

Get Started with AI - Strategy and Architecture

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Founder AI Tech North

@SMDisrupt



Agenda

- AI Introduction
 - AI Strategy
 - AI Platform
 - AI Demo - Time permitting
 - QnA
-
- Feedback or Tweet @SMDisrupt

Intro – Sherin Mathew

My Background

Cloud Solution Architect, Principal Consultant, Project Delivery
BI Programme Delivery, Project Management
Professional Services, Application and BI Development

Experience

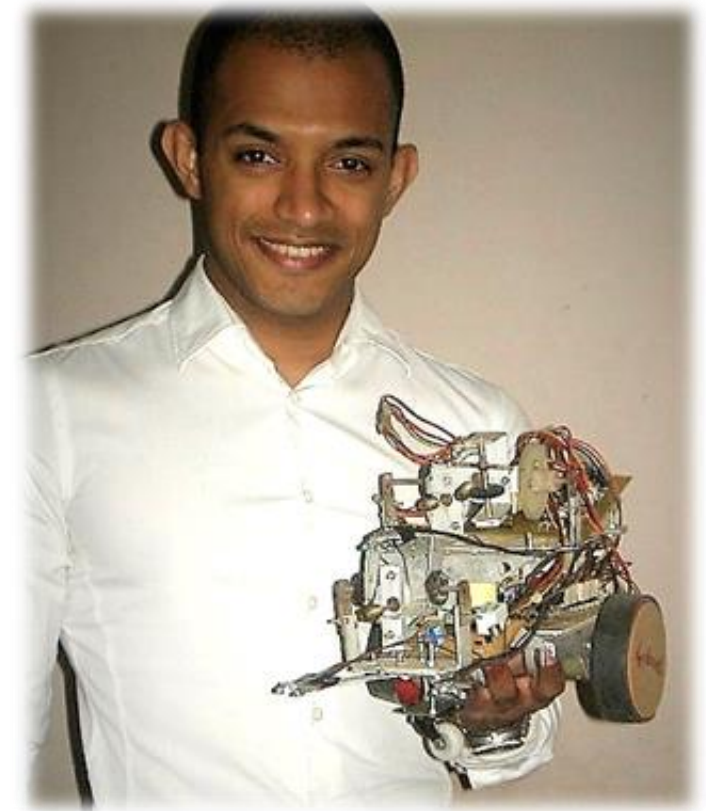
Healthcare, Telecom, Housing groups
Higher Education, Police forces and ICO

My Azure and AI Journey

Last 4 years feel like 20!

Extras

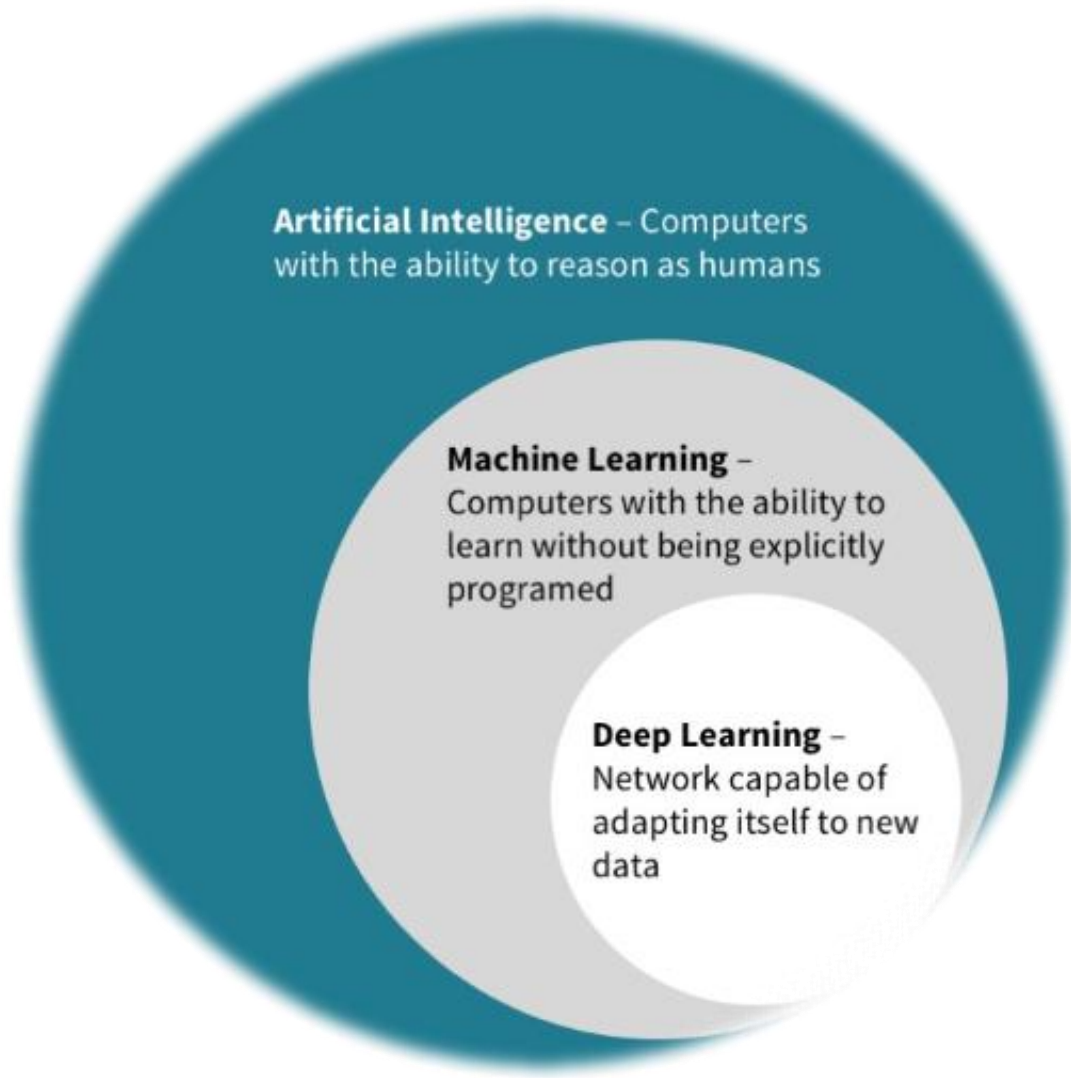
AI User Group, AI Tech North 2019, SQL Pass, Speaker



@SMdisrupt *"Disrupt the disruption!"*

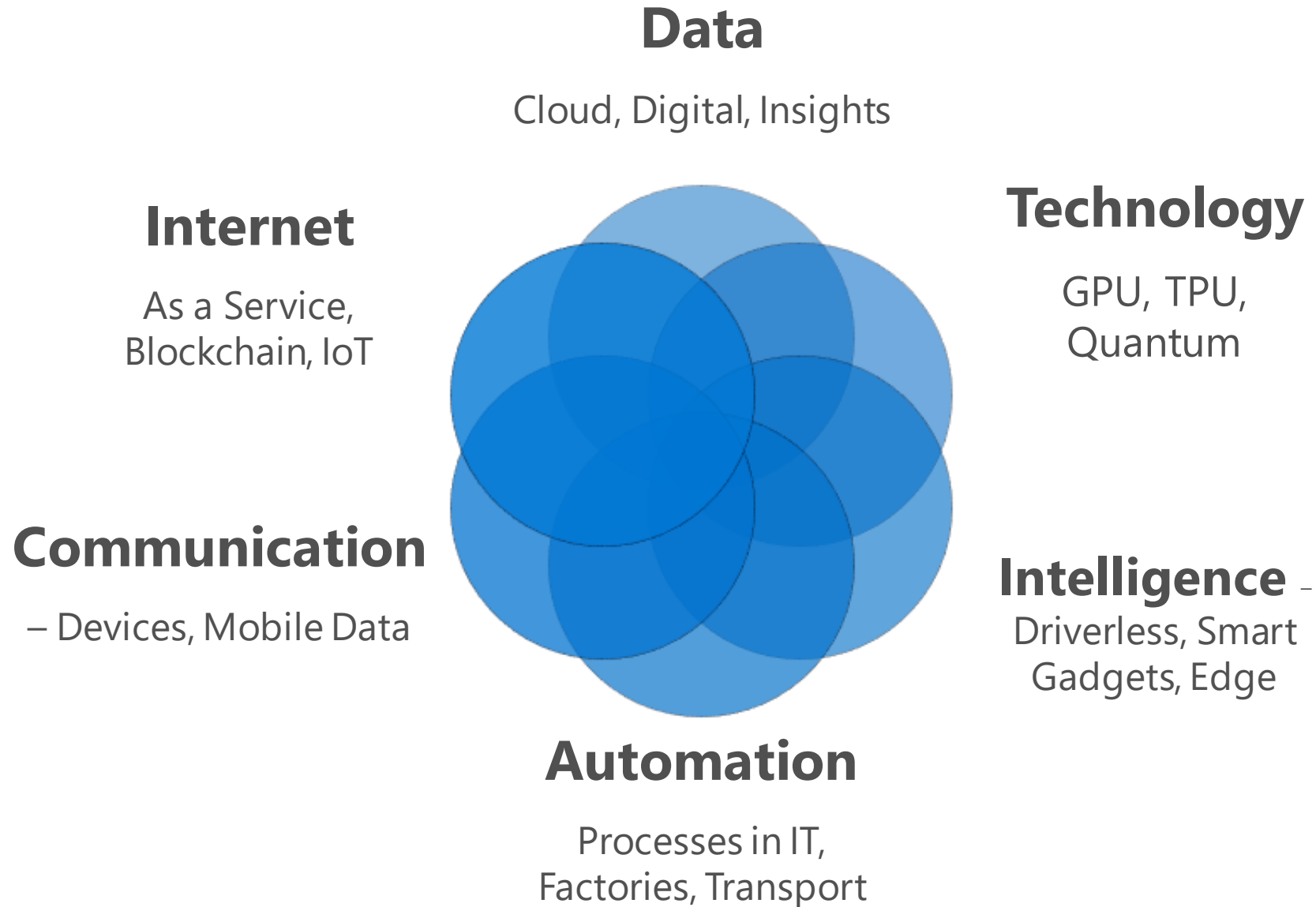
AI Introduction

AI-Gold-Rush

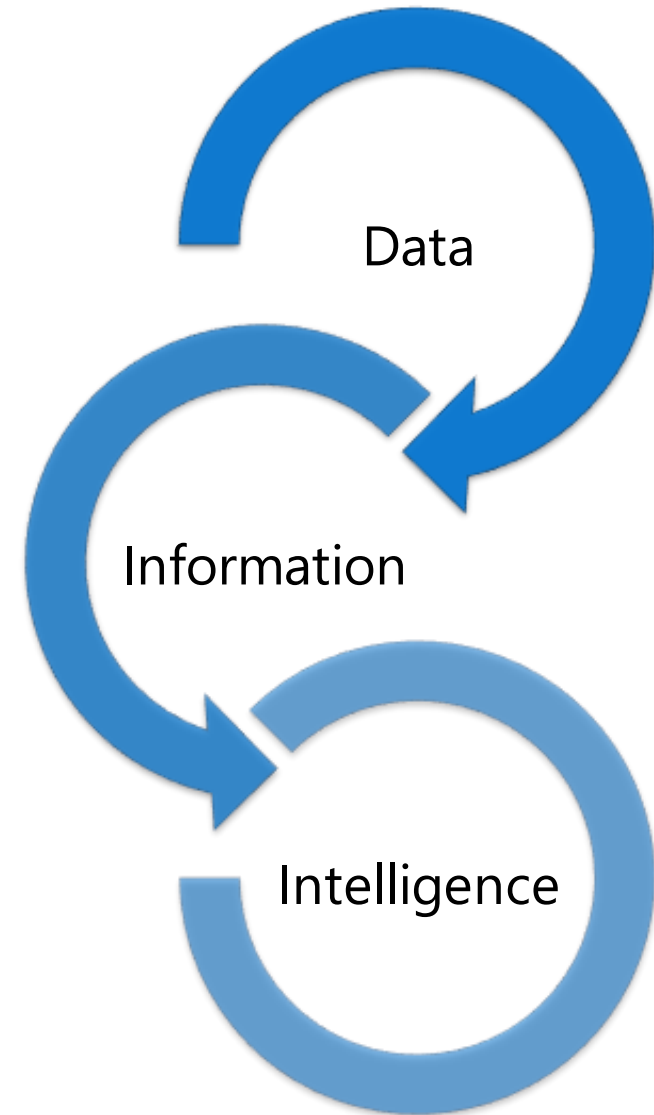
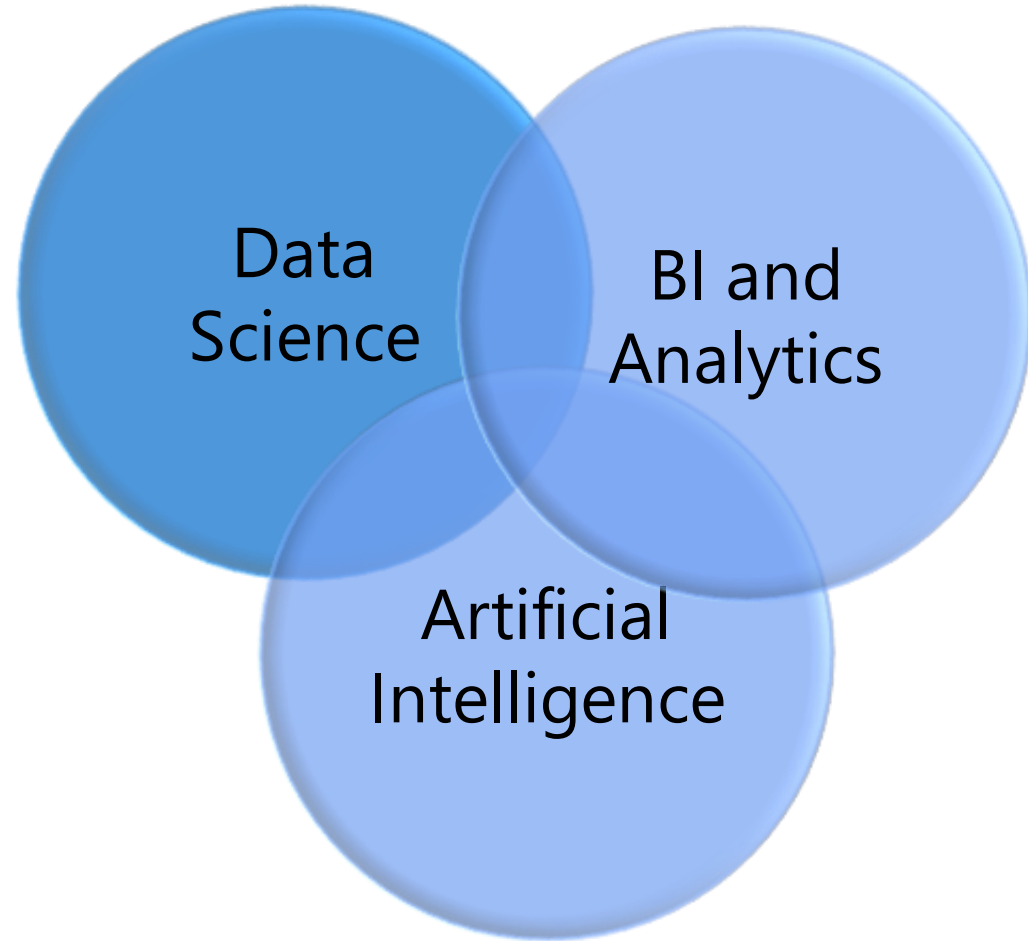


- 1956, the term “AI” coined by scientist John McCarthy at Dartmouth College
- Around 1980 ML starts to flourish
 - IBM’s Deep Blue computer beats Russian chess master Garry Kasparov in 1997
 - IBM’s Watson beat human players on Jeopardy in 2011 utilizing ML
- 2010 – Deep Learning flourishes
 - 2017 – Densenet is announced
- Today everyone is chasing AI as the new Gold-Rush

The Convergence aka Industry 4.0

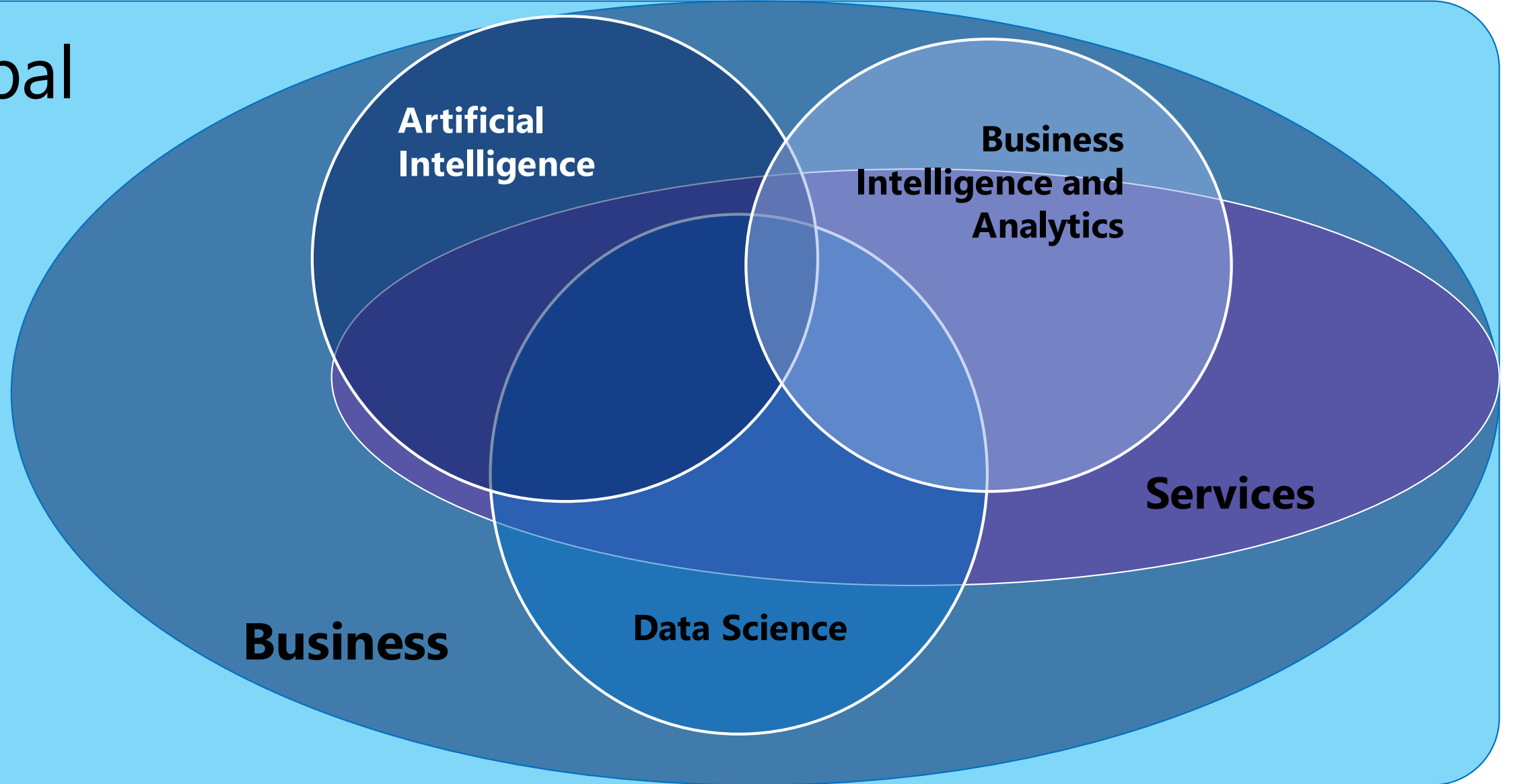


Show me intelligence!



A paradigm shift in roles

Global



AI Strategy

Knock Knock? Who's there?

Artificial Intelligence

With AI, all major industries are about to feel a Turbo-charged impact!



Take a Pause. THINK!

Artificial Intelligence

With AI, all major industries are about to feel a Turbo-charged impact!



Why AI Strategy



AI could add
£10 trillion pounds
to worldwide economic
output by 2030



GDP will increase by up
to 10%, adding **£230bn**
to the UK economy
by the year 2030

Those with AI are
already outperforming
others!

41% UK business
leaders believe
current business
model won't exist in
5 years...

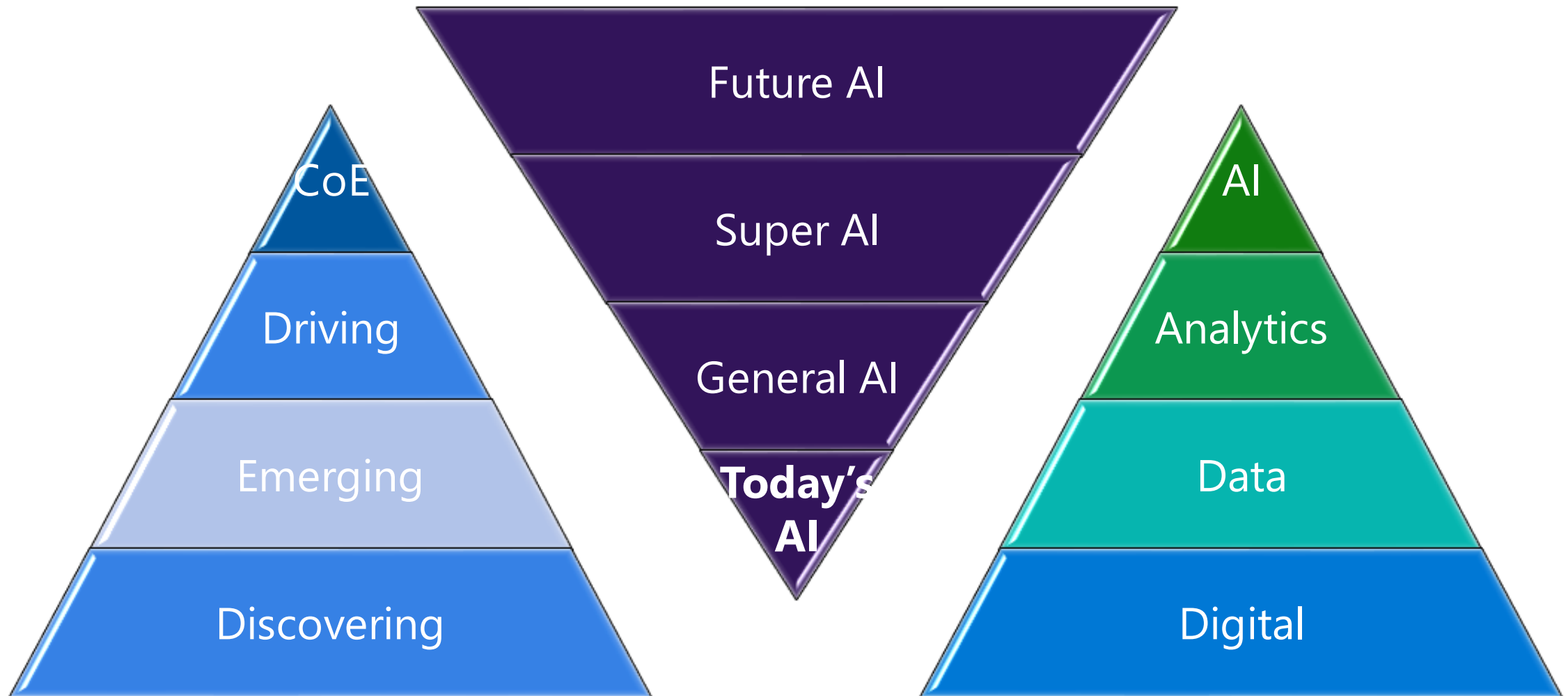


Maximising the
AI opportunity

How to harness the potential of
AI effectively and ethically

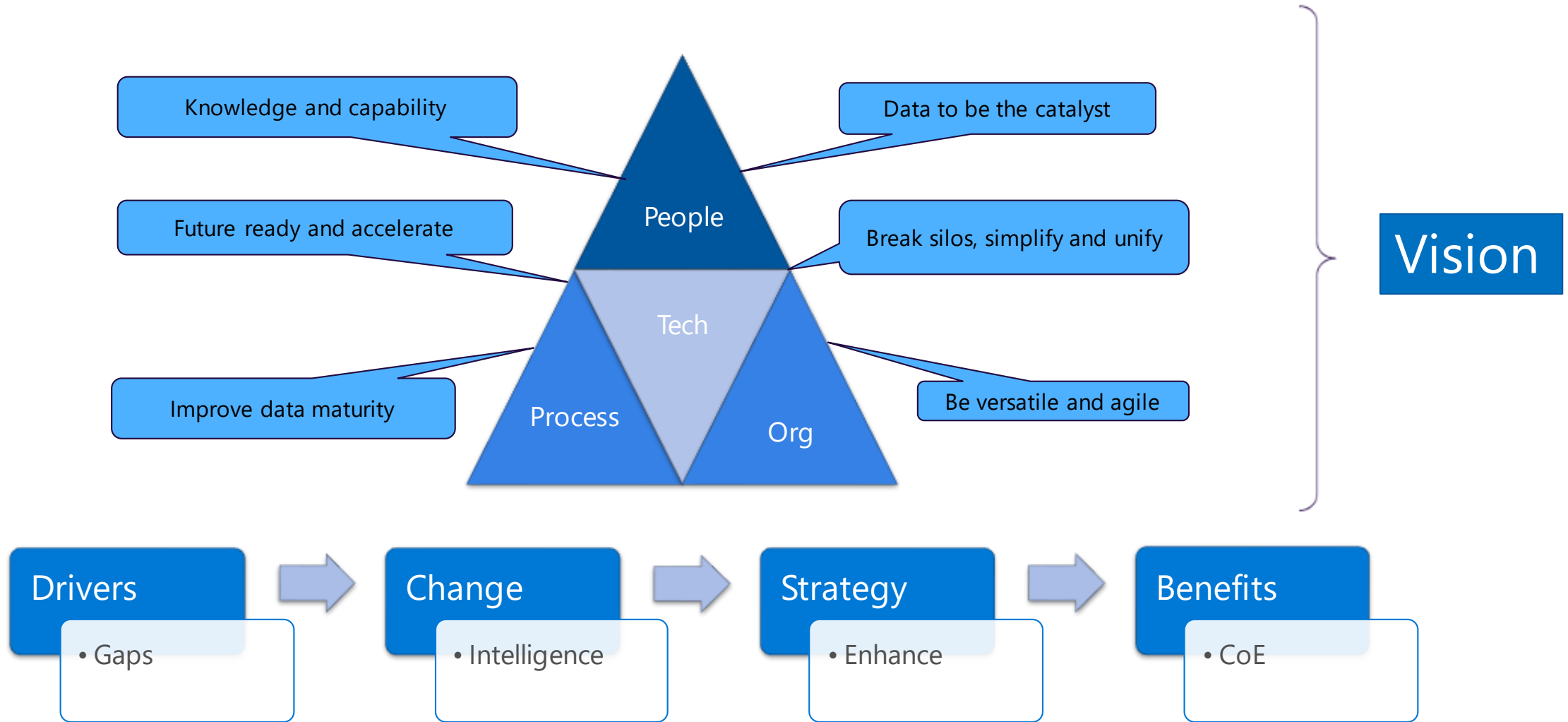
...but fewer than 50%
of UK businesses
have an AI strategy
to address this
challenge

Mind the gap!



Business Discovery

Mind the gap!



The nature of AI Delivery

Cross-cutting

Multi-disciplinary

Risky

Uncertain

Long term

Dis-benefits

Volatile Change

Language Agnostic

Platform Agnostic

Infrastructure Agnostic

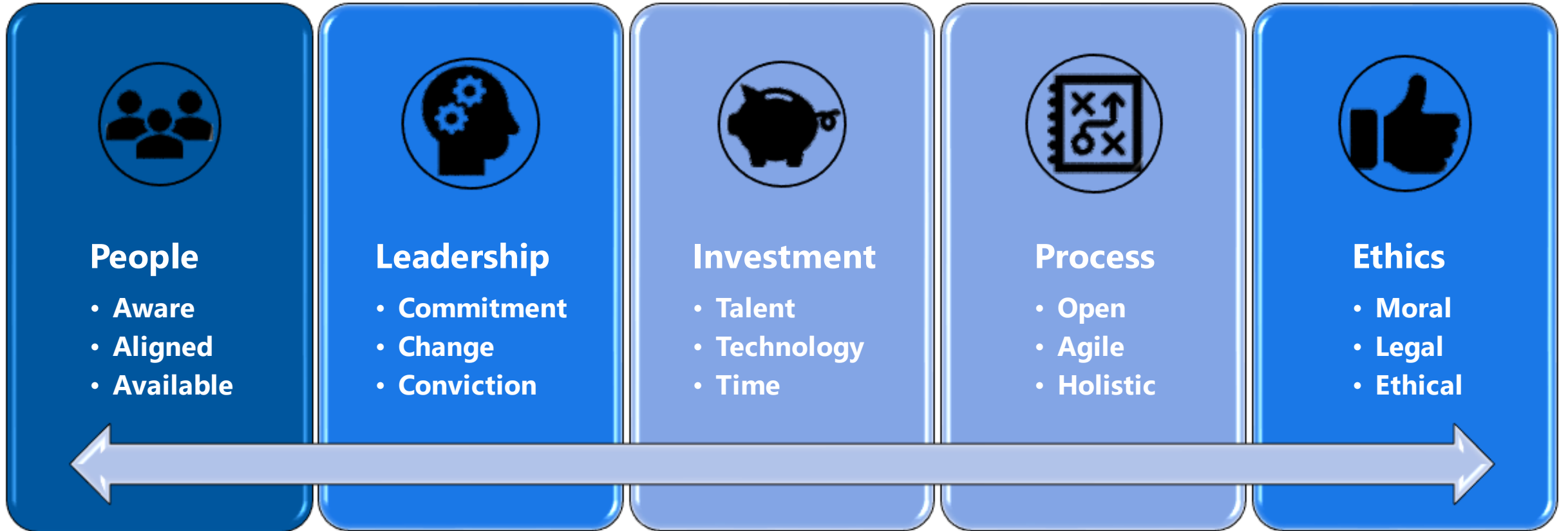
Scalable

Distributed

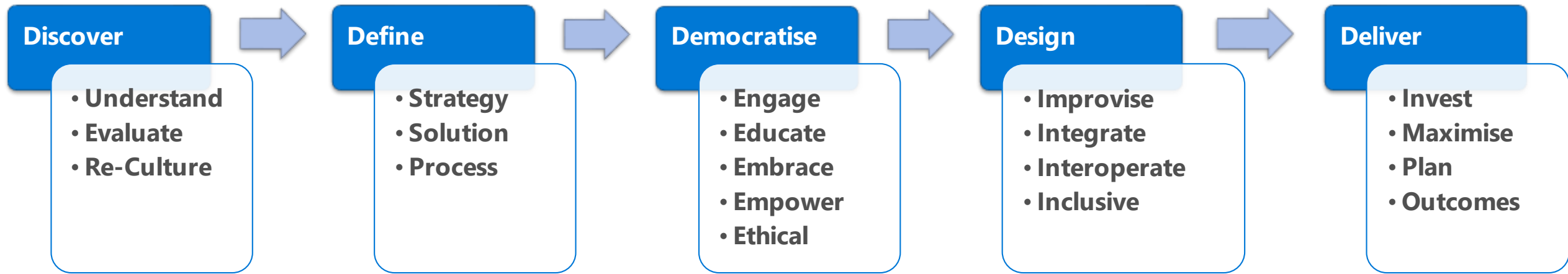
Interoperable

Compliance

Pillars of AI Strategy



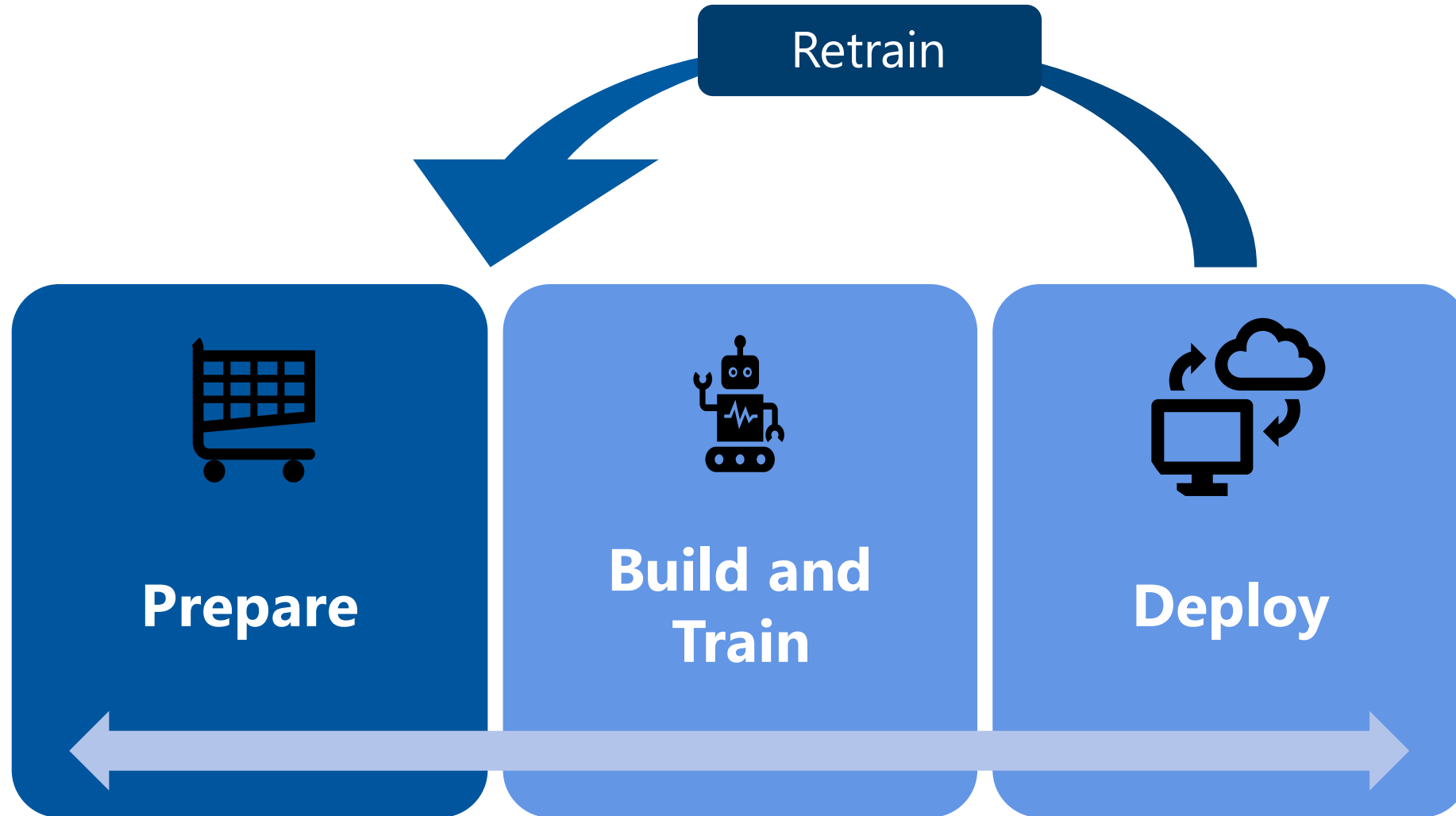
AI Strategy - ACES



We need to overcome the AI disruption – architecturally, culturally, ethically, and Strategically!

Microsoft AI Platform

AI Process



The Microsoft AI Platform

Azure AI Services

PRE-BUILT AI

Cognitive Services

CONVERSATIONAL AI

Bot Service

CUSTOM AI

Azure Machine Learning

Azure Infrastructure

AI ON DATA

Cosmos
DB

SQL
DB

SQL
DW

Data
Lake

Spark

DSVM

Batch
AI

ACS

IoT
Edge

AI COMPUTE

CPU, FPGA, GPU

Tools

CODING & MANAGEMENT TOOLS

VS Tools
for AI

Azure ML
Studio

Azure ML
Workbench

Others (PyCharm, Jupyter Notebooks...)

DEEP LEARNING FRAMEWORKS

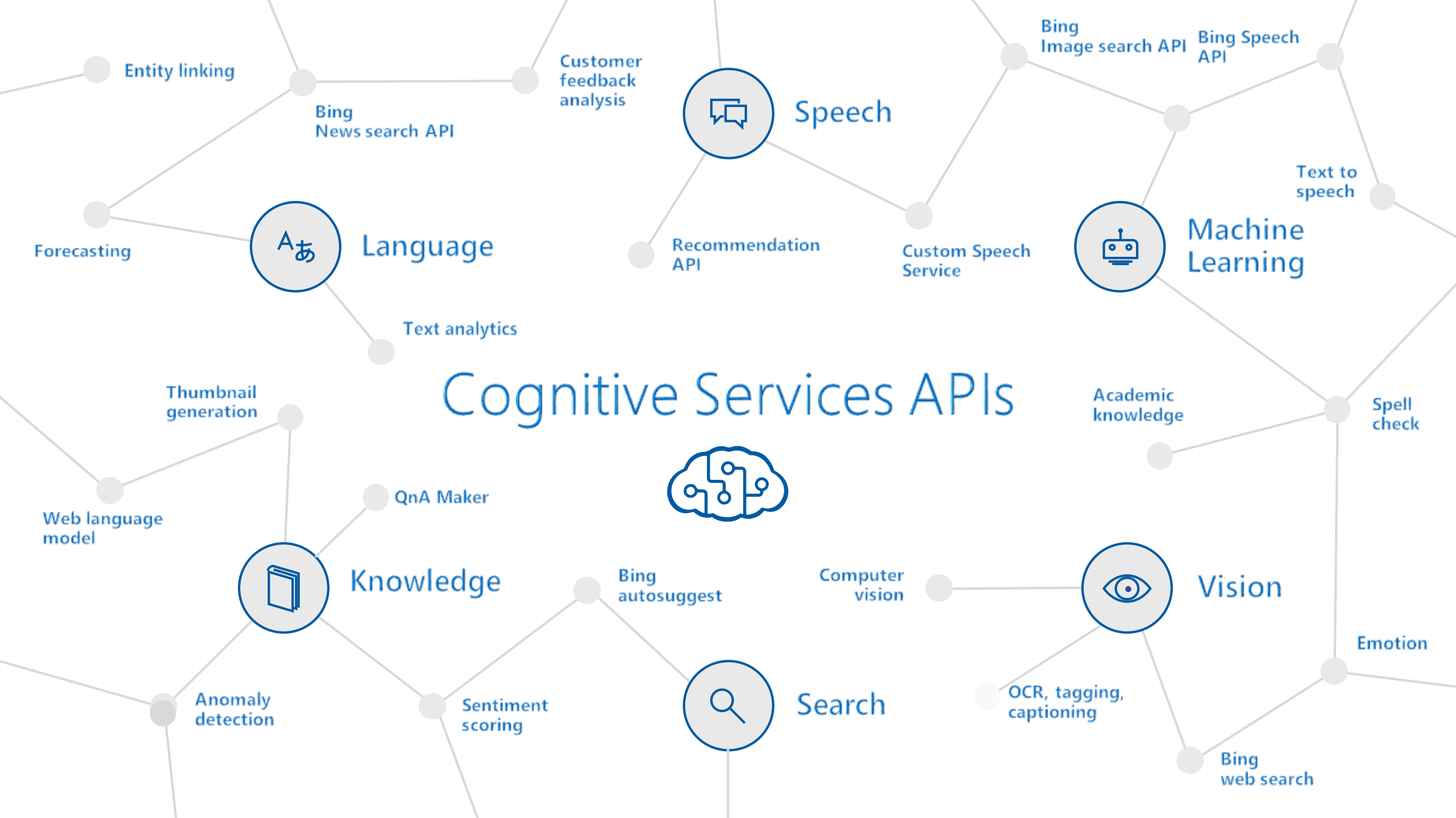
3rd Party

Cognitive
Toolkit

TensorFlow

Caffe

Others (Scikit-learn, MXNet, Keras,
Chainer, Gluon...)



Microsoft Cognitive Services

Give your apps
a human side

Cognitive Services API Collection



Vision

Computer Vision | Content Moderator | Emotion | Face | Video



Speech

Bing Speech | Custom Speech Service | Speaker Recognition



Language

Bing Spell Check | Language Understanding | Linguistic Analysis | Text Analytics | Translator | Web Language Model



Knowledge

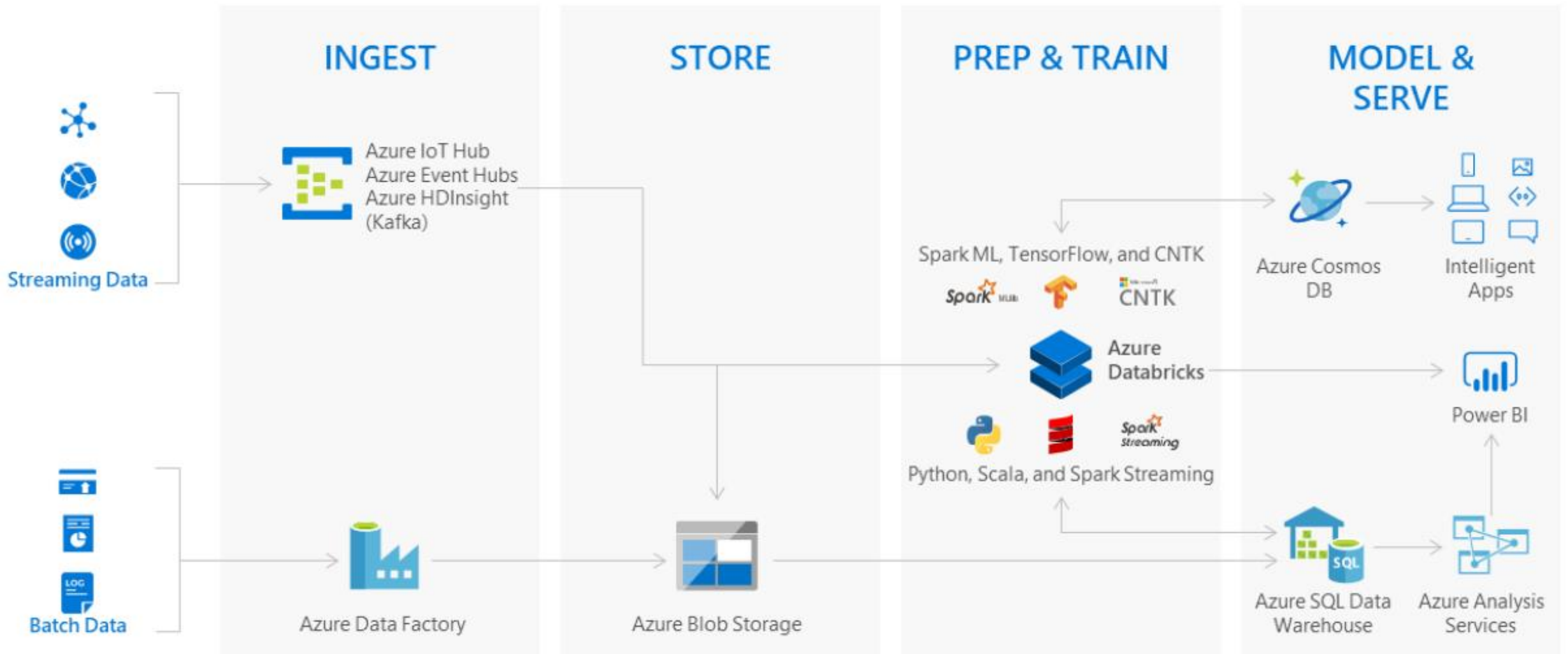
Academic Knowledge | Entity Linking | Knowledge Exploration | Recommendations | QnA Maker



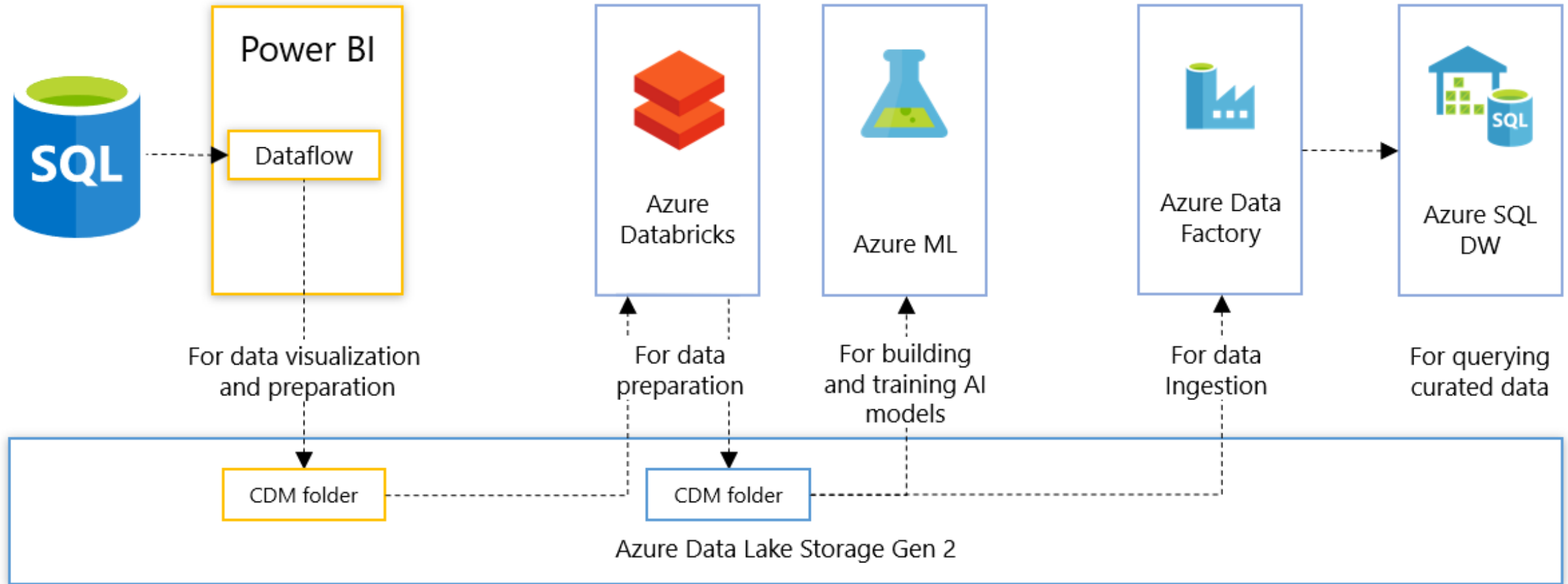
Search

Bing Autosuggest | Bing Image Search | Bing News Search | Bing Video Search | Bing Web Search

PaaS- AI Architecture



AI with PowerBI and ADLS gen2



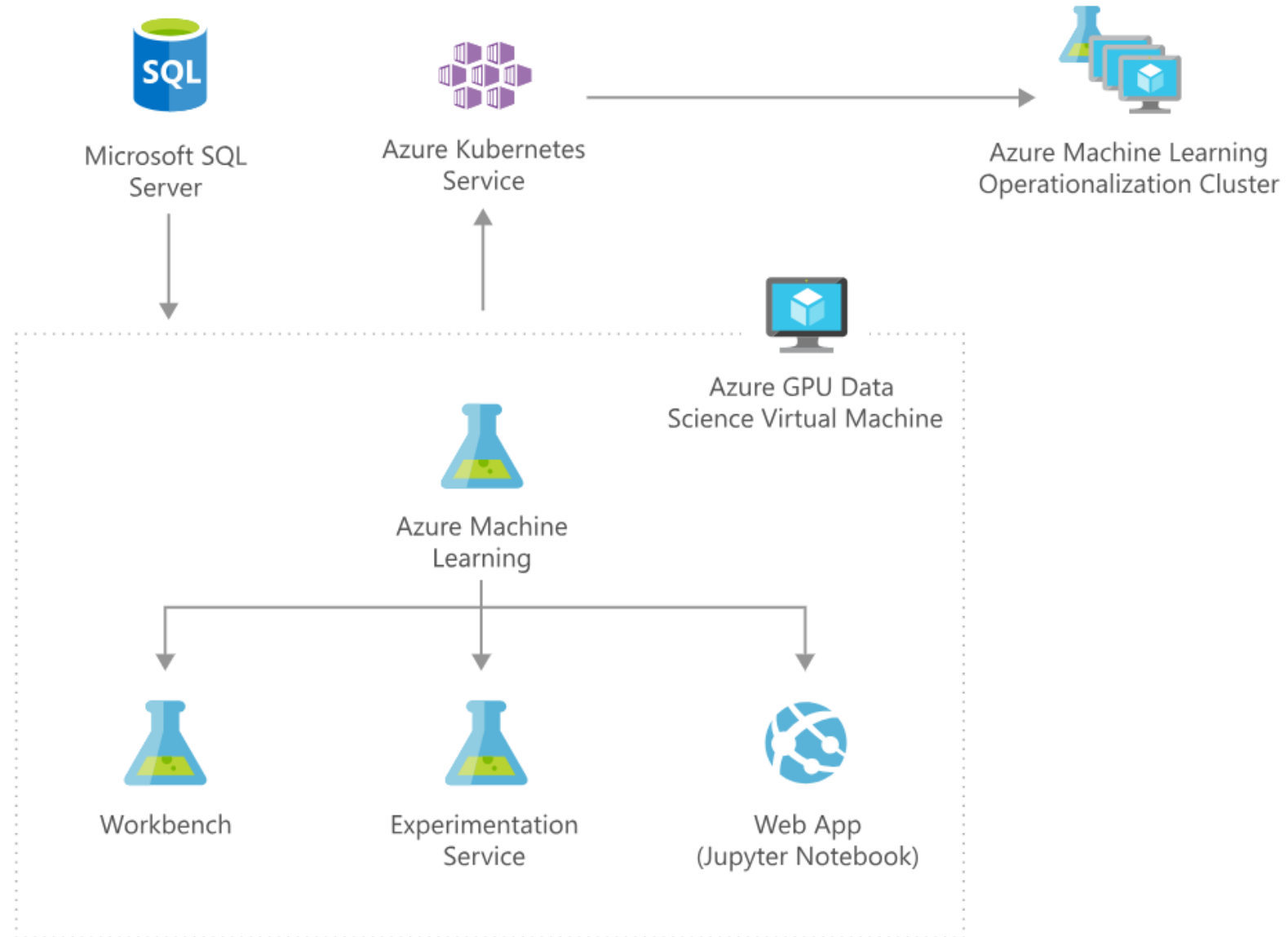
Business analysts

Low/no code

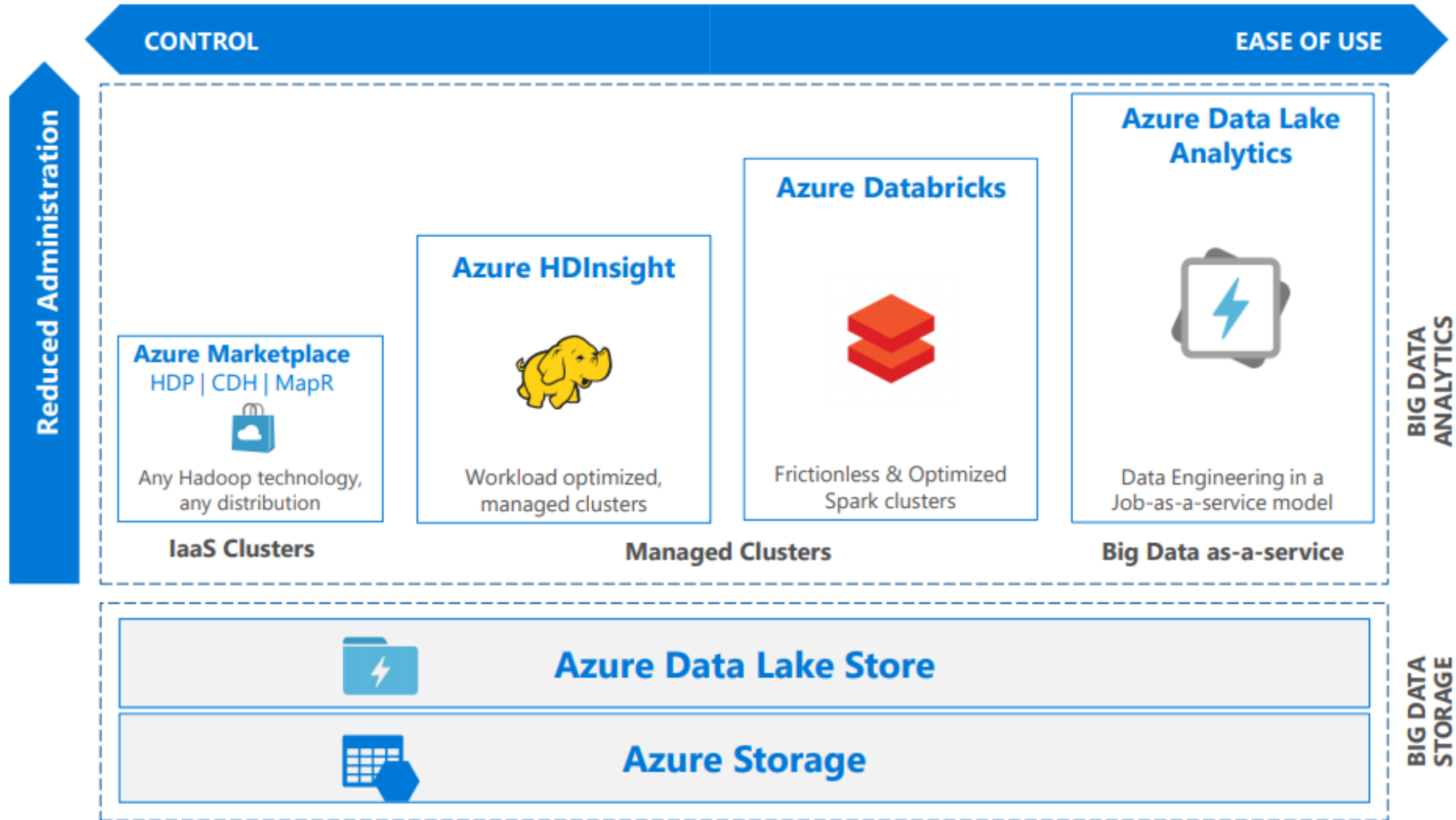
Data scientists
Data engineers

Medium to high code

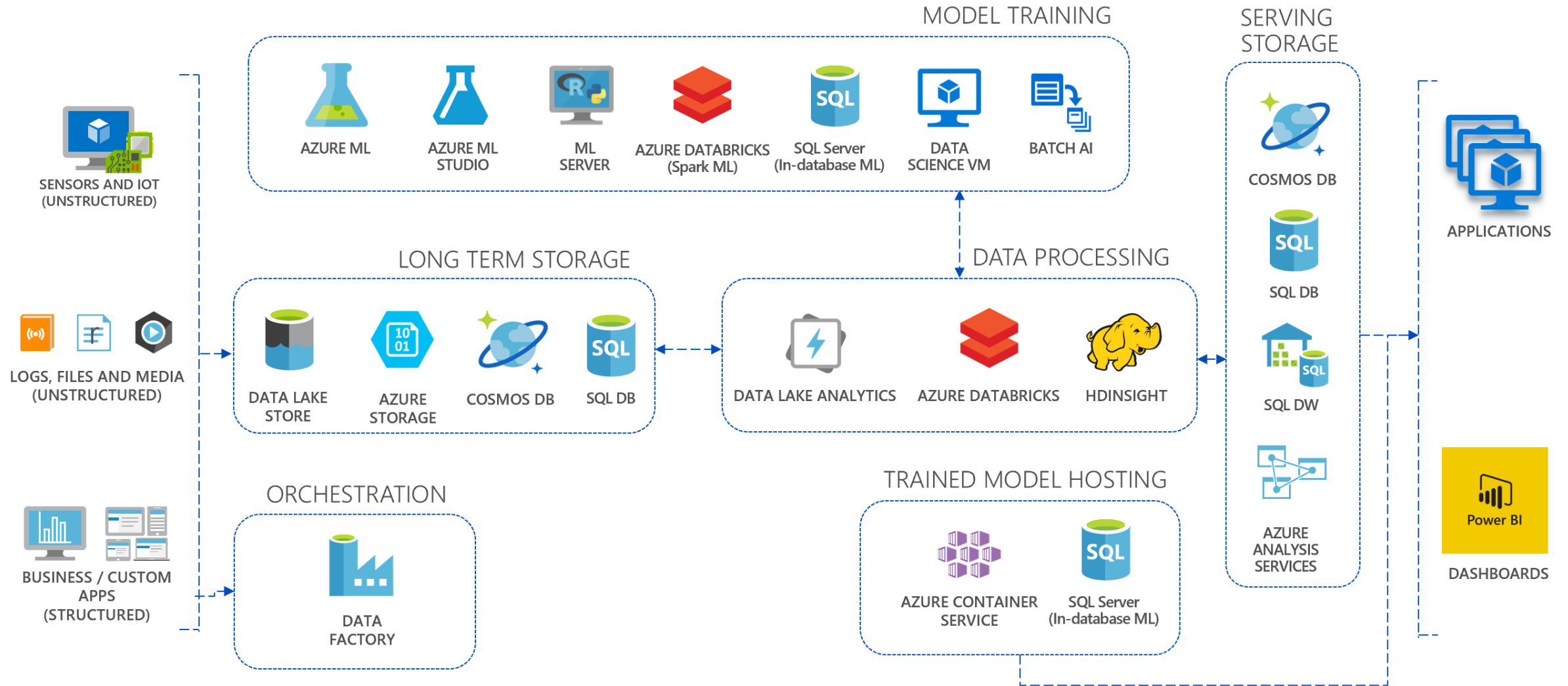
AI on IaaS



AI on Bigdata



Advanced Analytics and AI Architecture



Demo

Hit Refresh!

- The power of convergence
- Impact of AI – Internal and External
- AI Strategy relies on Analytics and Data strategy
- AI Leadership – People, Process and Tech
- AI Tech - Process, Services and Platform
- Democratising AI and Data
- Disrupt the disruption!

Today we don't think of Smart phone as Artificial Intelligent Phone and we are not surprised by all the phone innovation. The same way, we need align ourselves to accept the technological intelligence as the next step to augment human capabilities and capacities.

Thank you!

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AI UG: Ai-Tech.uk

Coming soon

AI Tech North 2019, AI Conference, Leeds, 20th July 2019

www.ai-tech.uk/ai-tech-north-2019