk livsløp og ModelOps



Deployment Register and Deploy



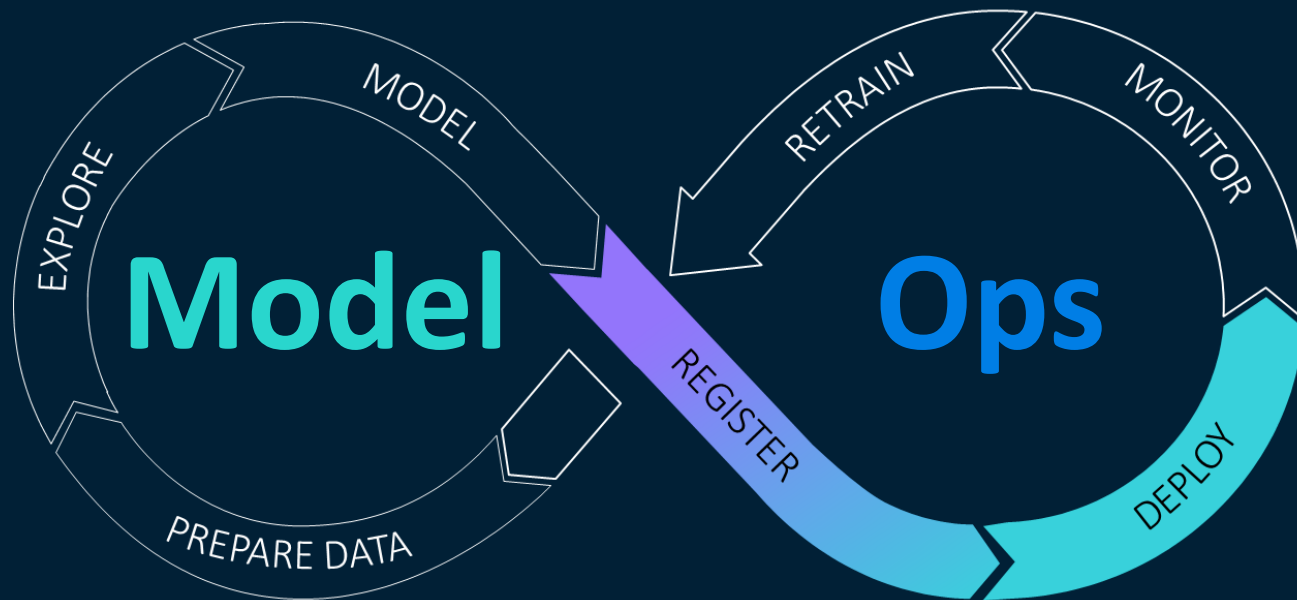
Central
Repository



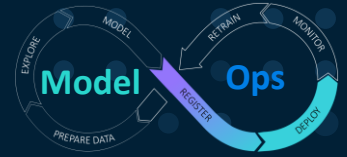
Model
Governance



Build once and
deploy rapidly
anywhere



Deployment Common Repository



SAS® Model Manager - Manage Models

Fleet Management

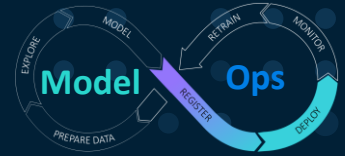
Models Variables Properties Scoring Performance Workflow History

Search event

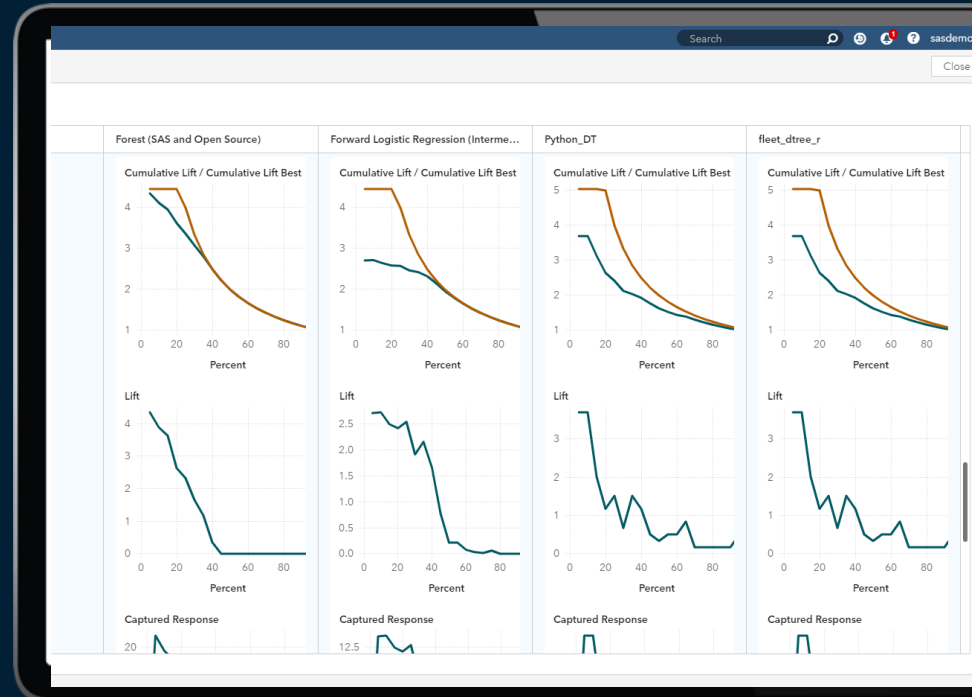
Event	Project Version	Model	Publishing Destination	Event Date
Project version created	1.0			Jun 3, 2020 12:57 PM
Project created				Jun 3, 2020 12:57 PM
Model created	1.0	Fleet_XGBoost (1.0)		Jun 3, 2020 12:58 PM
Model created	1.0	Fleet_SKLearn_DTree (1.0)		Jun 3, 2020 12:58 PM
Model created	1.0	Fleet_SKLearn_Logistic (1.0)		Jun 3, 2020 12:58 PM
Model set as champion	1.0	Fleet_XGBoost (1.0)		Jun 3, 2020 05:06 PM
Model set as challenger	1.0	Fleet_SKLearn_Logistic (1.0)		Jun 3, 2020 05:06 PM
Model published	1.0	Fleet_SKLearn_Logistic (1.0)	SAS Micro Analytic Service (maslocal)	Jun 3, 2020 05:07 PM
Model published	1.0	Fleet_XGBoost (1.1)	SAS Micro Analytic Service (maslocal)	Jun 3, 2020 05:07 PM
Model published	1.0	Fleet_SKLearn_Logistic (2.0)	Azure (AzureDemo)	Jun 3, 2020 05:14 PM
Model published	1.0	Fleet_XGBoost (2.0)	Azure (AzureDemo)	Jun 3, 2020 05:15 PM
Model set as champion	1.0	Fleet_SKLearn_DTree (1.0)		Jun 3, 2020 06:08 PM
Model set as challenger	1.0	Fleet_XGBoost (3.0)		Jun 3, 2020 06:08 PM
Model set as challenger	1.0	Fleet_SKLearn_Logistic (3.0)		Jun 3, 2020 06:09 PM
Model set as champion	1.0	Decision Tree (1.0)		Jun 4, 2020 08:03 AM
Model set as champion	1.0	Decision Tree (1.1)		Jun 4, 2020 08:05 AM
Model set as challenger	1.0	Fleet_XGBoost (3.0)		Jun 4, 2020 08:05 AM
Model set as challenger	1.0	Fleet_SKLearn_Logistic (3.0)		Jun 4, 2020 08:32 AM
Model published	1.0	Decision Tree (1.2)	SAS Micro Analytic Service (maslocal)	Jun 4, 2020 08:45 AM
Model published	1.0	Decision Tree (2.0)	CAS (CASDest)	Jun 4, 2020 08:47 AM
Model published	1.0	Fleet_XGBoost (3.0)	CAS (CASDest)	Jun 4, 2020 08:48 AM
Model published	1.0	Fleet_SKLearn_Logistic (3.0)	CAS (CASDest)	Jun 4, 2020 08:48 AM

- Register and inventory ALL analytic models
- Prebuilt model life cycle templates
- Share and collaborate

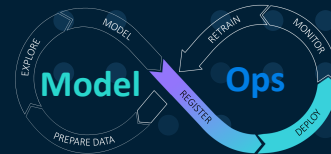
Deployment Model Governance



- Compare SAS & open source models side-by-side
- Manage & operationalize SAS & open source models



Deployment Governance



SAS Model Manager

Models

Filter

Advanced Filter

Repository (1 of 3)

- Carrie Repository
- mmAutomation_test
- Repository 1

Location

/Model Repositories

Modified By (1 of 8)

- brmdev
- dswieh
- edmdev
- glidin
- kriapo
- raevan

Date Modified

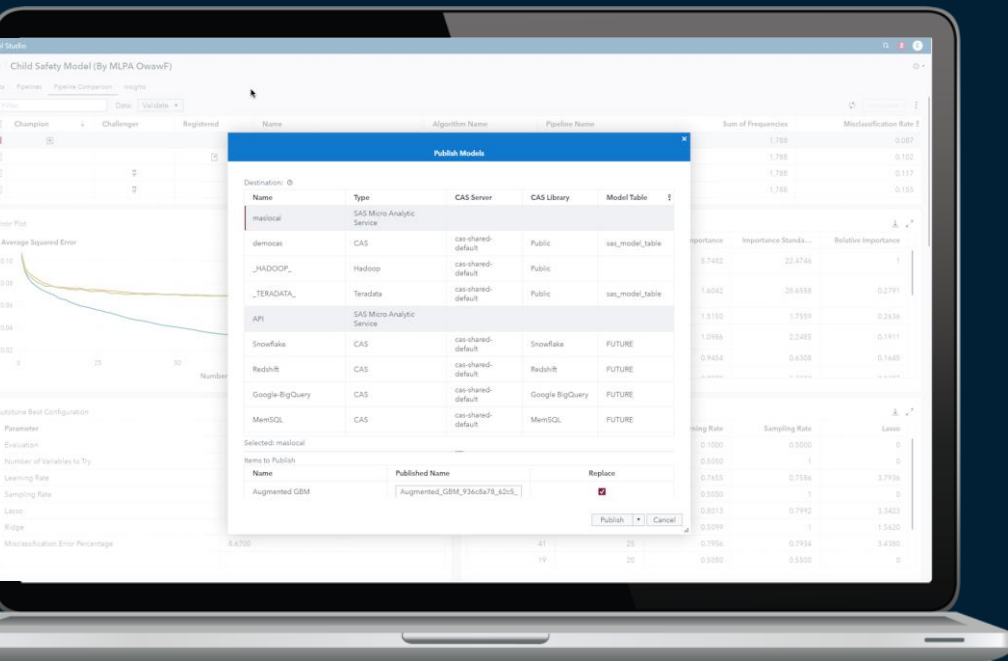
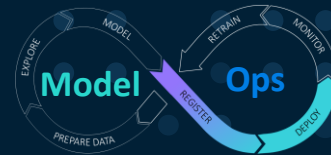
Items (7) Repository 1 brmdev

<input type="checkbox"/>	Name	R...	Model Func...	Location	Project (Version)	Date Modifi...	Modified By
<input type="checkbox"/>	testSPK		Classification	/Model Repositories/R epository 1		Aug 18, 2017 10:15 AM	brmdev
<input type="checkbox"/>	reg		Classification	/Model Repositories/R epository 1/Roster	Project 1, Version 1 (1.0)	Aug 21, 2017 10:34 AM	brmdev
<input type="checkbox"/>	3		Classification	/Model Repositories/R epository 1/A_Folder		Aug 16, 2017 03:35 PM	brmdev
<input type="checkbox"/>	2		Classification	/Model Repositories/R epository 1/A_Folder		Aug 16, 2017 03:35 PM	brmdev
<input type="checkbox"/>	HMECItem		Classification	/Model Repositories/R epository 1		Aug 18, 2017 10:16 AM	brmdev
<input type="checkbox"/>	4		Classification	/Model Repositories/R epository 1/A_Folder		Aug 16, 2017 03:35 PM	brmdev

- Lineage record for all models in one place
- Version control & track project history to ensure compliance with internal analytical processes

Deployment

Build once and rapidly deploy anywhere

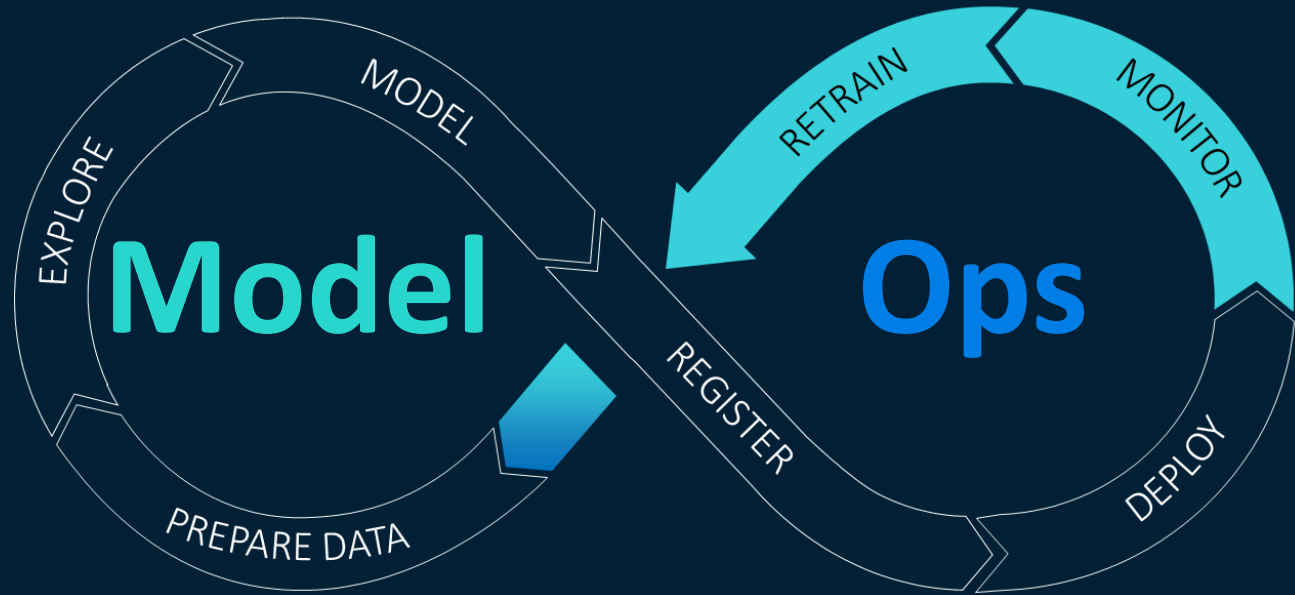


- Test and validate models
- Publish to different production environments including in-batch, streaming, cloud or edge device
- Automation to support ModelOps

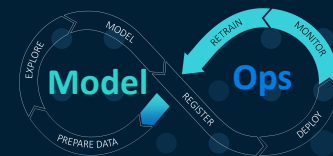
Deployment Monitor and Retrain


Monitor Performance

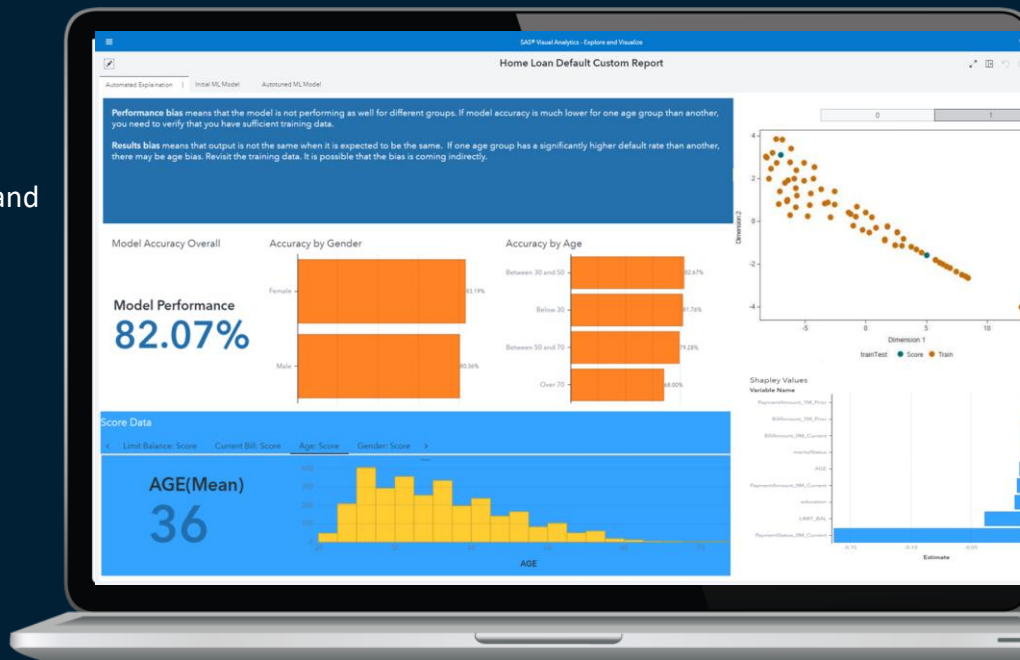

Improve



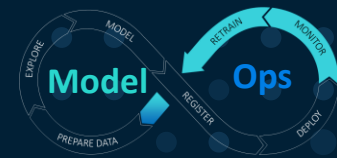
Deployment Monitor Performance



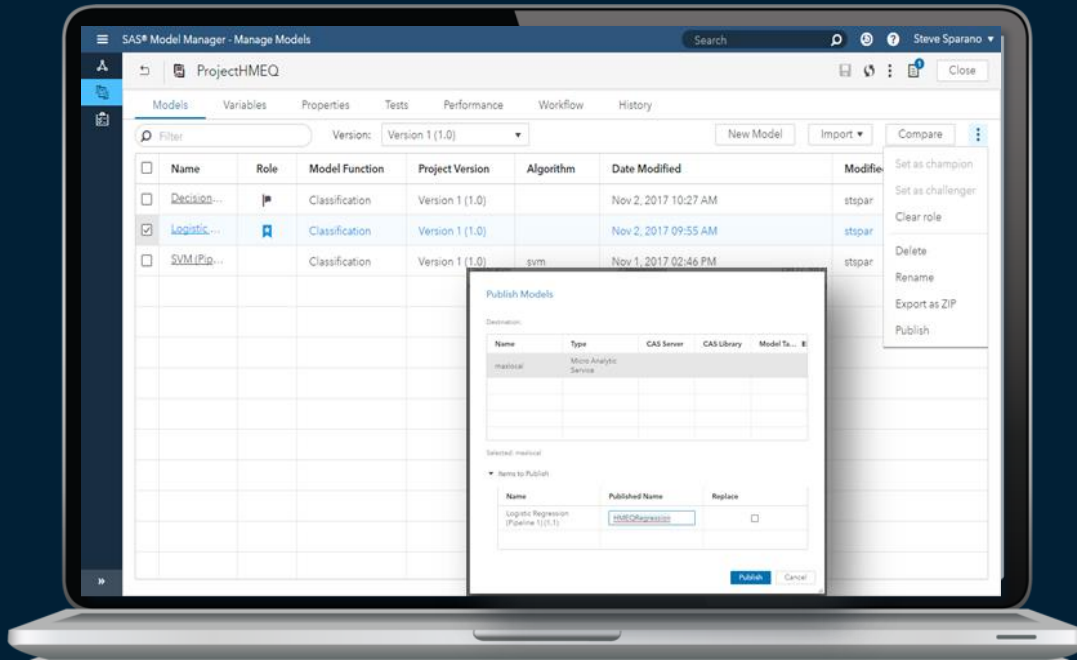
- Out of the box performance reports to monitor drift and performance
- Performance-monitoring tasks including data source and time execution
- Track all model attributes post deployment



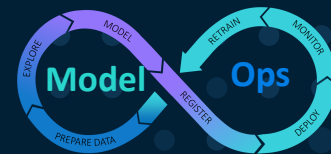
Deployment Improve



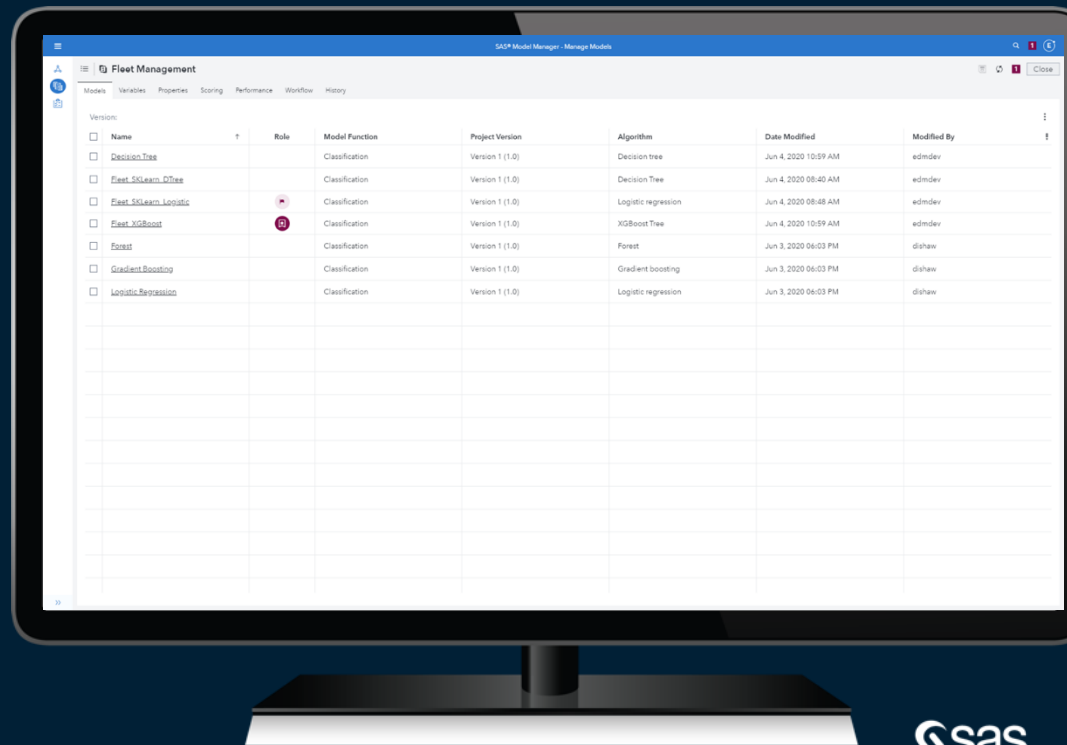
- Retrain when model shows decay
- Easily redeploy or replace models



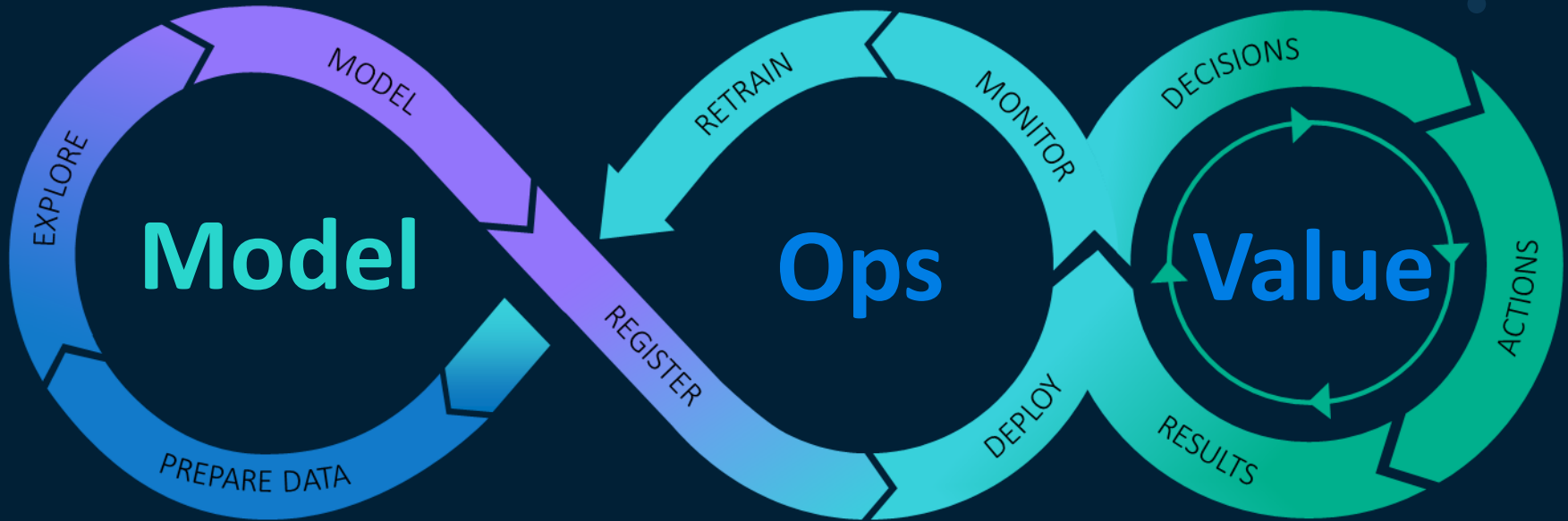
Automation Supporting ModelOps



- Create custom workflows matching business requirements and processes
- Start a workflow process to track the progress of your project
- Out of the box task templates
- Automate end-to-end deployment process using either SAS OOB workflow management tools or integrate with existing frameworks via REST API's



Operasjonalisering av analyse



ANALYTICS

IT

BUSINESS

Operationalizing



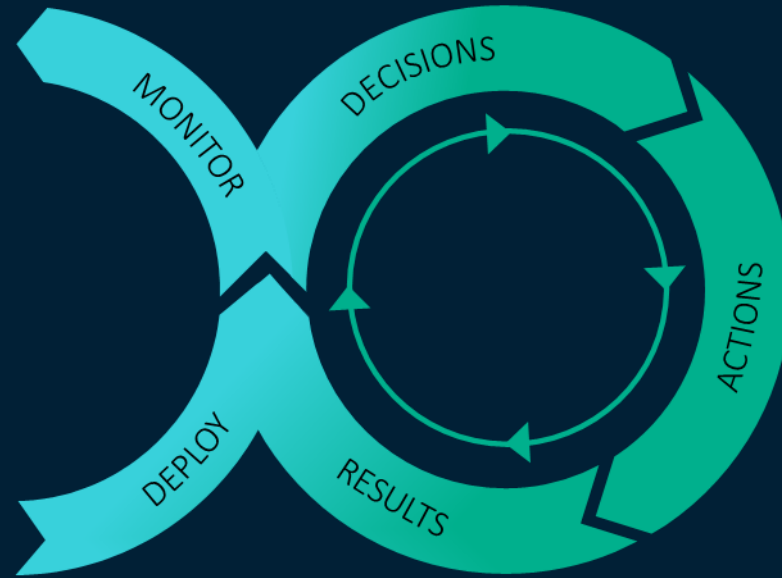
Manage decisions



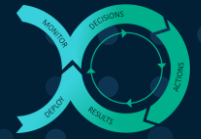
Business rule and analytical model execution



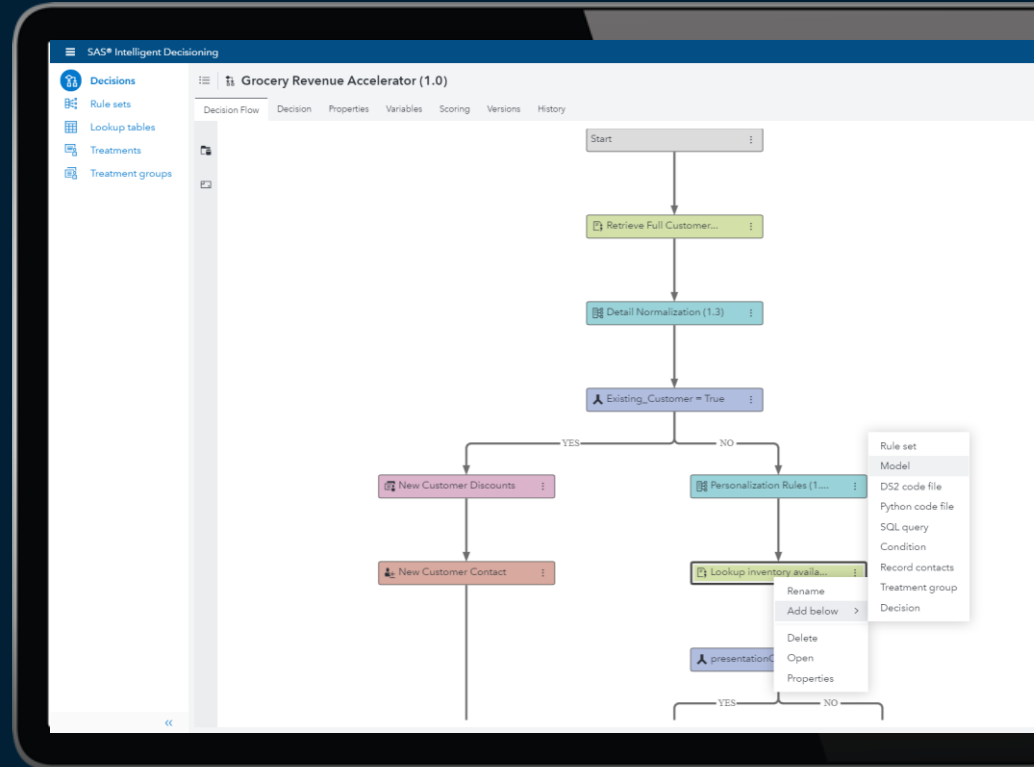
Automate high volume interactions



Operationalizing Manage Decisions



- Design, manage and govern decisions
- Decision testing, lineage, versioning and validation



Manuell modellutrulling

Tapte muligheter

ANALYTISK
VERDI

MEDGÅTT TID = TAPTE MULIGHETER

MANGLENDE STYRING = MINKENDE RELEVANS OG VERDI

TID

Data
prep

Bygg Modell

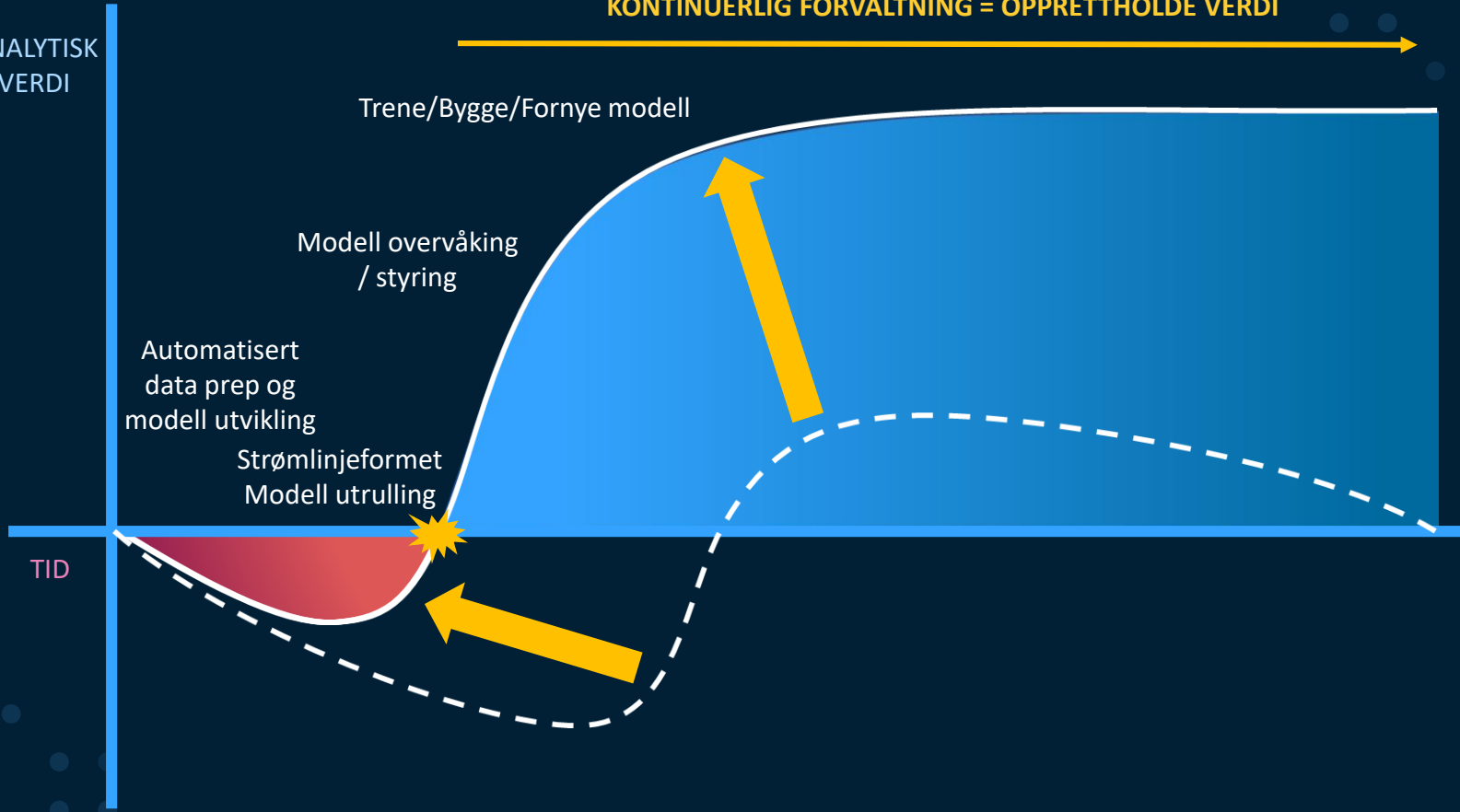
Omkode Modell

Manuell utrulling

Manglende
Styring / Overvåking / Retrening

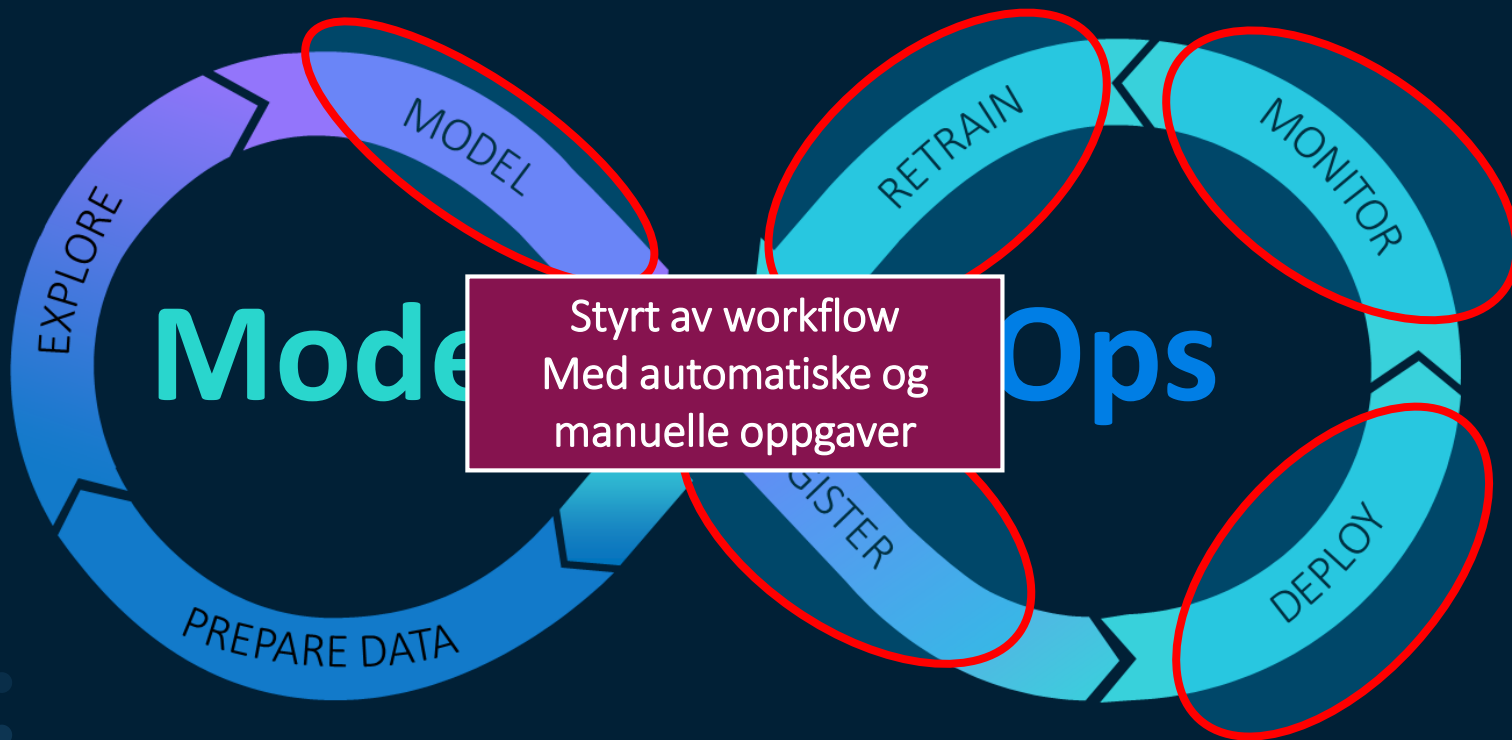
KONTINUERLIG FORVALTNING = OPPRETTOLDE VERDI

ANALYTISK
VERDI



Operasjonalisering av analyse

Analytisk livsløp og ModelOps





Demo

sas.com



Operasjonalisering av analyse

Analytisk livsløp og ModelOps

