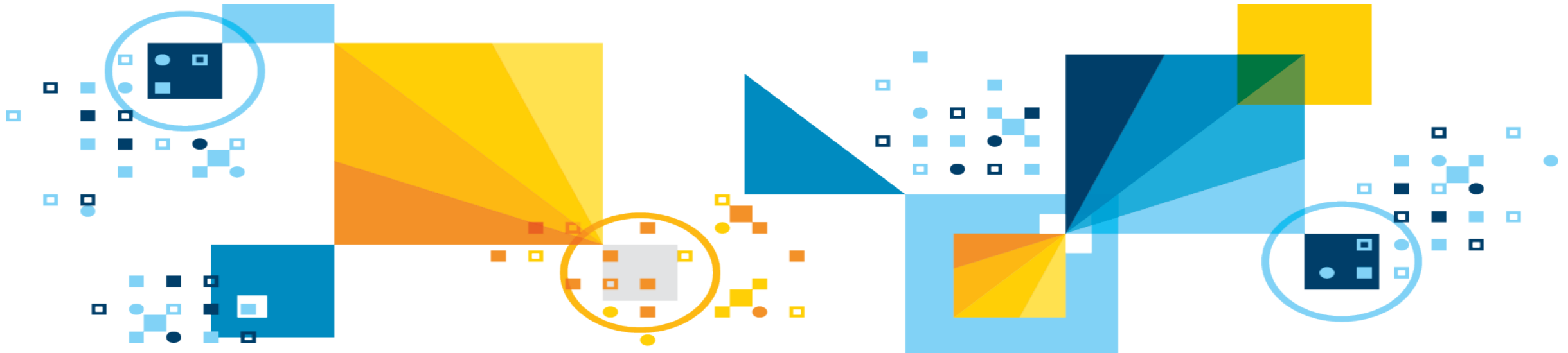


# Latest from the Lab: What's New Machine Learning

## Sam Buhler - Machine Learning Product/Offering Manager



## Please Note

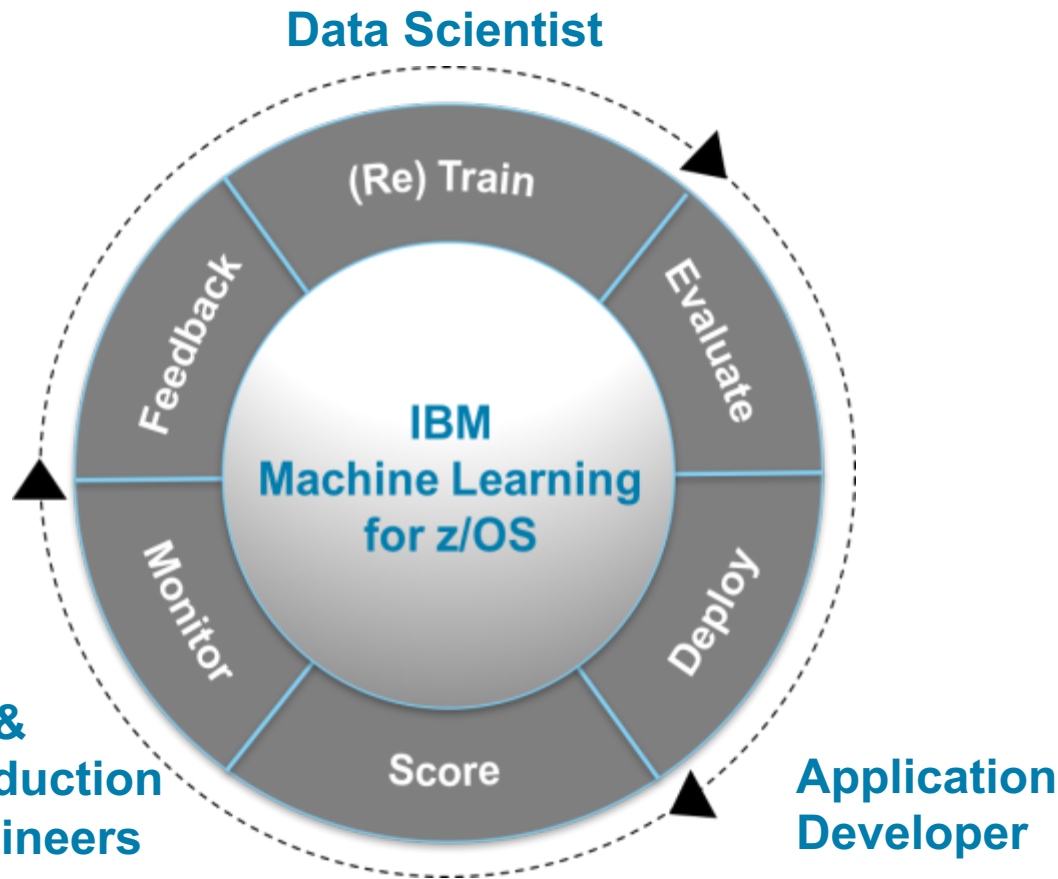
- IBM's statements regarding its plans, directions, and intent are subject to change or withdrawal without notice at IBM's sole discretion.
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Performance is based on measurements and projections using standard IBM benchmarks in a controlled environment. The actual throughput or performance that any user will experience will vary depending upon many factors, including considerations such as the amount of multiprogramming in the user's job stream, the I/O configuration, the storage configuration, and the workload processed. Therefore, no assurance can be given that an individual user will achieve results similar to those stated here.

# Machine Learning for z/OS

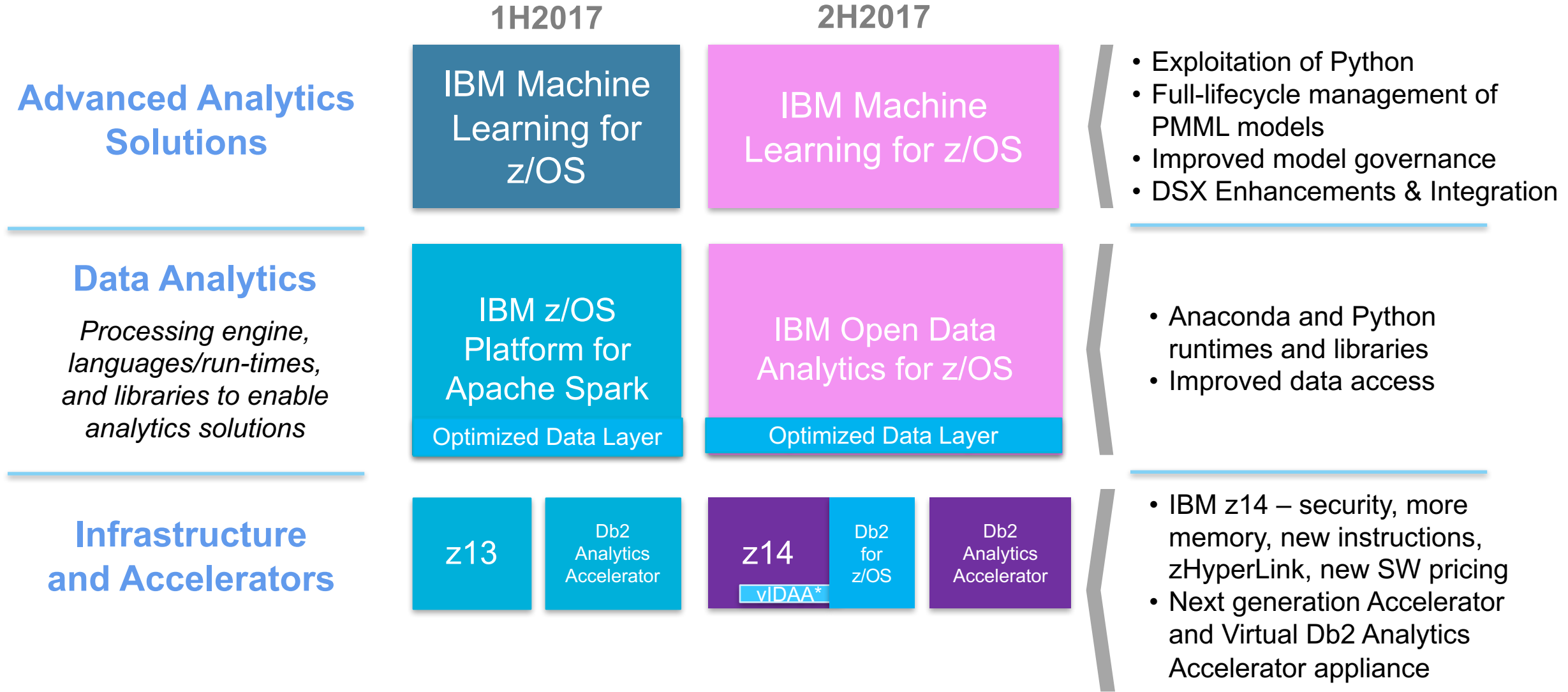
*Quick model development, deployment and management = Faster ROI*



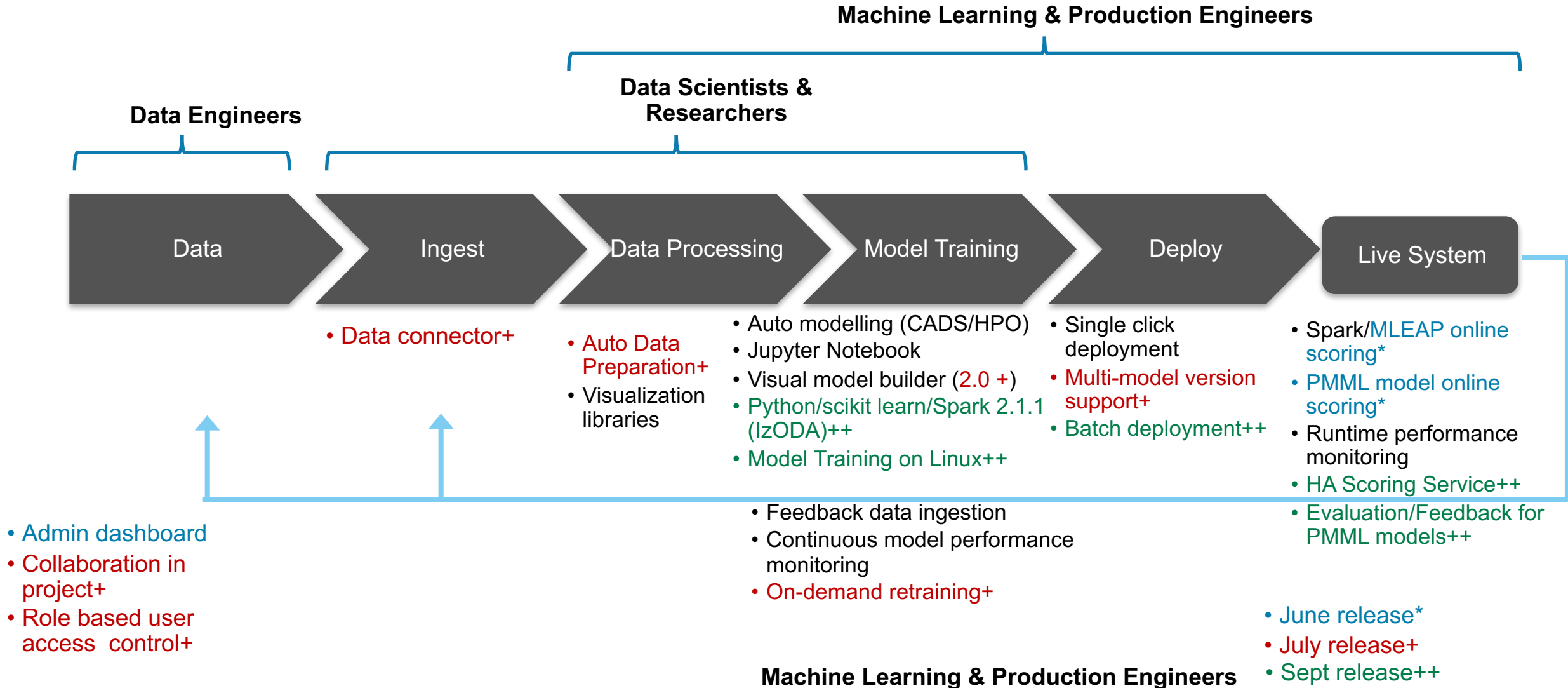
## Hybrid cloud approach to model lifecycle management & collaboration

- Platform agnostic model development
- Leverage enterprise grade open source software
- Real-time insight embedded with transactions
- Insight incorporated from any platform
- Industry leading encryption, security, reliability & availability

# IBM Z Analytics Roadmap



# The Machine Learning Workflow



# Machine Learning for z/OS Roadmap - 2017

April 2017

- Download & Go common installer
- Jupyter on z support
- Support for application cluster on Linux on z
- Consistent User Interface experience across model creation and deployment/management views

June 2017

- PMML scoring engine (SAS/R models conforming to PMML standards can be supported)
- MLeap scoring engine
- Feedback data ingestion directly to Db2 for z/OS
- Administration Dashboard for resource management directly from Web User Interface

July 2017

- On demand retraining
  - Multi-version support
- Model governance phase 1 – user and model access control
- Visual model builder 2.0
  - Support for additional transformers and algorithms
  - Auto data preparation

Sep 2017

- Support for Python/scikit learn with IzODA
- Model creation and training on x86 with deployment and scoring remaining on z/OS
  - Train with Scala/Python/R on x86
- Batch deployment
- Monitoring and feedback data ingestion for PMML model
- Zero downtime for scoring service

4Q 2017

- Model Templates – ITOA use case sample
- Online scoring service in CICS integrated Liberty
- Remote Spark cluster Support
- Sklearn model feedback evaluation
- Sandbox for deployment and scoring
- Automatic retraining / redeployment
- Complete services in application cluster installed on Linux on Z
- Canvas for Spark
- ODM (Operational Decision Manager) integration
- Model governance – audit trace
- Automatic path in visual model builder
- Security enhancement for IzODA
- 3rd party authentication product with ML for z/OS
- Installation simplification by zOSMF workflow