Microsoft Azure

Microsoft Azure Overview

Steve Kirchoff

Monitoring
Location-based Authentication
Serverless
Event driven
Compute
Orchestrators
Machine Learning
Compliance
Mixed Reality
Haptics
Containers
Edge
DevOps
GPU
NoSQL
Bio-Wearables
Quorum
Quantum computing
Microservices
Log telemetry
Digital Twin
Data privacy
IoT
Blockchain
Big data
Bots
Hybrid cloud
Beacons
Artificial Intelligence
Threat Intelligence
Ambient UX

Monitoring
Location-based Authentication
Serverless
Event driven
Compute
Orchestrators
Machine Learning
Compliance
Mixed Reality
Haptics
Containers
Edge
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Log telemetry
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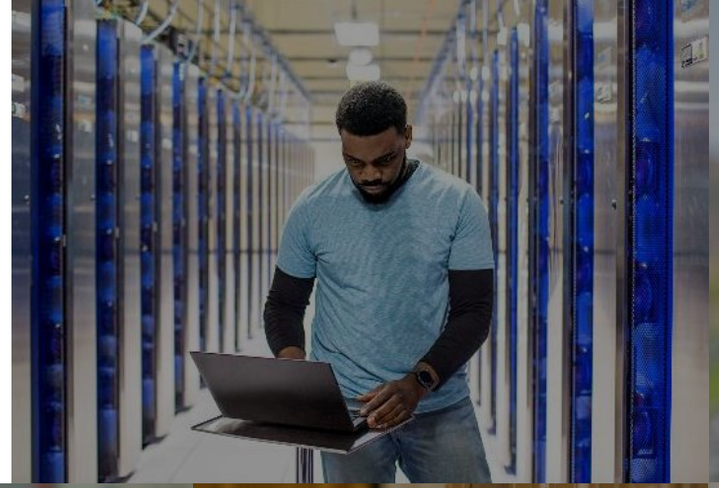
Data privacy
IoT
Blockchain
Big data
Bots
Hybrid cloud
Beacons
Artificial Intelligence
Threat Intelligence
Ambient UX

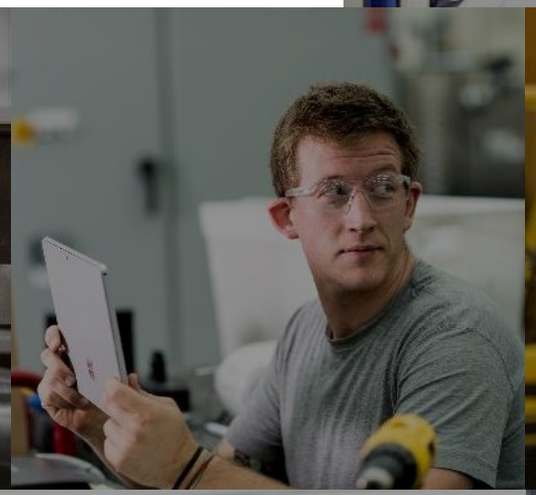
Microsoft Azure

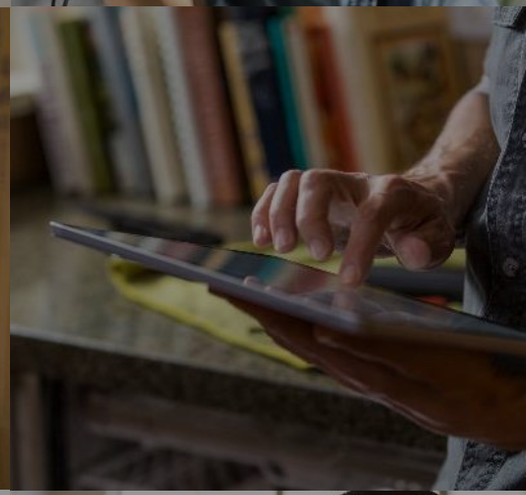
Microsoft Azure

Productive + Hybrid + Open + Trusted

Digital transformation represents a unique and timely opportunity for your company

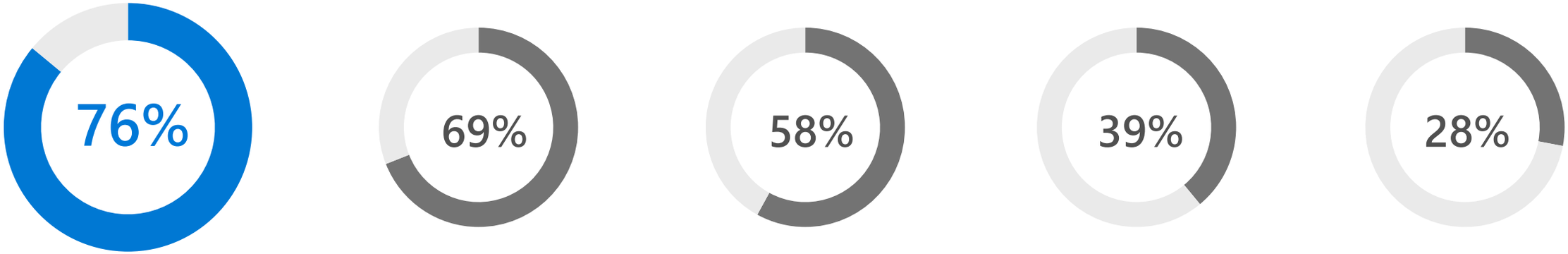






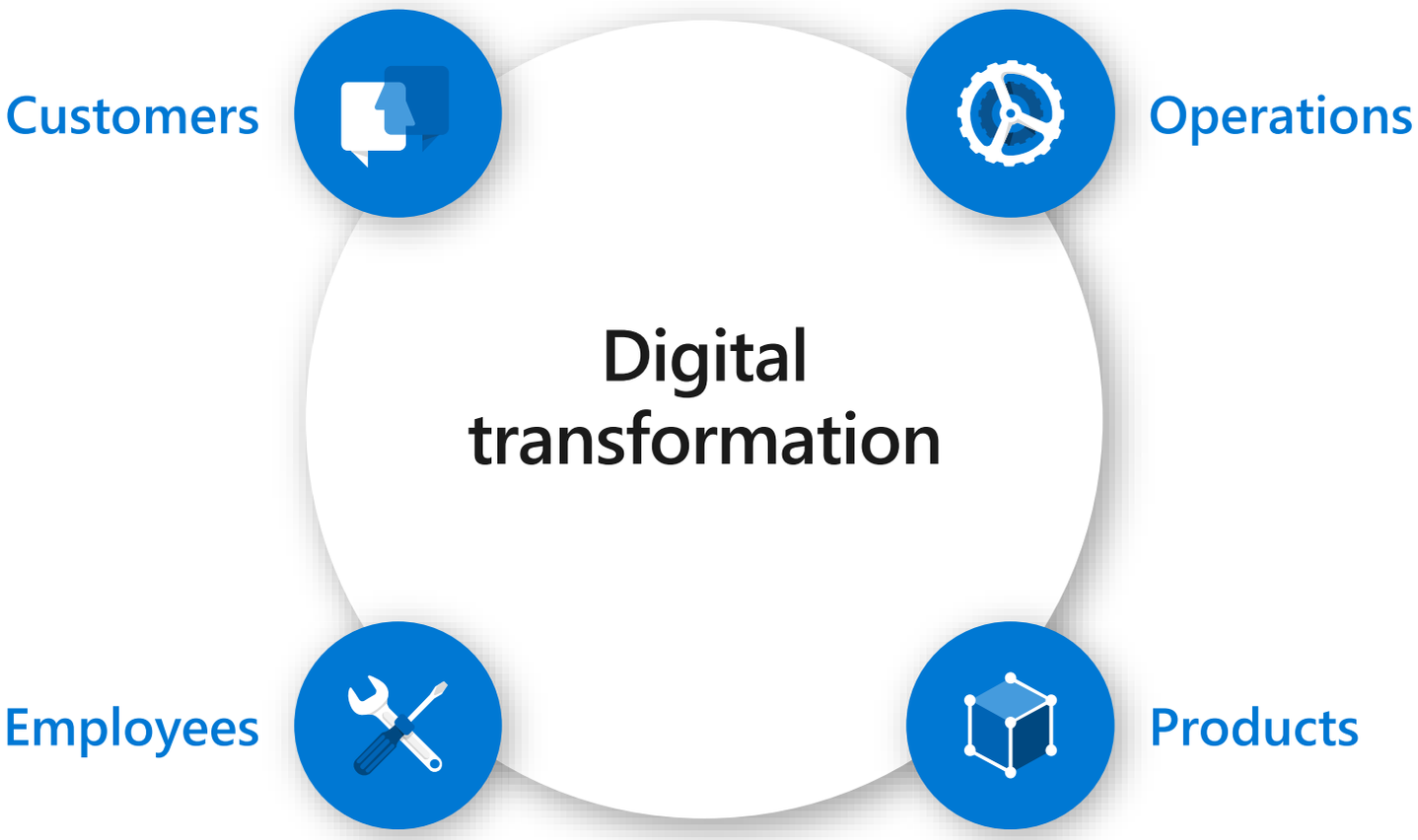
76% of CEOs consider DT their #1 priority

Trends that will transform business over the next five years



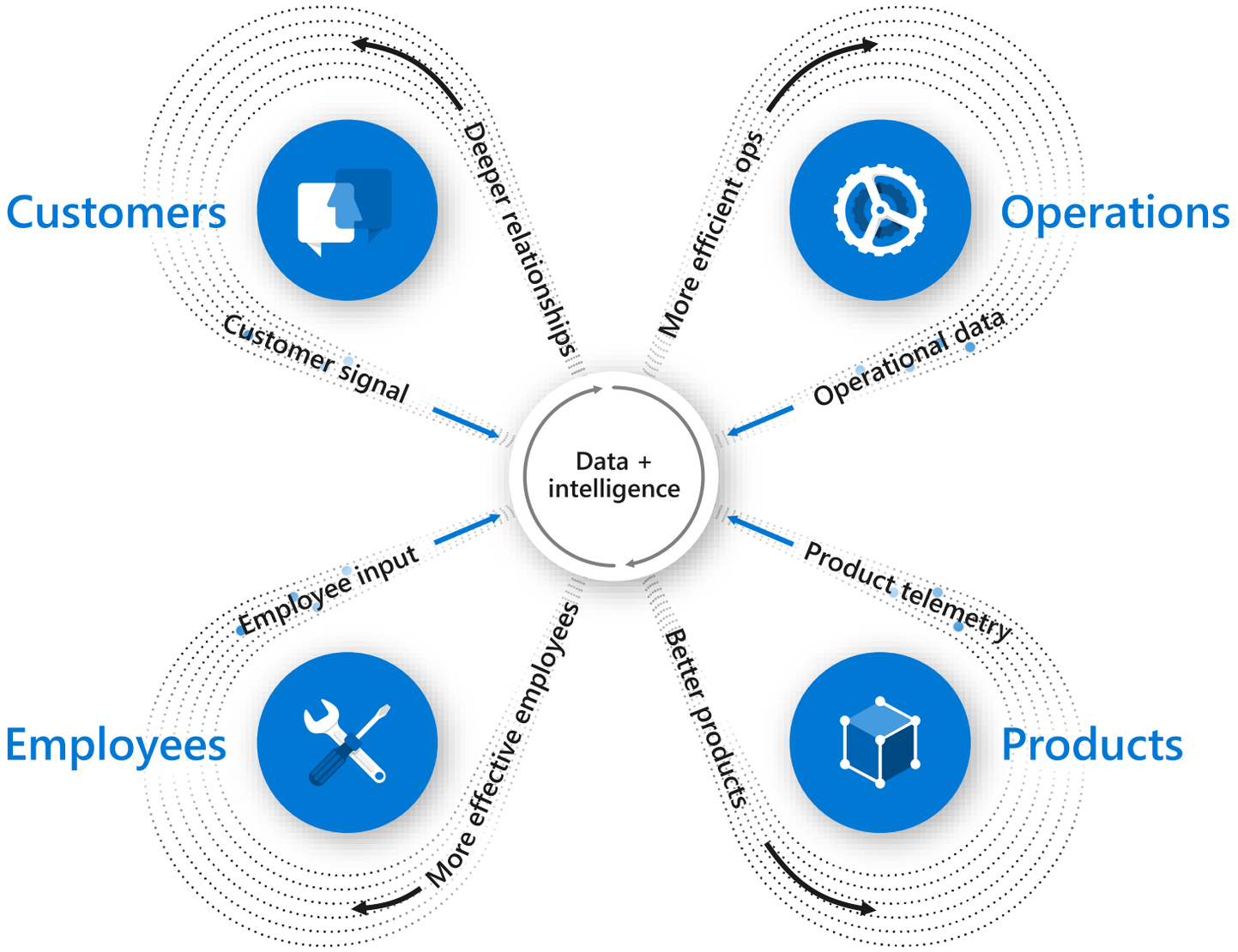
Technological advances	Demographic shifts	Shift in global economic power	Resource scarcity & climate change	Urbanization

Source: PWC CEO Survey


Customers
Operations
Digital transformation
Employees
Products

The digital feedback loop

1. Data: Capture digital signal across business
2. Insight: Connect and synthesize data
3. Action: Improve business outcomes



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Ever-expanding set of cloud services to help your organization meet your business challenges

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Microsoft Azure

Tools

Developer
DevOps
Management

Serverless

Web
Mobile
Functions
Containers
Integration services
Databases
AI + Machine Learning
Analytics
Internet of Things
Media

Infrastructure

Compute
Networking
Storage
Security
Identity

>95%

of Fortune 500 use Microsoft Azure

Microsoft Azure

Productive • Hybrid • Open • Trusted

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Productive

Infrastructure

"What your application runs on"

Data

"What your application works with"

Code

"What your application does"

Migrate • Innovate

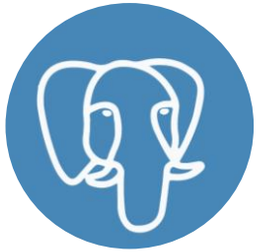
Unified Management • Security • Governance • Tools • DevOps

Infrastructure for all workloads

On-demand	Purpose-built	Linux, Open Source, and Red Hat	Best Choice for Microsoft workloads
Compute	SAP	+40% of Azure VMs are running Linux	Cost savings
Networking	NetApp™	1.4x growth of Linux	Easy migrations
Storage	CRAY		First-party support
	vmware®	redhat Co-located support with Red Hat on-site team	Modernize apps beyond infrastructure

Azure Operational Data Services

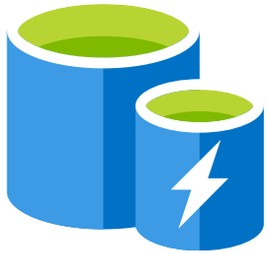
SQL DB



PostgreSQL

MySQL

MariaDB



Redis Cache

Cosmos DB

Azure for Cloud Scale Analytics

Azure for Cloud Scale Analytics

Ingest	Store	Prep	Serve	Visualize
70+ Connectors	Cost-effective	Best Spark	Fastest DW	Modern BI
Azure Data Factory	Azure Data Lake Storage	Azure Databricks	Azure SQL Data Warehouse	Power BI

A serverless platform for Application Modernization

Web & Mobile development

Containers

Microservices

Integration services

Event-driven

AI

Dev Ops

asos

Microsoft Azure

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By design.

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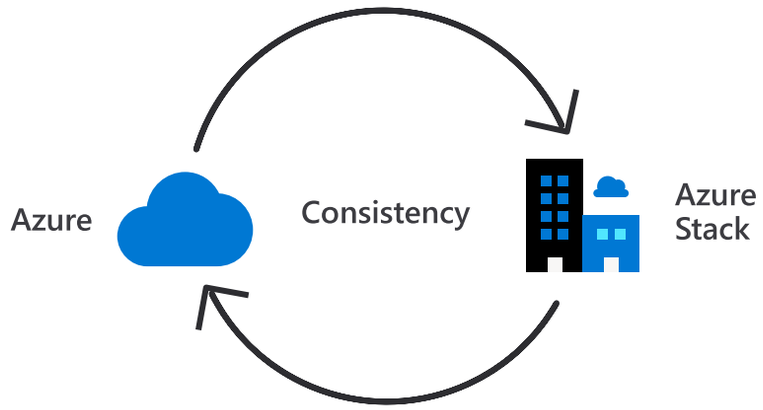
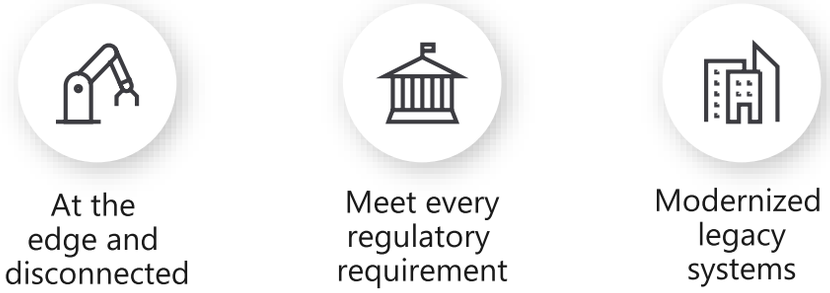
Microsoft Azure

the only consistent, comprehensive hybrid cloud

Azure services	Azure DevOps	Azure data services	Azure active directory	Azure security & management
↑	↑	↑	↑	↑
Developer platform	**DevOps**	**Data platform**	**Identity**	**Security & management**
↓	↓	↓	↓	↓
Azure Stack	Azure DevOps	SQL Server, MySQL, PostgreSQL, NoSQL	Active directory	Azure security & management





Azure Stack updates

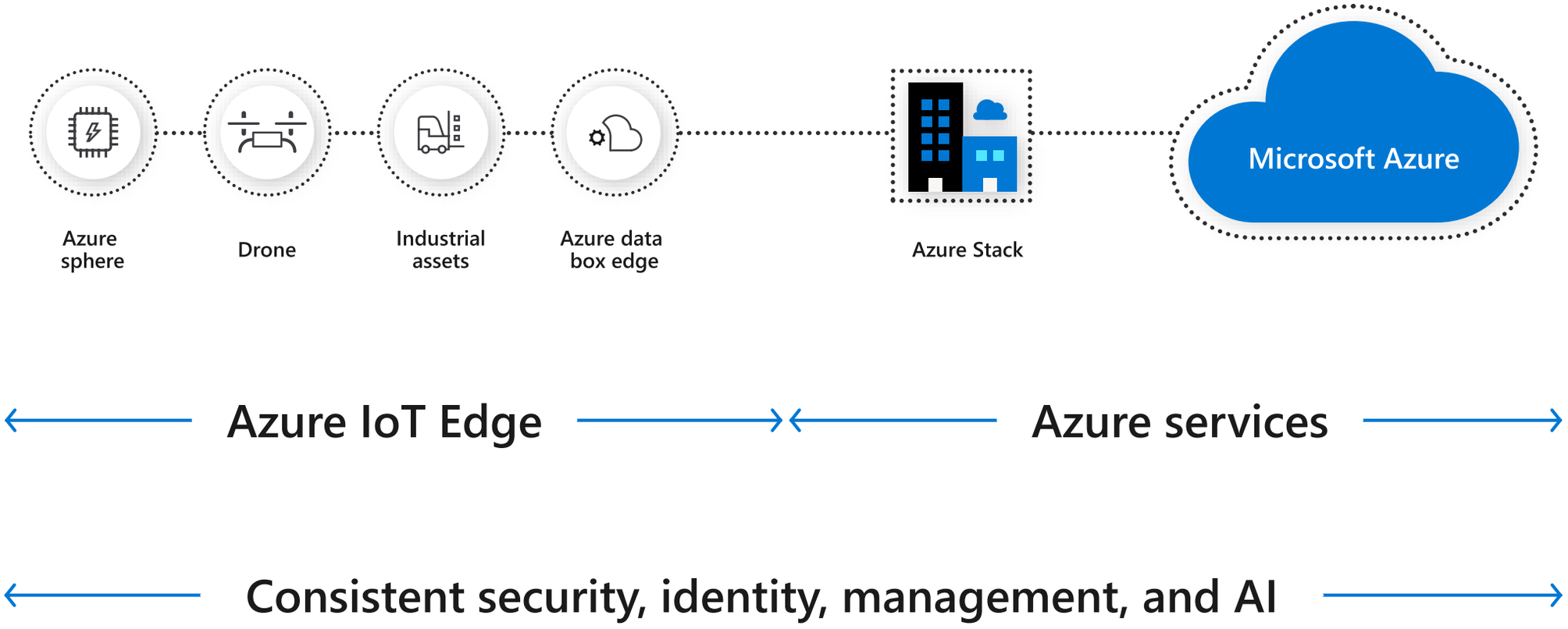
Kubernetes on Azure Stack public preview

Expanded capacity for Azure Stack in the coming weeks

Azure event hubs on Azure Stack preview this year

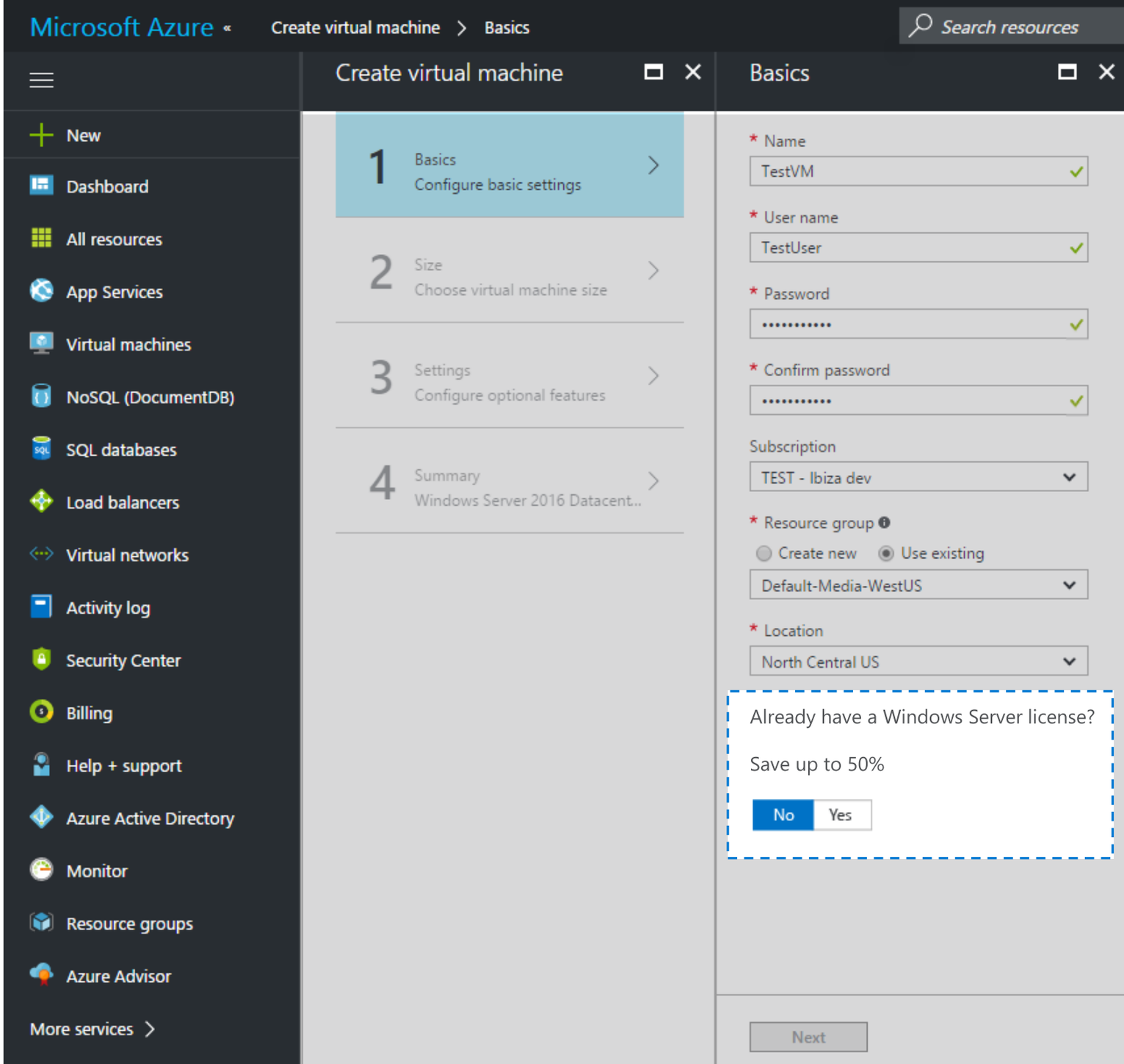
Consistent blockchain deployment in preview this year

Consistency across the cloud and the edge



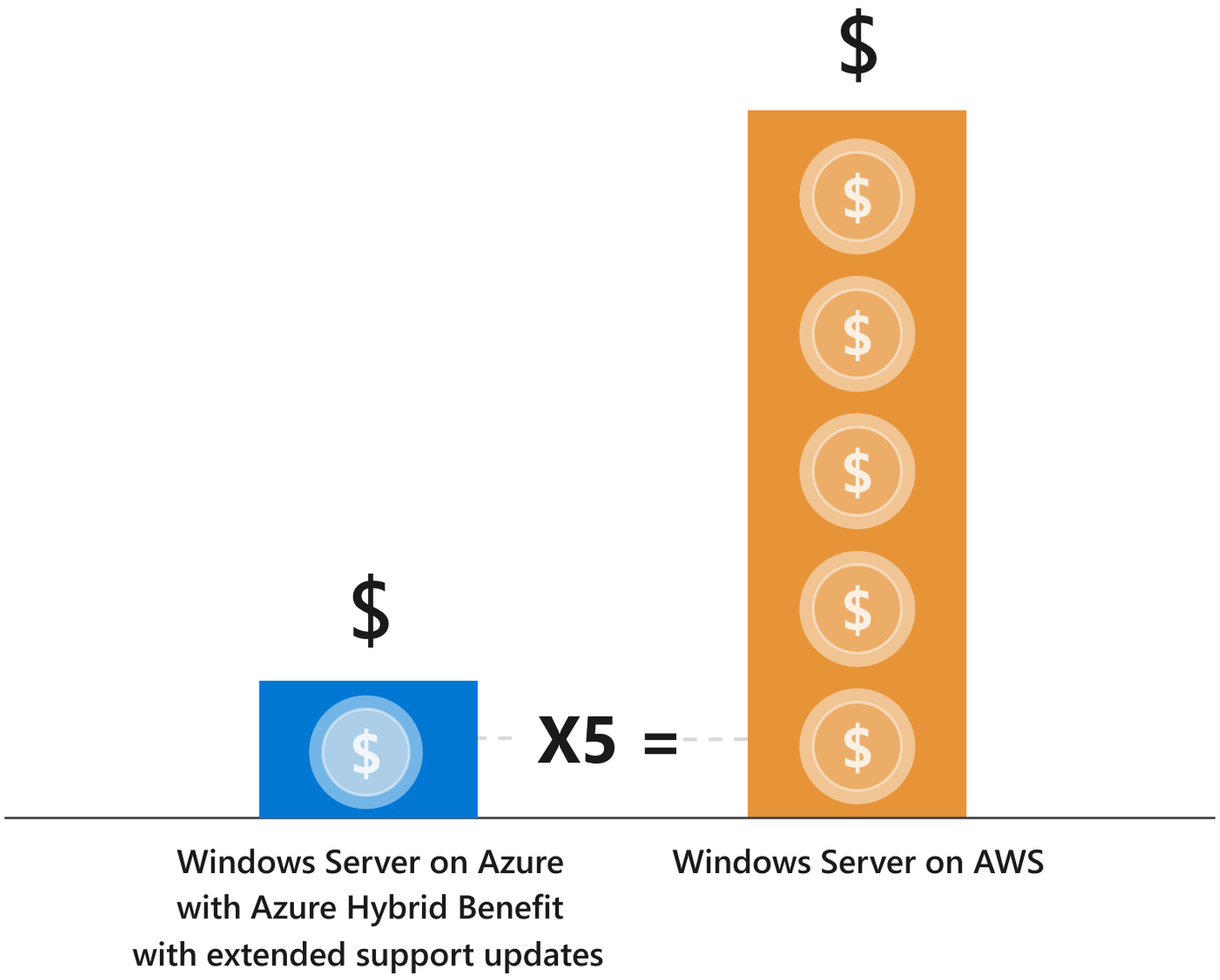
Azure Hybrid Benefit

Reuse your Windows Server and SQL Server licenses and save up to 50% vs other cloud providers



Windows Server and SQL Server 2008/R2 on Azure

+ Azure reserved instances
+ Azure Hybrid Benefit
+ Free extended security updates



Chevron

H

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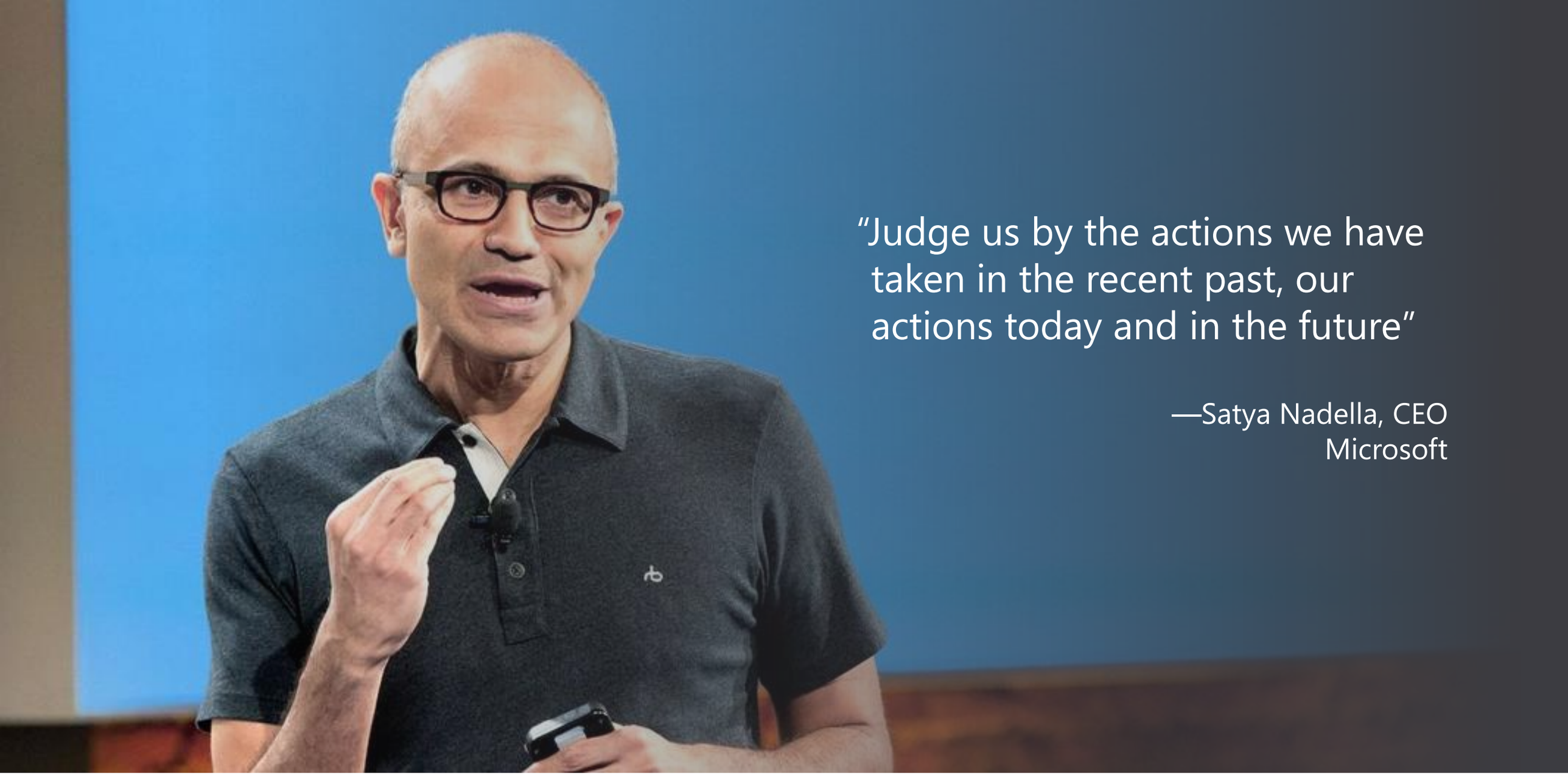


"Judge us by the actions we have taken in the recent past, our actions today and in the future"

—Satya Nadella, CEO
Microsoft

2018

GitHub contributions

2014

Satya "Microsoft loves Linux"

.NET foundation created

2015

VSCode released

HDInsight (Hadoop/ Ubuntu) announced

Microsoft jointly forms Node.js foundation

2016

.NET Core 1.0

PowerShell Core

SQL on Linux announced

Windows Subsystem for Linux in Windows 10

Microsoft joins Linux foundation

2017

Microsoft Azure Kubernetes Service launched

Draft, Brigade, Kashti projects submitted to Kubernetes community

Microsoft joins Cloud Native Computing & Cloud Foundry Foundations

Azure Database for Postgres & MySQL announced

Azure Databricks (Apache Spark) announced

2018

VSCode ranked #1 developer tool (Stack Overflow, 2018 language survey)

Service Fabric Open Sourced

Azure Sphere with Linux kernel

GitHub intent to acquire announced

~5,000 Microsoft employees committing to open source projects on Github

Azure trending to 50% Linux

2018/19

Microsoft acquires GitHub

GitHub

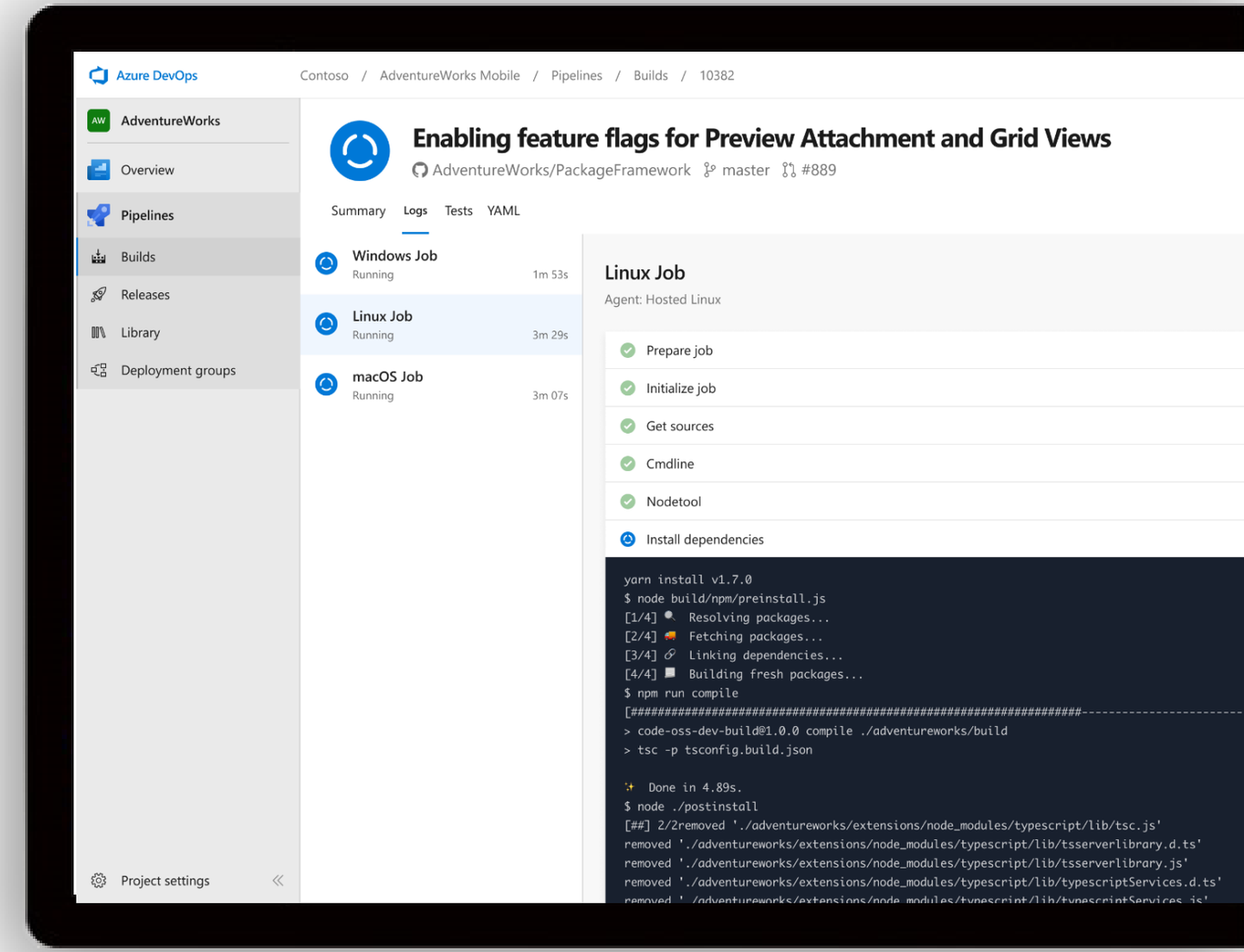
2014 2015 2016 2017 2018 2018

Azure Pipelines

Cloud-hosted CI/CD for any language, any platform

Connect to GitHub and deploy continuously

Free unlimited build for open source projects



Azure supports the open source ecosystem

Management

puppet labs
CHEF
ANSIBLE

Databases & middleware

Hortonworks
cloudera
mongoDB
DATASTAX

Applications

apprenda®
Joomla!
Drupal
CLOUD FOUNDRY

Infrastructure

redhat
CANONICAL
docker
Linux
Pivotal

App frameworks

Microsoft .NET
nodeJS
python
Java
php
Ruby

Microsoft Azure

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Azure: Trusted

Global

- ISO 27001
- ISO 27018
- ISO 27017
- ISO 22301
- SOC 1 Type 2
- SOC 2 Type 2
- SOC 3
- CSA STAR Self-Assessment
- CSA STAR Certification
- CSA STAR Attestation

Regional

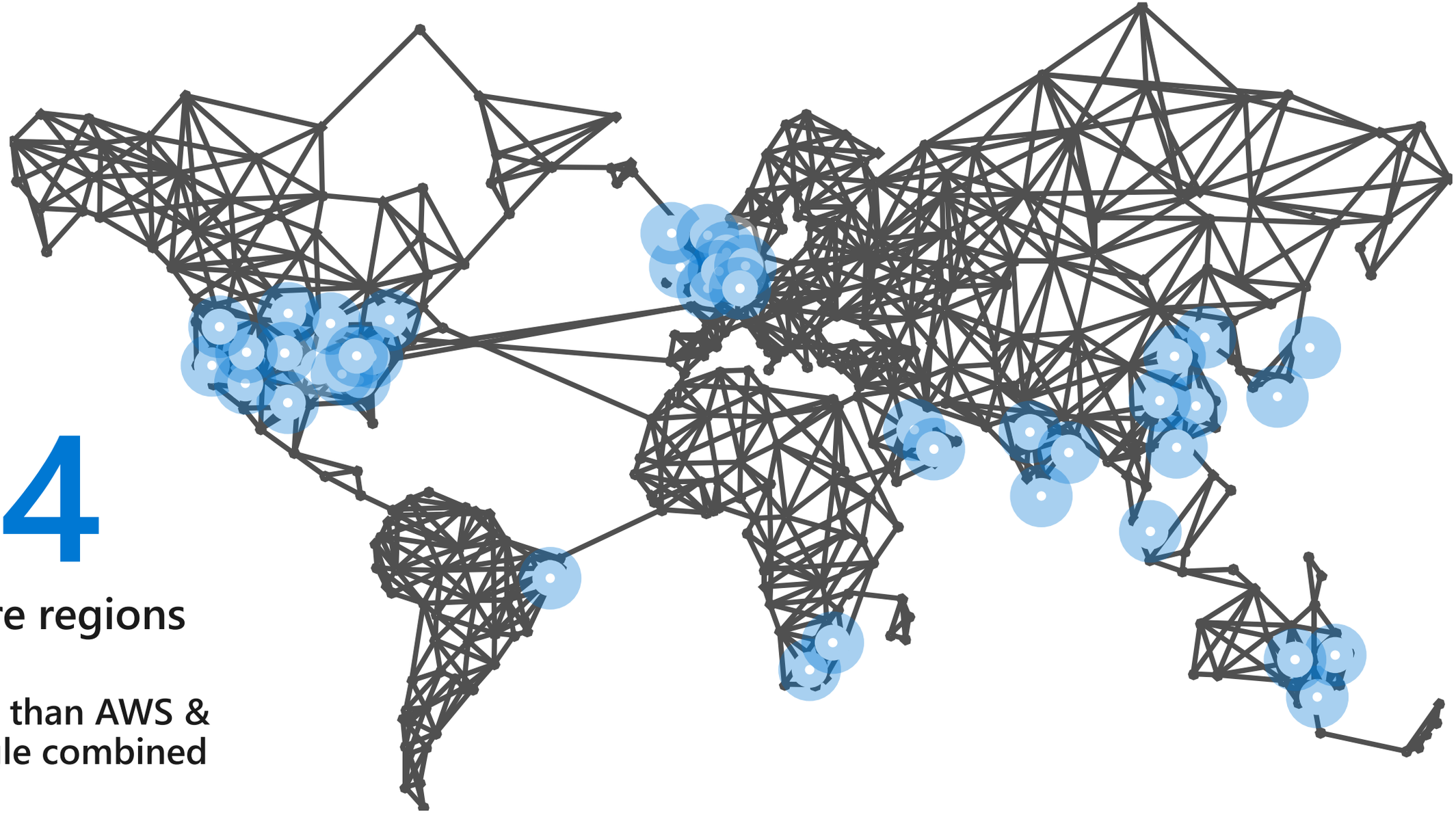
- Argentina PDPA
- EU Model Clauses
- UK G-Cloud
- China DJCP
- China GB 18030
- China TRUCS
- Singapore MTCS
- Australia IRAP/CCSL
- New Zealand GCIO
- Japan My Number Act
- ENISA IAF
- Japan CS Mark Gold
- Spain ENS
- Spain DPA
- India MeitY
- Canada Privacy Laws
- Privacy Shield
- Germany IT Grundschutz workbook

Industry

- PCI DSS Level 1
- CDSA
- MPAA
- FACT UK
- Shared Assessments
- FISC Japan
- HIPAA/ HITECH Act
- HITRUST
- GxP 21 CFR Part 11
- MARS-E
- IG Toolkit UK
- FERPA
- GLBA
- FFIEC

Us Gov

- Moderate JAB P-ATO
- High JAB P-ATO
- DoD DISA SRG Level 2
- DoD DISA SRG Level 4
- DoD DISA SRG Level 5
- SP 800-171
- FIPS 140-2
- Section 508 VPAT
- ITAR
- CJIS
- IRS 1075



54

Azure regions

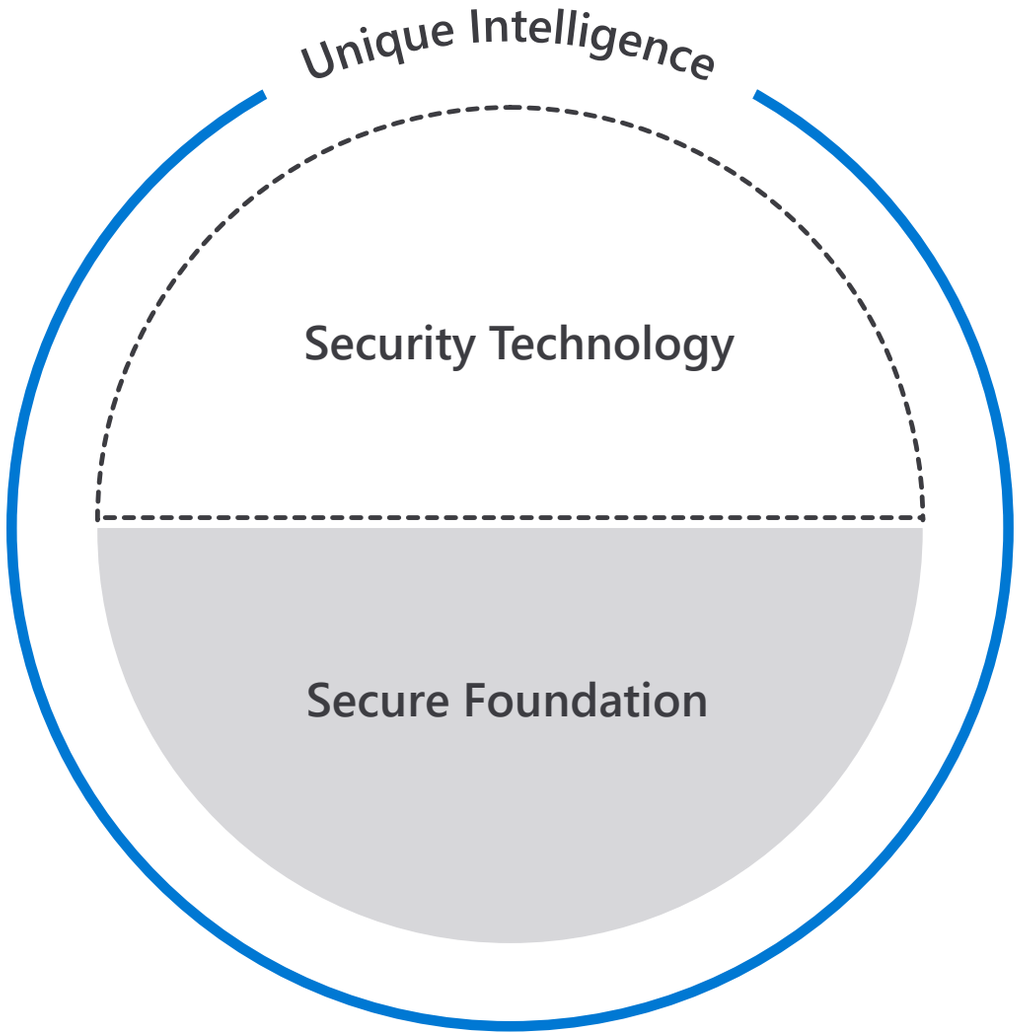
More than AWS &
Google combined

Unmatched security

$1B+ annual investments

Over 3500 security experts

Trillions of diverse signals



Your journey to the cloud

Resources

Azure Migrate

Free tools to migrate virtual machines and databases to Azure

Programs

FastTrack for Azure

Proven practices, design principles and tools to provide personalized guidance from engineering

Microsoft Azure

Microsoft Learn

Interactive step-by step tutorials

Hands-on learning & coding environments

Knowledge checks to validate learning & earn achievements

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Microsoft Azure

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Microsoft Azure

Thank you.

감사합니다 TEŞEKKÜRLER

DANK U WEL **СПАСИБО**

ευχαριστώ OBRIGADO

תודה MULŢUMESC **நன்றி**

HVALA SALMAT PO MERCI

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Microsoft Azure

Appendix
1. Why Microsoft Azure
2. Safe deployment zones
2. Stay Informed of roadmap and updates

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Microsoft Azure

Why Microsoft Azure

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Why Microsoft Azure?

Microsoft Azure

Trusted partner

Your Trusted Technology, Innovation and Business Partner

Hybrid by Design

Deep expertise in both On-prem & Cloud

Global

>54 Azure regions

Secure

Built with security from the ground up

Compliant

>90 compliance certifications

Microsoft is your Trusted technology partner

Trusted business partner

Microsoft mission

Empower every person and every organization on the planet to achieve more

Satya Nadella, Microsoft CEO

October 2018

"No customer wants to be dependent on a provider that sells them technology on one end and competes with them on the other. Getting this equation right is key to their success going forward. **Microsoft is uniquely positioned to help**."

Trusted innovation partner

Shared IP Innovation Principles:

Microsoft's policies give customers peace of mind and clarity when innovating with us

Azure IP Advantage:

Microsoft offers best-in-industry protection against IP risks

Patent Pick

Uncapped Indemnification

Springing License

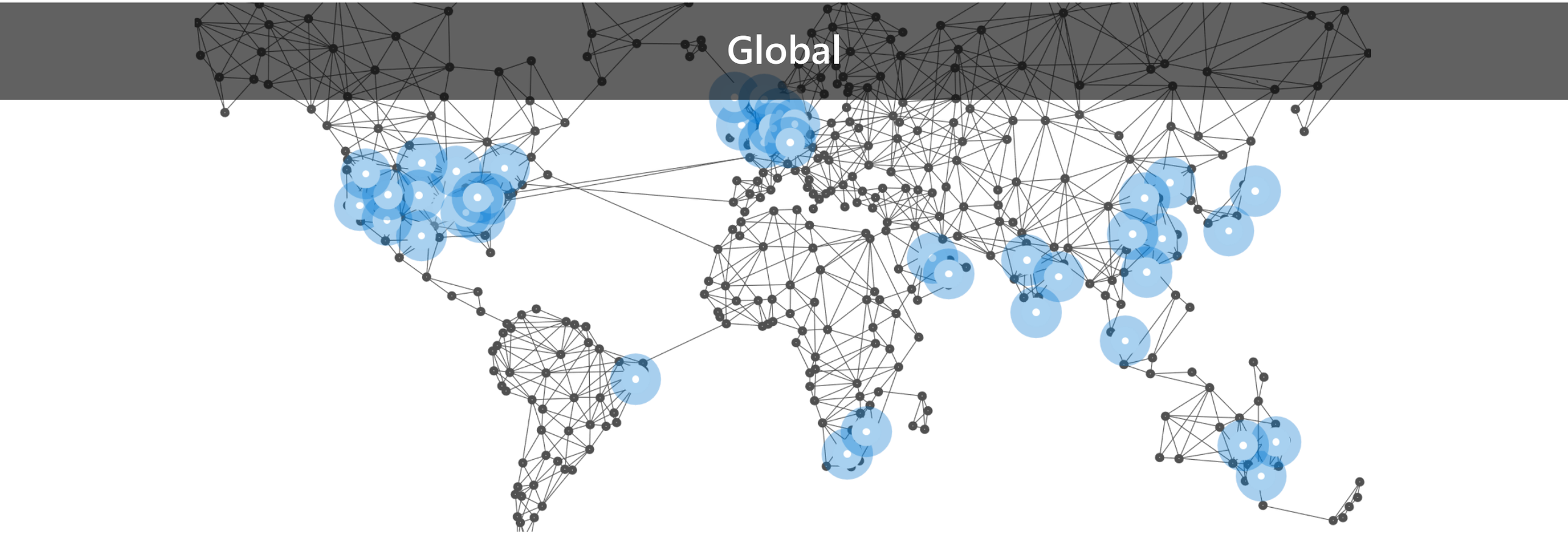
Hybrid by design

Microsoft is the only IT partner with deep expertise in both **on-prem and cloud environments.**

Beyond mere connectivity and app portability, Azure is built to be **hybrid by design** since its launch in 2008.

Azure builds consistency across the full stack: app development, management & security, identity and the data platform.

Global, secure and compliant



Largest geographical footprint of any cloud provider
with more than **54 Azure regions**

Global, secure and compliant

Microsoft Cyber Defense Operations Center

>**3,500** full-time security professionals

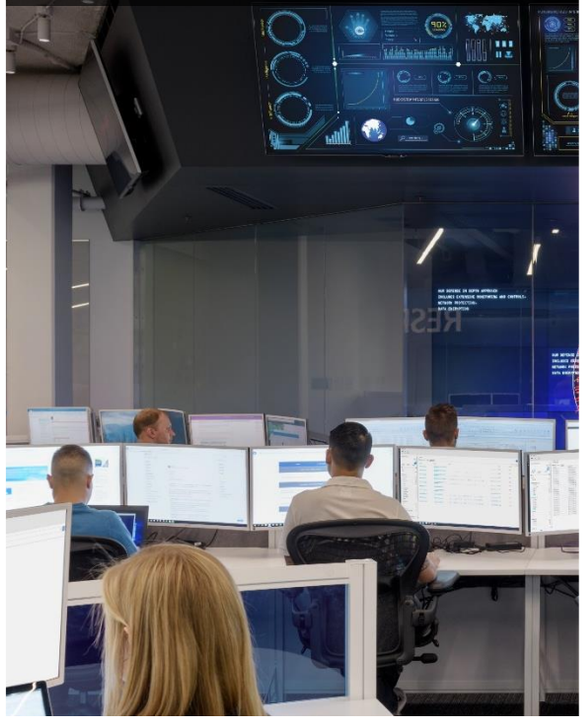
6.5 trillion global signals daily

$**1 billion** annual cybersecurity investment

Global, secure and compliant

Global

Secure

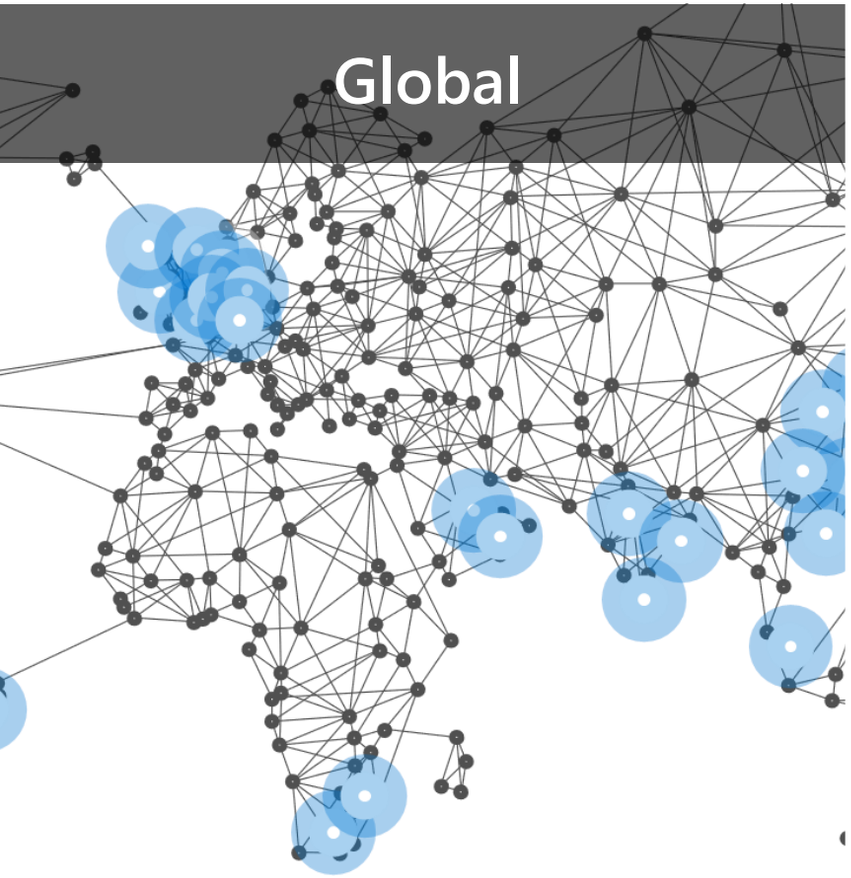


Compliant

Global	☑ ISO 27001:2013 ☑ ISO 27017:2015 ☑ ISO 27018:2014	☑ ISO 22301:2012 ☑ ISO 9001:2015 ☑ ISO 20000-1:2011	☑ SOC 1 Type 2 ☑ SOC 2 Type 2 ☑ SOC 3 ☑ CIS Benchmark	☑ CSA STAR Certification ☑ CSA STAR Attestation ☑ CSA STAR Self-Assessment ☑ WCAG 2.0 (ISO 40500:2012)
U.S. Gov	☑ FedRAMP High ☑ FedRAMP Moderate ☑ EAR ☑ ITAR	☑ DoD DISA SRG Level 5 ☑ DoD DISA SRG Level 4 ☑ DoD DISA SRG Level 2 ☑ DFARS	☑ DoE 10 CFR Part 810 ☑ NIST SP 800-171 ☑ NIST CSF ☑ Section 508 VPATs	☑ FIPS 140-2 ☑ CJIS ☑ IRS 1075 ☑ CNSSI 1253
Industry	☑ PCI DSS Level 1 ☑ GLBA (US) ☑ FFIEC (US) ☑ Shared Assessments (US) ☑ SEC 17a-4 (US) ☑ CFTC 1.31 (US) ☑ FINRA 4511 (US) ☑ SOX (US) ☑ 23 NYCRR 500 (US)	☑ OSFI (Canada) ☑ FCA + PRA (UK) ☑ APRA (Australia) ☑ FINMA (Switzerland) ☑ FSA (Denmark) ☑ RBI + IRDAI (India) ☑ MAS + ABS (Singapore) ☑ NBB + FSMA (Belgium) ☑ AFM + DNB (Netherlands)	☑ AMF + ACPR (France) ☑ KNF (Poland) ☑ European Banking Authority (EBA) ☑ FISC (Japan) ☑ HIPAA BAA (US) ☑ HITRUST Certification ☑ GxP (FDA 21 CFR Part 11) ☑ MARS-E (US)	☑ NHS IG Toolkit (UK) ☑ NEN 7510:2011 (Netherlands) ☑ FERPA (US) ☑ CDSA ☑ MPAA (US) ☑ FACT (UK) ☑ DPP (UK) ☑ HDS (France)
Regional	☑ Argentina PDPA ☑ Australia IRAP Unclassified ☑ Australia IRAP PROTECTED ☑ Canada Privacy Laws ☑ China GB 18030:2005 ☑ China DJCP (MLPS) Level 3	☑ China TRUCS / CCCPPF ☑ EU EN 301 549 ☑ EU ENISA IAF ☑ EU Model Clauses ☑ EU – US Privacy Shield ☑ GDPR ☑ Germany C5 ☑ Germany TISAX	☑ Germany IT-Grundschutz workbook ☑ India MeitY ☑ Japan CS Mark Gold ☑ Japan My Number Act ☑ Korea ISMS ☑ Netherlands BIR 2012 ☑ New Zealand Gov CIO Framework	☑ Singapore MTCS Level 3 ☑ Spain ENS High ☑ Spain DPA ☑ UK Cyber Essentials Plus ☑ UK G-Cloud ☑ UK PASF

Global, secure and compliant

Global



Secure

Compliant

cloud security alliance®

AICPA SOC

FedRAMP

FIPS VALIDATED 140-2

CDSA Content Protection & Security Program

FACT

PCI Security Standards Council™ PARTICIPATING ORGANIZATION

CYBER ESSENTIALS PLUS

TRUCS 可信云服务认证

DJCP

ENSI ECOLE NATIONALE DES SCIENCES DE L'INFORMATIQUE

TISAX® RESULT AVAILABLE

ISMS Information Security Management System

Azure covers 91 compliance offerings

Azure has the deepest and most comprehensive compliance coverage in the industry

Global	☑ ISO 27001:2013 ☑ ISO 27017:2015 ☑ ISO 27018:2014	☑ ISO 22301:2012 ☑ ISO 9001:2015 ☑ ISO 20000-1:2011	☑ SOC 1 Type 2 ☑ SOC 2 Type 2 ☑ SOC 3 ☑ CIS Benchmark	☑ CSA STAR Certification ☑ CSA STAR Attestation ☑ CSA STAR Self-Assessment ☑ WCAG 2.0 (ISO 40500:2012)
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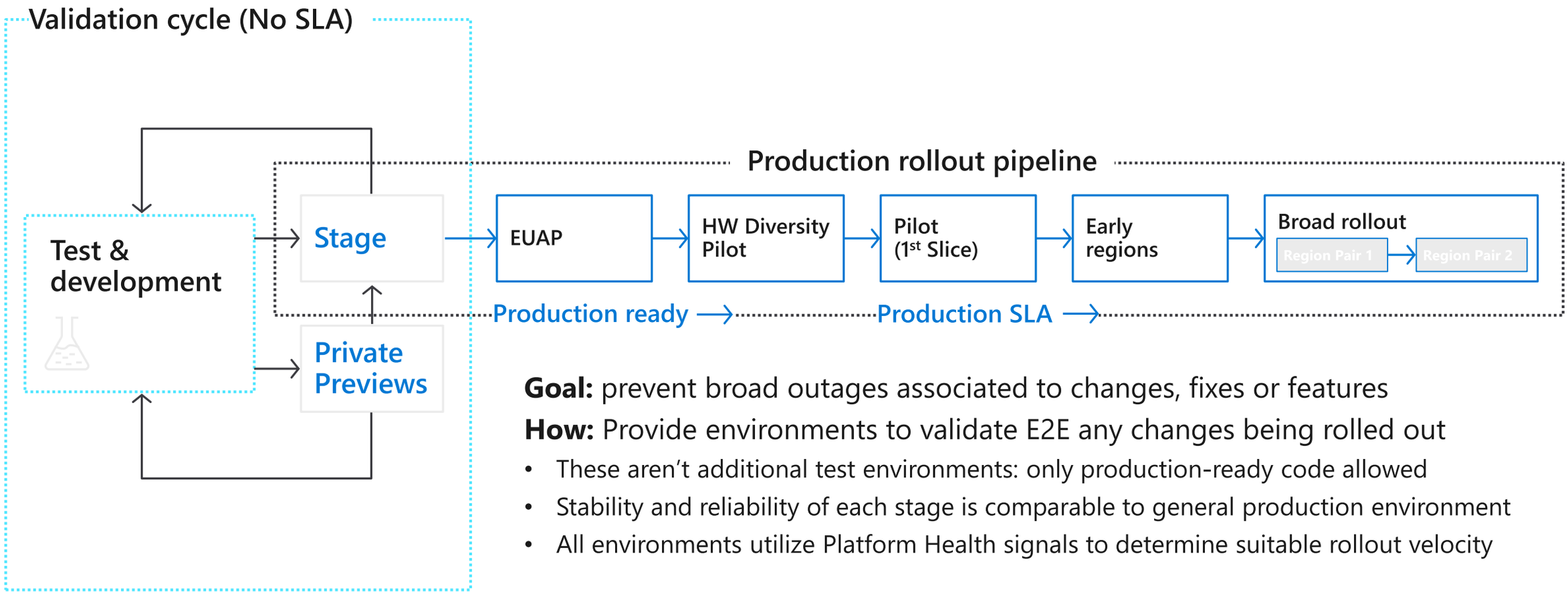
Azure investment in change automation: Our safe deployment practices (simplification)



Goal: prevent broad outages associated to changes, fixes or features

How: Provide environments to validate E2E any changes being rolled out

- These aren't additional test environments: only production-ready code allowed
- Stability and reliability of each stage is comparable to general production environment
- All environments utilize Platform Health signals to determine suitable rollout velocity

Increasing cost and impact of failures

Stay informed of changes in Azure

Azure.com/updates

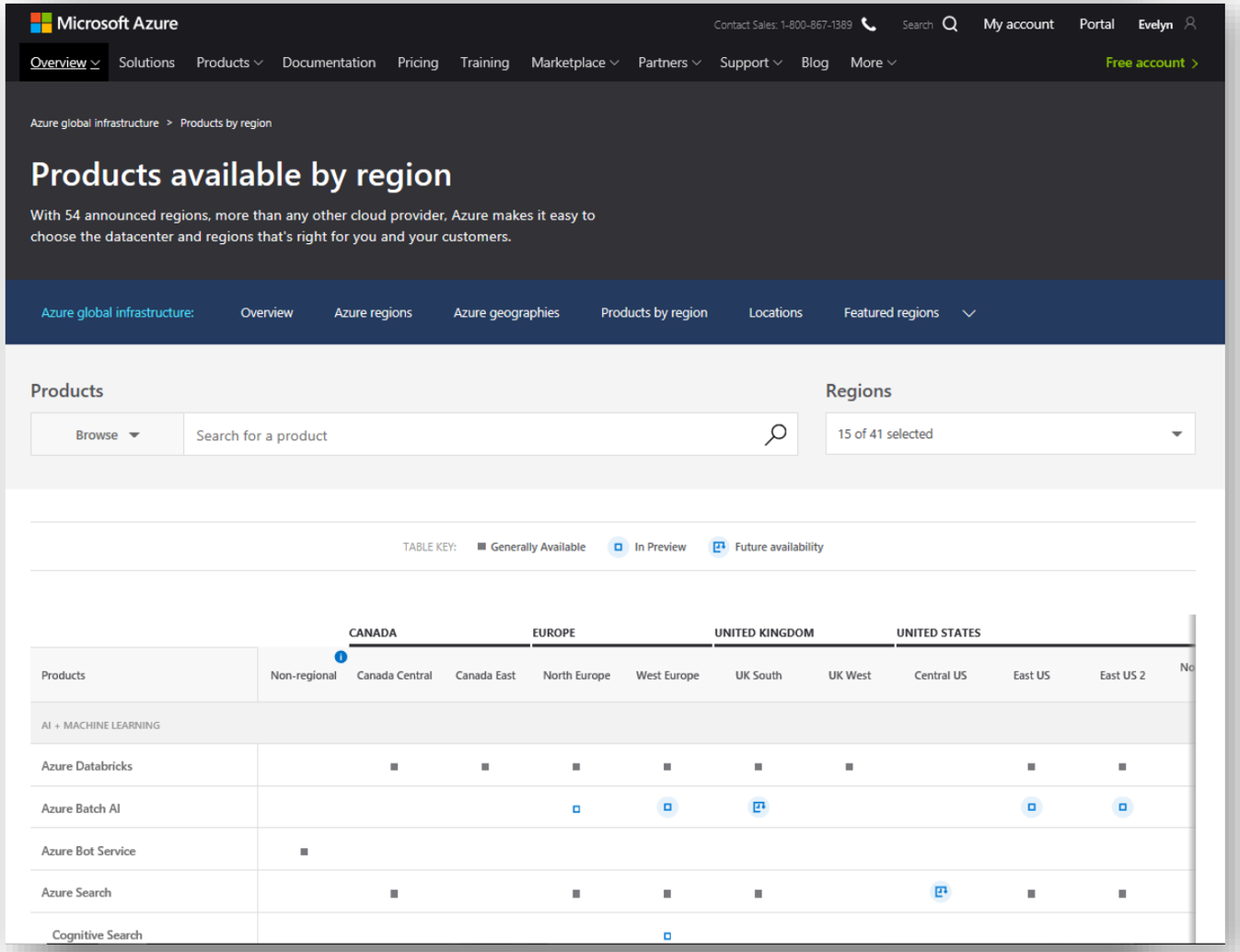
Azure updates is where you go for product updates and roadmap changes

Filter by products and the types of updates of interest

Subscribe to customized RSS Feed to stay informed on updates you care about

Includes packaging, licensing and region availability changes

Azure.com/productsbyregion

Products available by region shows what features/services are available and where

Source of truth—integrated with engineering roadmap tools to deliver future release timeframes for services in Preview or Future Availability