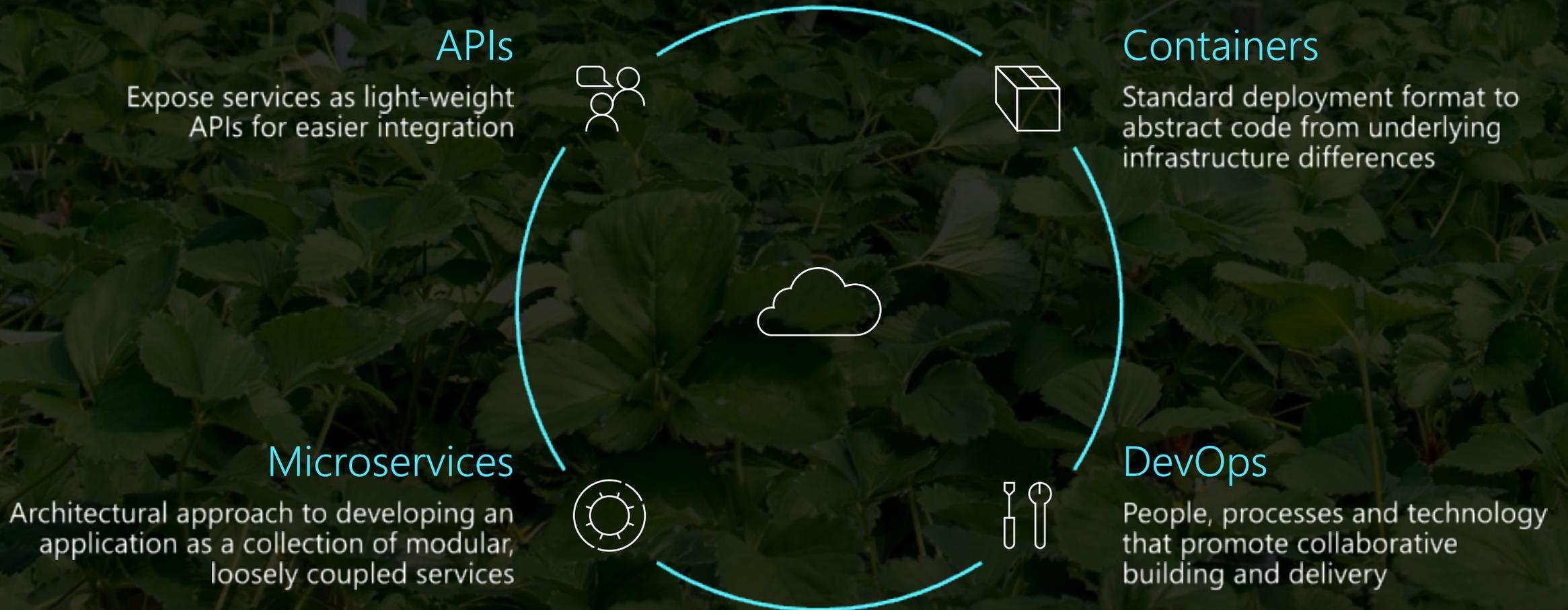Cloud native
is the new
paradigm
of software
development

> 35 %

of all production
apps will be cloud-
native by 2022[1]

[1]IDC FutureScape, 2018

What is cloud native?

Package application code & dependencies in containers, deploy as microservices and manage them using DevOps processes & tools

APIs

Expose services as light-weight APIs for easier integration

Containers

Standard deployment format to abstract code from underlying infrastructure differences

Microservices

Architectural approach to developing an application as a collection of modular, loosely coupled services

DevOps

People, processes and technology that promote collaborative building and delivery

Why cloud native?

Speed of innovation

Security at scale

Reliability

Thousands of companies build cloud native applications on Microsoft Azure
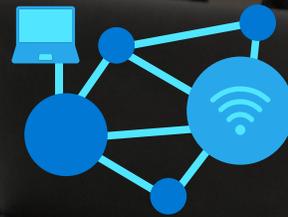
Common cloud native scenarios

Modernize business critical applications

SaaS delivery

Real-time telemetry

Geo-distributed applications
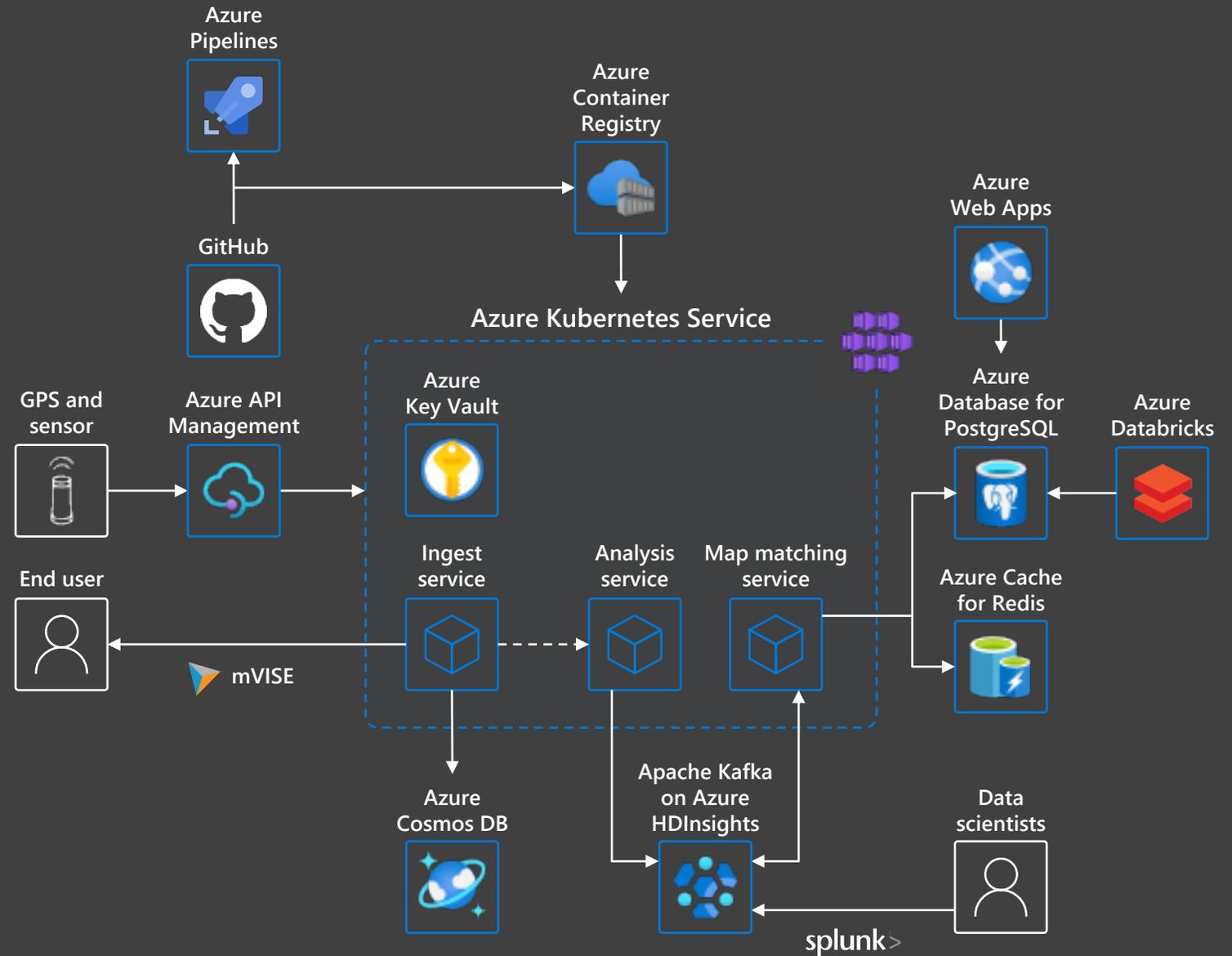
Common cloud native scenarios

Real-time
telemetry

Instant IoT data streaming

Ingest and analyze high volumes of IoT data and generate real-time recommendations and insights
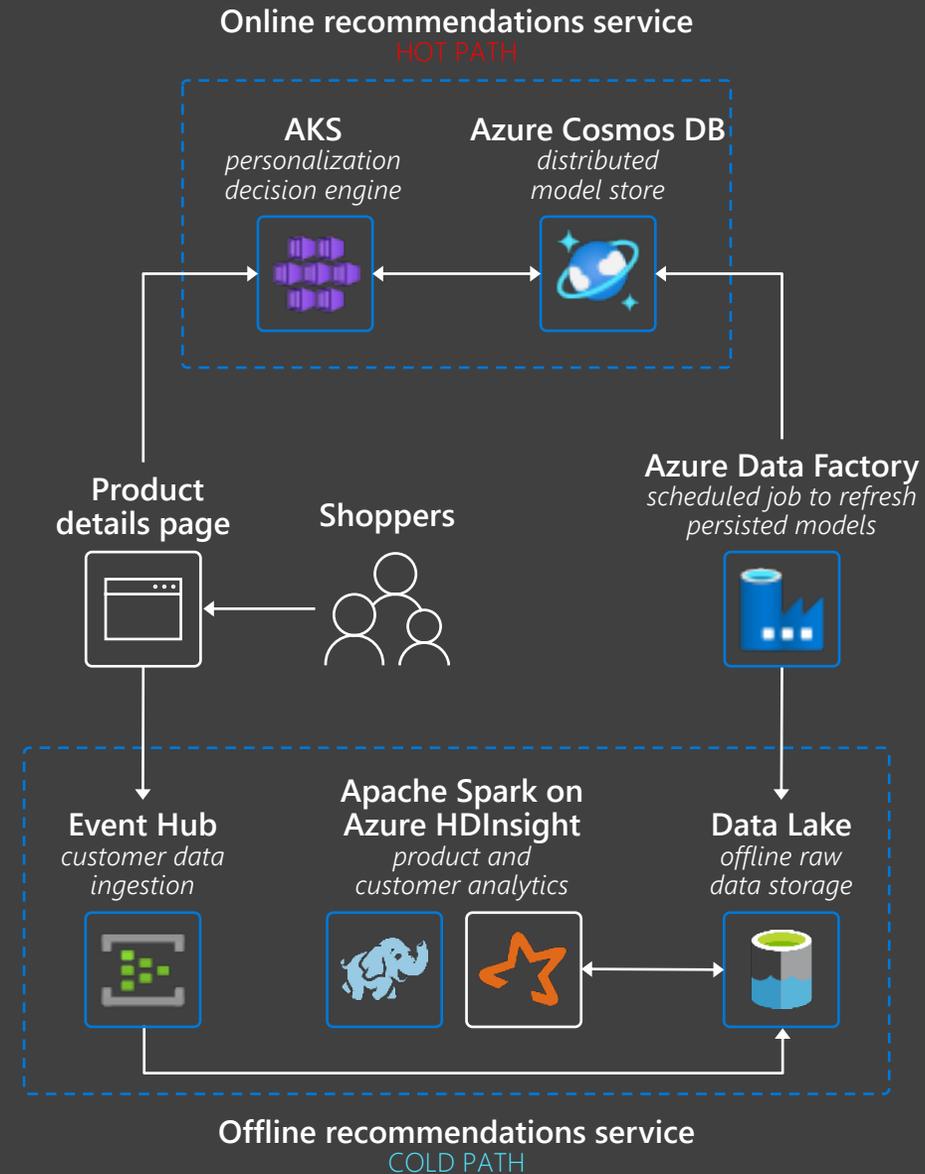
- Real-time data ingestion and processing pipeline capable of detection and notification within seconds

- Secure API gateway that connects to back-end services running anywhere

- Elastic provisioning of compute capacity without the need to manage the infrastructure

Real-time personalized recommendations

Help customers discover items they'll love with real-time personalization and product recommendations

- High volumes of product data can be analyzed in milliseconds

- Low-latency ensures high app performance worldwide

- Tunable data consistency models for rapid insight

Online recommendations service
HOT PATH

AKS
personalization decision engine

Azure Cosmos DB
distributed model store

Product details page

Shoppers

Azure Data Factory
scheduled job to refresh persisted models

Event Hub
customer data ingestion

Apache Spark on Azure HDInsight
product and customer analytics

Data Lake
offline raw data storage

Offline recommendations service
COLD PATH

Pegasus One

Retail

Deliver engaging digital customer experiences

- Deliver customized offers and personalized shopper experiences in real time
- Add new revenue streams faster with improved target marketing
- Serverless scaling to meet seasonal demand spike

Transform store management

- Brand ambassadors empowered by always up-to-date product catalog and inventory
- Build IoT innovations that reduce errors and strengthen loss prevention
- Deploy securely connected mPOS systems to reduce wait times

Build an intelligent supply chain

- Close the gap between demand and fulfillment with real-time order processing and supply chain management
- Expose fraud by detecting and alerting anomalies in real time
- Build partner/vendor portal to improve customer service response and accuracy

Manufacturing & Automotive

Deliver new services

- Unlock omnichannel and personalized customer experiences
- Create a collaborative development environment for partner apps marketplace
- Take advantage of infrastructure advances to bring lean capabilities into IT

Achieve industrial IoT innovation

- Ingest and analyze high volumes of IoT data and generate real-time recommendations and insights
- Power smart buildings and cities
- Predict equipment needs and safety issues before they happen with instant equipment diagnostics

Enable smart, scalable supply chain management

- Produce the right parts at the right time
- Deploy analytics to improve quality, increase operational efficiency, and drive faster time-to-market
- More effectively use computing and human resources, saving time and money

Financial Services

Deliver differentiated customer experiences

- Develop services optimized for omnichannel and self-service

- Speed trading and transactions with digital kiosks

- Improve customer acquisitions with personalized sales and marketing

Manage risk and detect fraud

- Conduct real-time analytics to stress-test risk and exceed compliance levels across standards

- Expose fraud by detecting and alerting anomalies in real time

- Deploy securely and confidently on-premises and in the cloud

Real-time payments

- Centralize payment pipelines to scale high volumes of payment data accurately with low latency

- Enable mobile wallets for efficient use of resources

- Build frictionless peer-to-peer models