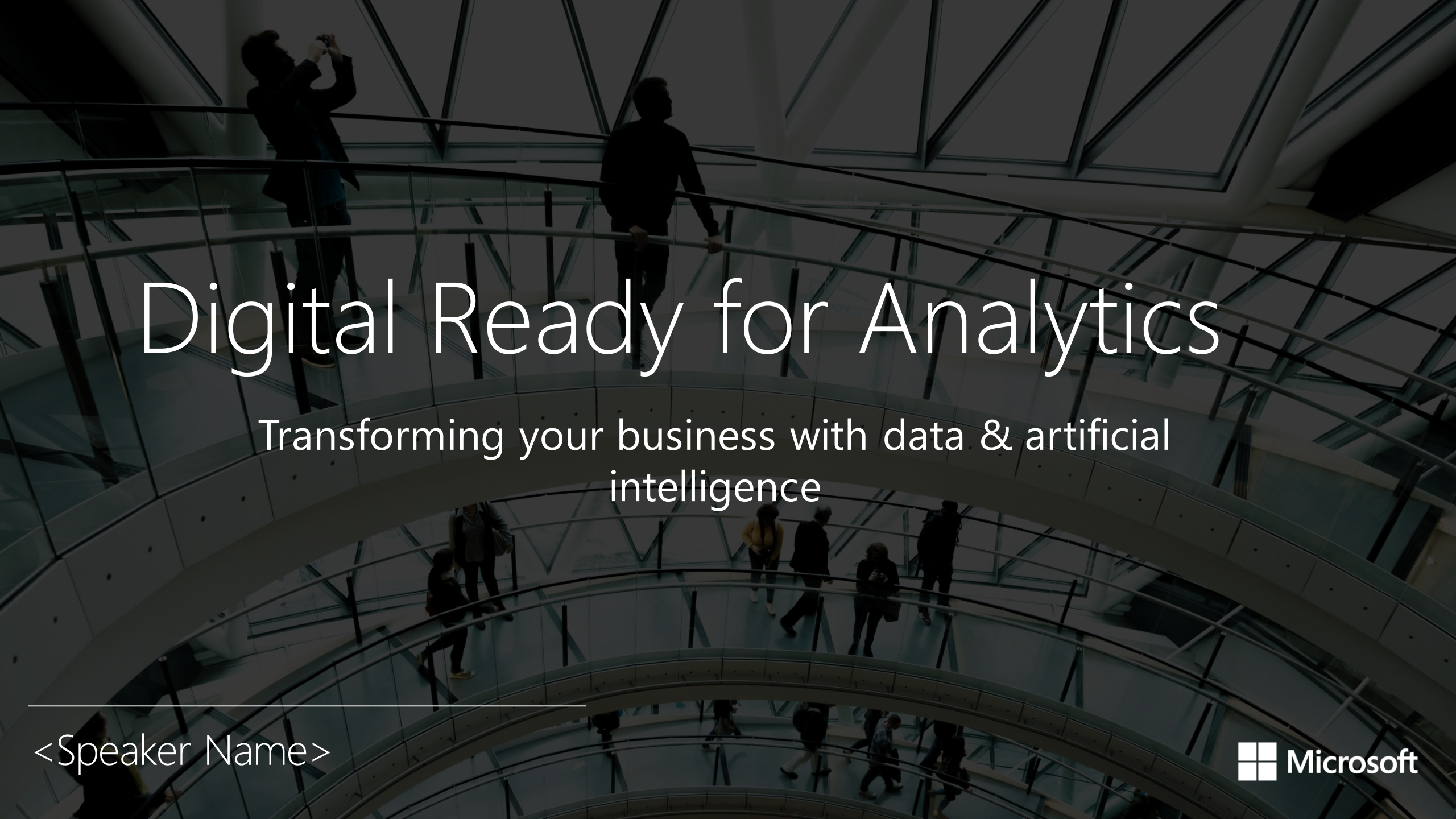




Digital Ready for Analytics

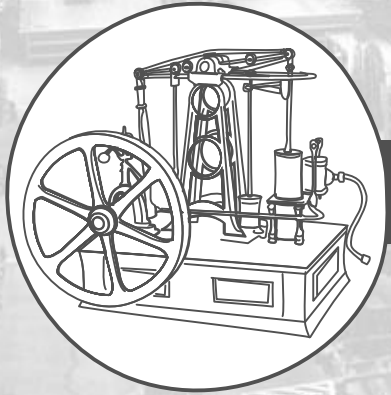
Transforming your business with data & artificial intelligence

<Speaker Name>

Intelligence Revolution...

Changing Businesses and Industries

Digital Transformation blurring the
physical and the digital divide



James Watt's
Steam Engine

Industrial Revolution

1769

1800

1900

...

Today

2020

2040

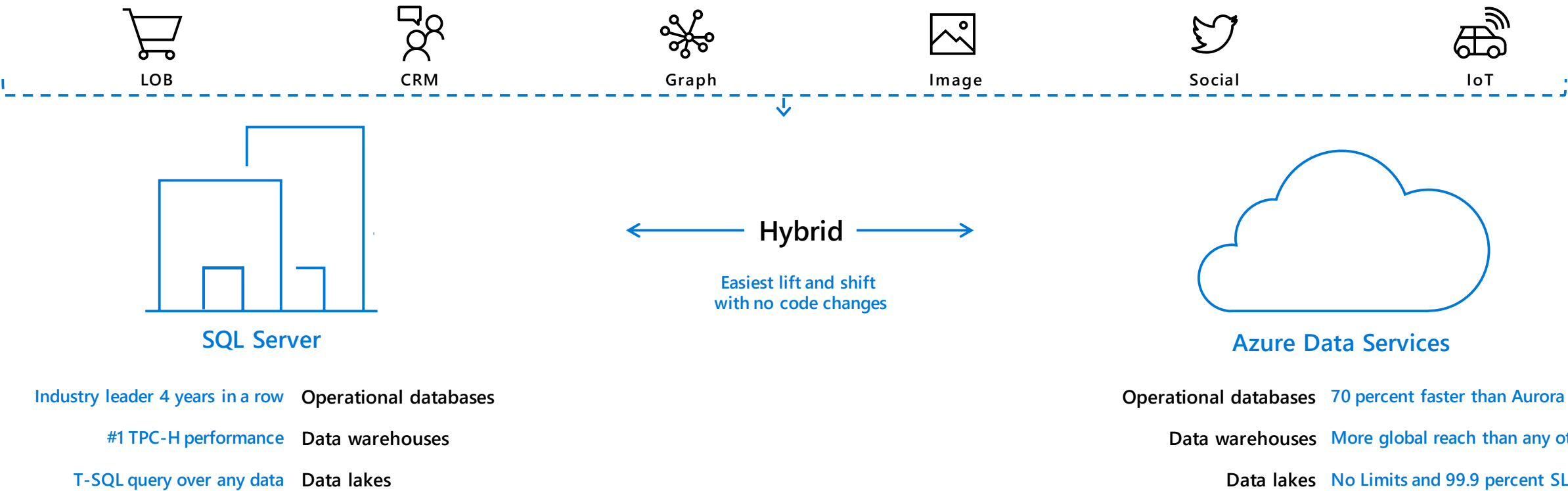
...

Intelligence Revolution



Intelligent
Cloud

The Microsoft offering



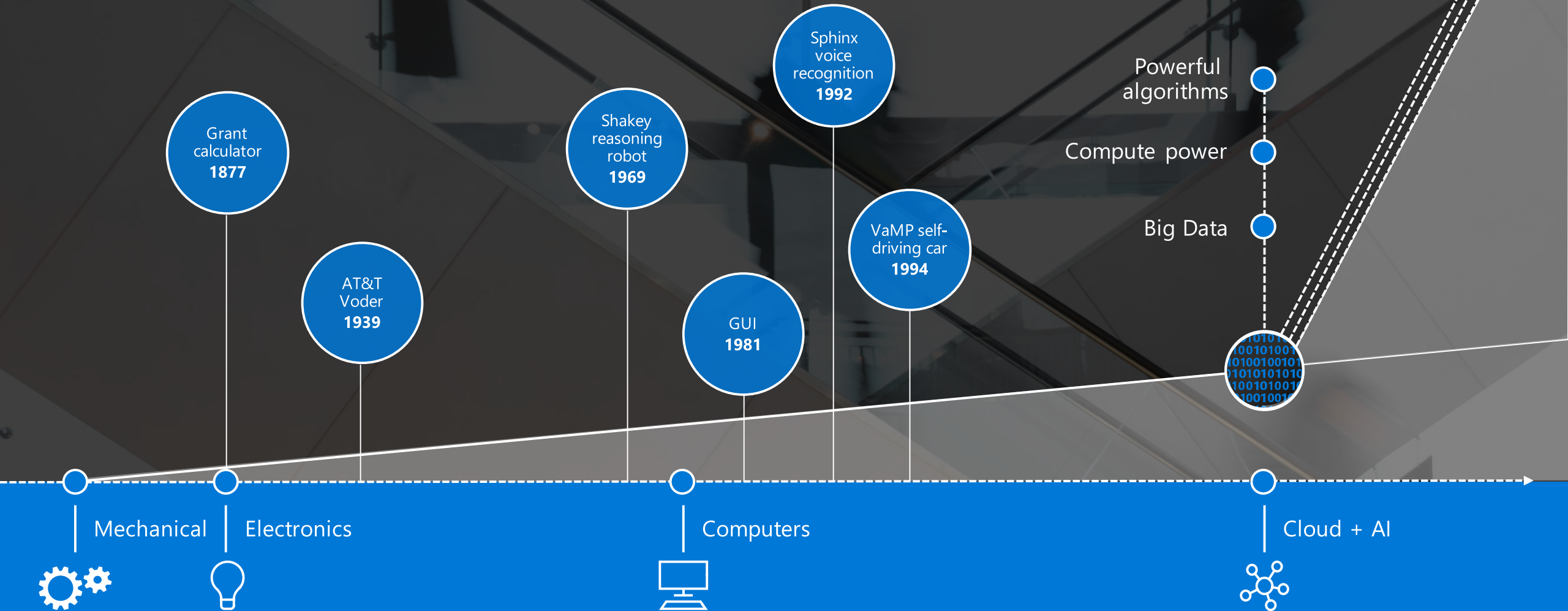
AI built-in | Most secure | Lowest TCO

Reason over any data, anywhere

Flexibility of choice

Security and performance

Why now?



AI for your business

\$1.2T

estimated additional
revenue/shifting revenue
driven by AI in three years



Reasoning

Utilize your unique
data and augment your
business in new,
unimaginable ways



Understanding

Interpret business and
customer data in real time
and scale including text,
documents, images, video, voice



Interacting

Remove technology
barriers with customers
and multiply employee
capabilities



Amplifying human ingenuity with intelligent technology



Reasoning

Learn and form conclusions
with imperfect data



Understanding

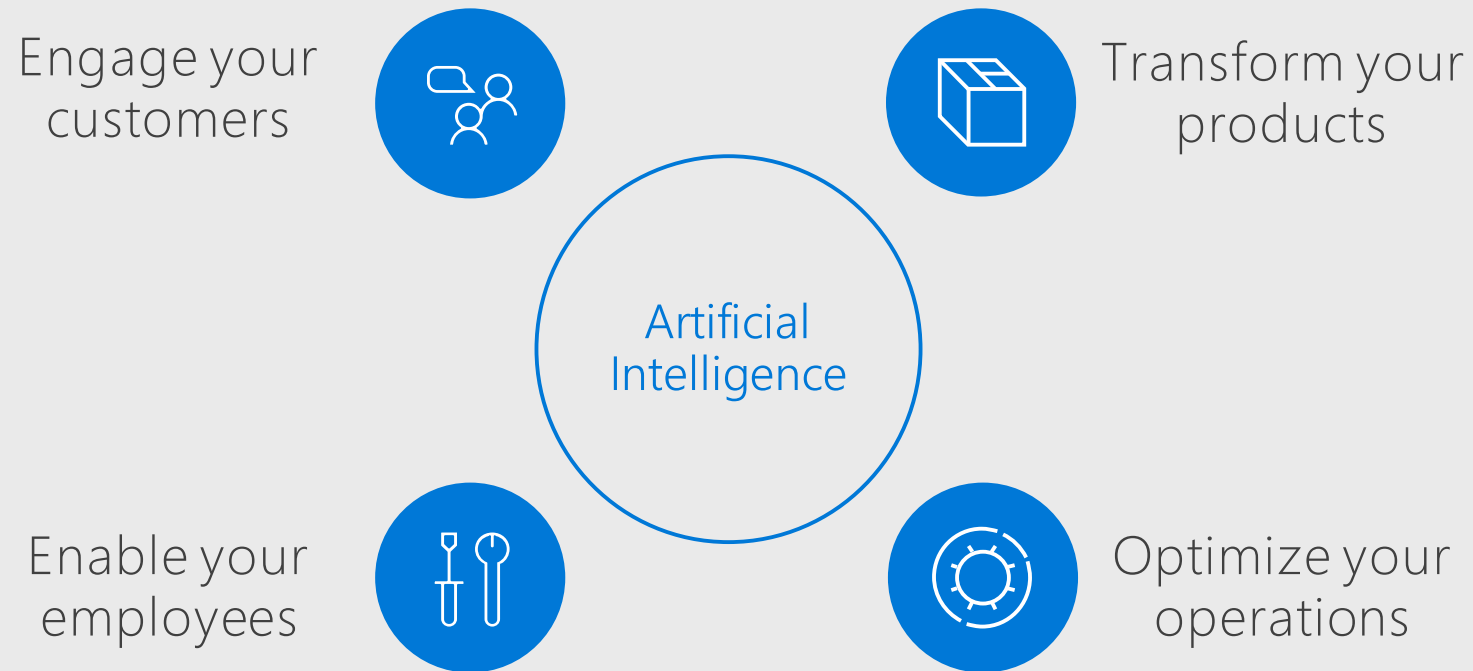
Interpret meaning of data
including text, voice, images



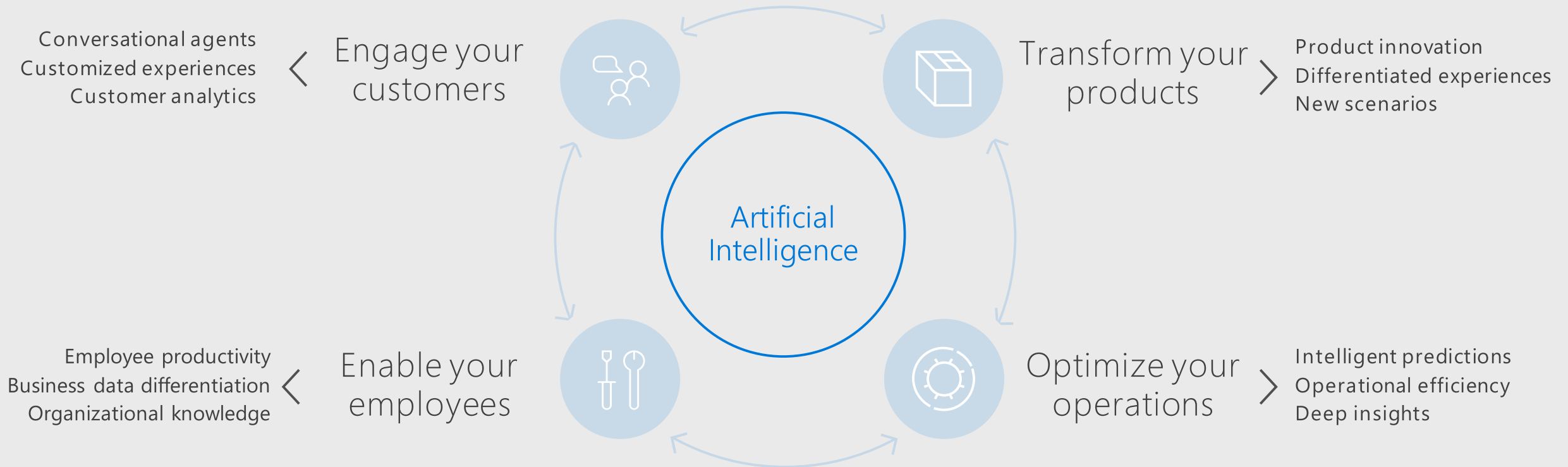
Interacting

Interact with people
in natural ways

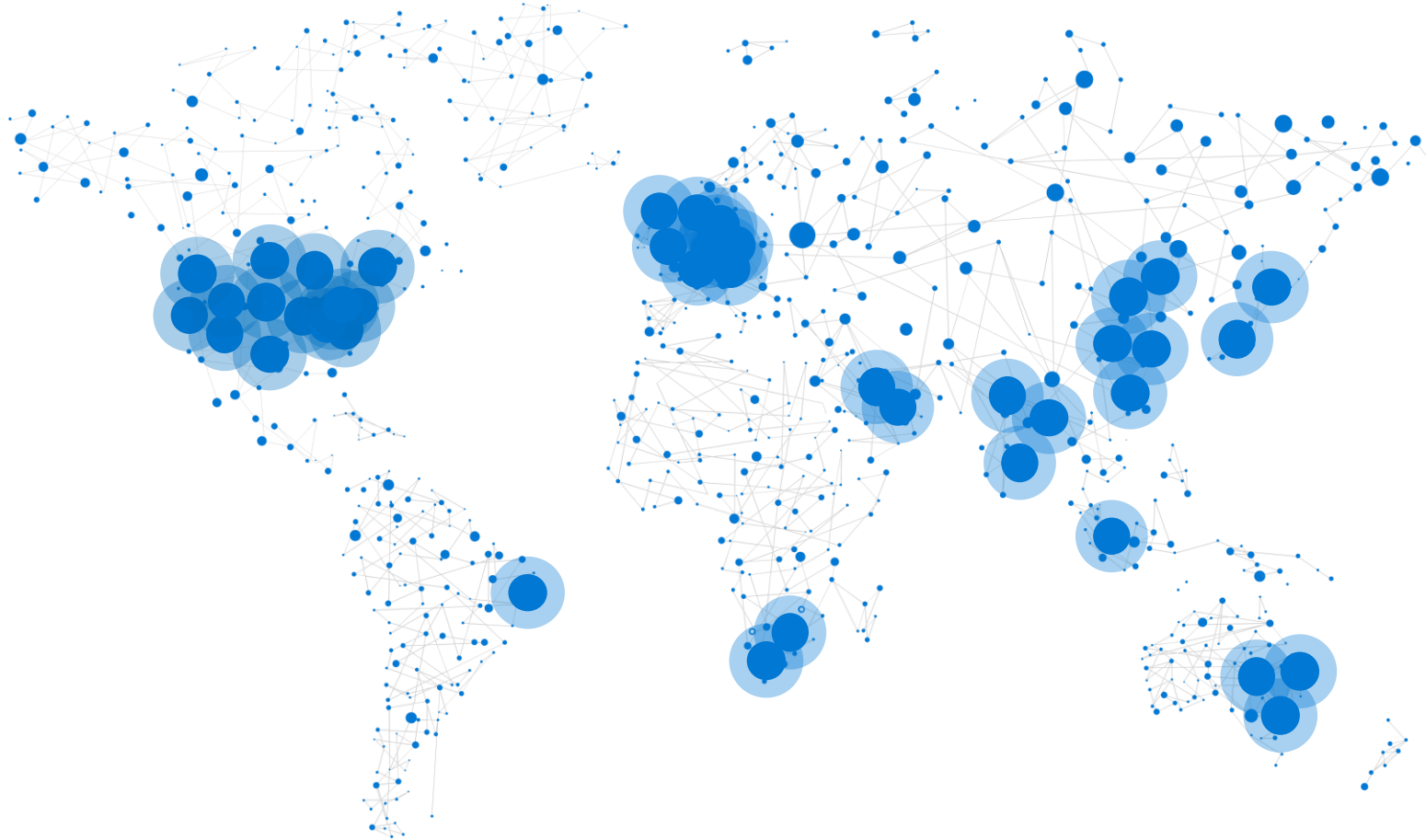
Digital Transformation + AI



Digital Transformation + AI



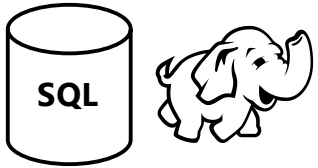
Azure



Productive | Hybrid | Intelligent | Trusted

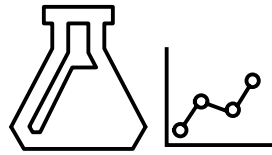
Solution scenarios

Big Data and advanced analytics



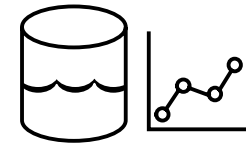
Modern data warehousing

“We want to integrate all our data—including Big Data—with our data warehouse”



Advanced analytics

“We’re trying to predict when our customers churn”



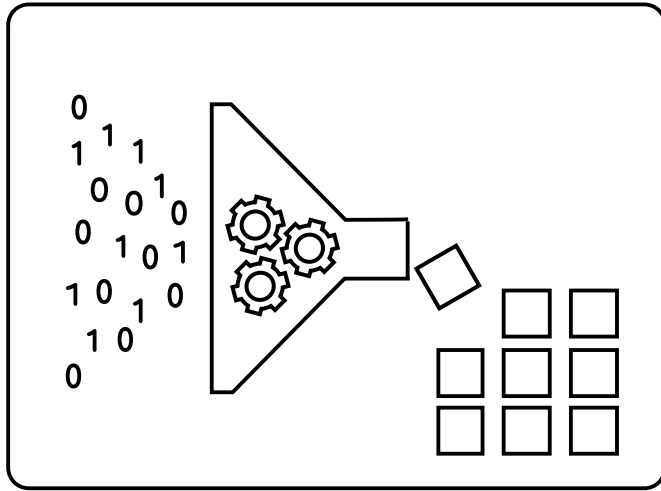
Real-time analytics

“We’re trying to get insights from our devices in real-time”

Advanced analytics

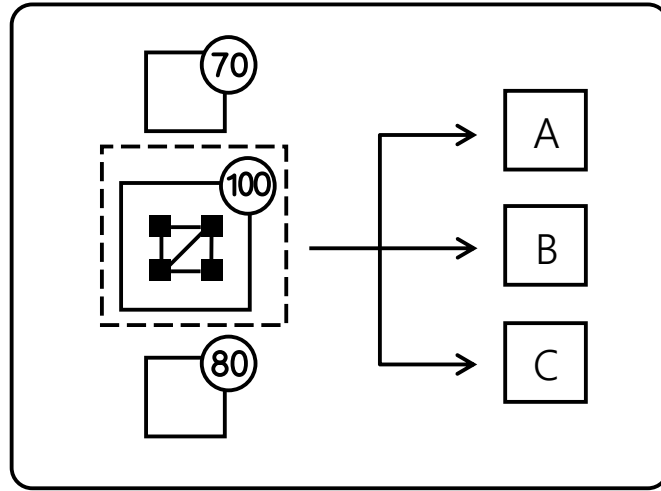
Canonical operations

Data acquisition and understanding



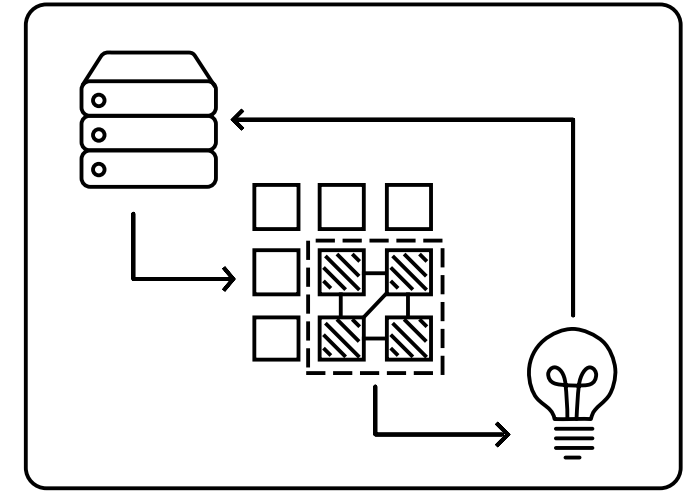
Acquire and understand

Modeling



Training and validation

Deployment



Deploy and integrate

Azure is the best place for AI

Accelerate time to value
with agile tools and
services



Pretrained AI
services



Powerful
tools



Comprehensive
platform

Innovate with AI everywhere
in the cloud, at edge and
on-premises



Cloud



Edge



On-premises

Use any language, any
development tool and any
framework



python™

PYTORCH



ONNX



TensorFlow™



Spark

Benefit from industry leading
security, privacy, compliance,
transparency and AI ethics
standards

>90% of Fortune 500 companies
use Microsoft Cloud

Shell AI



Shell and Microsoft

Shell appoints C3 IoT and Microsoft Azure as its AI platform

Through this collaboration, Shell will drive efficiencies across the company from **drilling** and **extraction** to **employee empowerment** and collaboration, as well as **safety** for its retail customers and employees.

Shell has selected C3 IoT with Microsoft Azure as its artificial intelligence (AI) platform to enable and accelerate digital transformation on a global scale. Shell expects to realize substantial economic value by rapidly scaling and replicating AI and machine learning applications across its upstream and downstream businesses.

Together with Microsoft, Shell is creating a secure, reliable foundation upon which to build these digital solutions.



“

Digital technologies are core to our strategy to strengthen our position as a leading energy company. Our collaboration with Microsoft gives us a solid digital platform to make our core business more effective and efficient and supports our ambition to provide more and cleaner energy solutions through technology.

”

— Yuri Sebregts

Executive Vice President for Technology and CTO, Shell

Microsoft Cognitive Services

Give your apps a human side



Vision

From faces to feelings, allow your apps to understand images and video



Speech

Hear and speak to your users by filtering noise, identifying speakers, and understanding intent



Language

Process text and learn how to recognize what users want



Knowledge

Map complex information and data in order to solve specific tasks



Search

Access billions of web pages, images, videos, and news with the power of Bing



Labs

An early look at emerging Cognitive Services technologies: discover, try, and give feedback on new technologies before general availability



Drone-based electric grid inspector powered by deep learning

Challenge

- Traditional power line inspection services are costly
- Demand for low cost image scoring and support for multiple concurrent customers
- Needed powerful AI to execute on a drone solution

Solution

- Deep learning to analyze multiple streaming data feeds
- Azure GPUs support Single Shot multibox detectors
- Reliable, consistent, and highly elastic scalability with Azure Batch Shipyards



Increased match accuracy with image analysis

Challenge

- Assist buyer search by providing accurate options of similar clothing items from catalogue
- Need for improved smart-image matching capability based on color, pattern, neck style, etc.

Solution

- Training data created using Bing and domain-specific images
- Used transfer learning to leverage pre-trained ImageNet deep neural network
- Accurate list of most similar clothing items using similarity metrics for apparel
- Match accuracy of 74%

Rolls-Royce

Fewer flight delays using Microsoft Azure IoT Suite

Objectives

Rolls-Royce wanted a solution to enhance the life cycle of its aircraft engines. The company's engines power more than 50K flights worldwide every month, so it wanted to provide its mechanics the right tools at the right place to be able to fix problems.

Tactics

Rolls-Royce used Microsoft's Azure IoT Suite & Cortana Intelligence Suite to quickly diagnose issues with plane engines. Information on engine health, air traffic control, route restrictions, and fuel usage are collected from hundreds of sensors inside the engines to detect operational anomalies.

Results

- Achieved 1% fuel savings (\$250,000)
- Improved airline efficiency
- Help make sure planes fly on more efficient routes and that the correct replacement parts are in the places where they are needed the most

"Our goal is not data for the sake of data, but to embrace the cloud and analytical technologies to deliver more expert insights to the right stakeholders at the right time."

Nick Farrant
Senior Vice President, Rolls-Royce



WATCH VIDEO



Rolls-Royce®

Rolls-Royce extends value to airlines with new services

Rolls Royce continues to extend value added services to their customers by using the growing volume of data from their jet engines. By building digital capabilities to harvest intelligence from their systems, Rolls Royce can now deliver actionable insights that customers can use to reduce maintenance and operational costs.

[Rolls-Royce Case Study and Video](#)

PREDICTIVE MAINTENANCE SCHEDULING

Provide actionable insights from more than 13,000 jet engines to help airlines **minimize the cost of service disruptions** with preemptive jet engine maintenance scheduling



FUEL MANAGEMENT

Engine performance data combined with numerous and often fragmented data sets provide airlines with information on cost effective methods to **reduce fuel consumption**



ThyssenKrupp

Global elevator manufacturing company develops service arm

Objectives

ThyssenKrupp wanted to compete in their industry more effectively by offering dramatically increased uptime, taking preventative maintenance a step further to predictive and even preemptive service.

Tactics

Microsoft technology helped ThyssenKrupp to monitor products via a near real-time dashboard and instruct technicians on optimal maintenance activities through dynamic predictive models.

Results

- Increased elevator uptime
- Reduced costs for ThyssenKrupp and its customers
- Developed real-time data visualization and awareness of issues



WATCH VIDEO

“We wanted to go beyond the industry standard of preventative maintenance, to offer predictive and even preemptive maintenance.”

Andreas Schierenbeck
CEO, ThyssenKrupp Elevator



School system increases graduation rates with cloud analytics

Challenge

- Dramatically increase student graduation rate.
- Identify signs of dropout risk and address early.

Solution

- Microsoft Services developed data warehouse solution to capture student data.
- Leveraged Power BI and Office 365 to display and share student data.

Benefits

- Helped to improve graduation rates from 55 to 82.6 percent.
- Provided additional learning assistance early enough to turn at-risk students around.
- Sharing the model with other districts.



WATCH VIDEO

“More than anything, the combination of new visionary leadership with sophisticated data analytics is helping drive improvement in graduation rates.”

Shaun Taylor
CIO, Tacoma Public Schools

TACOMA
PUBLIC SCHOOLS
EVERY STUDENT. EVERY DAY.

