Overview of Cloud Computing

Digital Transformation of Business

Andrew Hodges

Senior Security Advisor

World Wide Public Sector - APJ

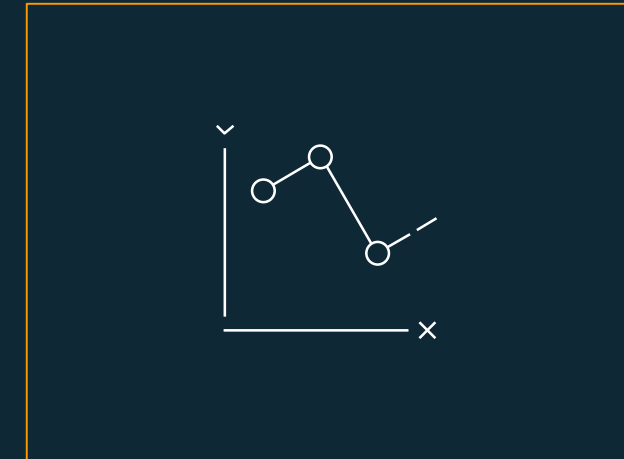22 February 2023

What are your business goals?

Grow new
revenue streams

Improve operational and
financial efficiency

Lower business risk

aws

Industry leaders are building on AWS

McDonald's brings home delivery to market in four months

"This was a four month-duration for us—from idea, to development to massive scale. That's the new norm that we see everyday."

- Thilina Gunasinghe, Chief Technology Architect, McDonald's

Scalability and reliability to deliver over 1 million orders per hour

Multi-country support, each with multiple delivery partners

Cost sensitive – selling hamburgers!

Ryanair personalizes customer travel plans with machine learning

"Machine learning is hugely important to our growth, and we're pursuing a variety of AWS machine learning services, including Amazon SageMaker, to personalize the MyRyanair portal for every unique traveler."

- John Hurley, Chief Technology Officer, Ryanair

RYANAIR

Enhances and personalizes customer experience

Automatically detects flight surge demand

Routes support requests to the right assistance type

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GE Healthcare creates new digital business

"Advancing medical outcomes requires processing large amounts of healthcare data with governed access to that data for research as well as clinical application...We chose AWS for GE Health Cloud for its breadth of services and commitment to making those services compliant with global health data regulations, which was key for us."

- Mitch Jackson, vice president of cloud strategy and technology, GE Healthcare Digital

GE Healthcare
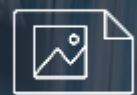
Enables image collaboration across primary care, specialists, and care settings

Improves diagnoses and treatment using machine learning

Establishes an ecosystem for innovation

aws

Mint.com frees resources to focus on new revenue streams

"Datacenter management is not our core business.
Our business is helping people improve their financial lives.
We wanted to focus more on delivering exceptional
financial-management products and less on managing
the backend IT environment."

—Sean McCluskey, Director of Application Development and Cloud Operations, Intuit Mint

25% cost reduction

15% improvement in DBA productivity
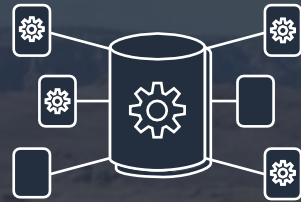
Failover scenarios now 1 min vs. 30 min

Hours vs. weeks to spin up new service

How to reach your business goals with AWS

Migrate and free-up resources

Adopt **modern application development** practices

Gain faster, deeper insights with analytics

Ensure **security, compliance** and **resiliency**

Organize for speed and agility

Bridge **skills and experience** gaps rapidly

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Migrate and free-up resources

Migrate and free-up IT resources

Reduce infrastructure costs

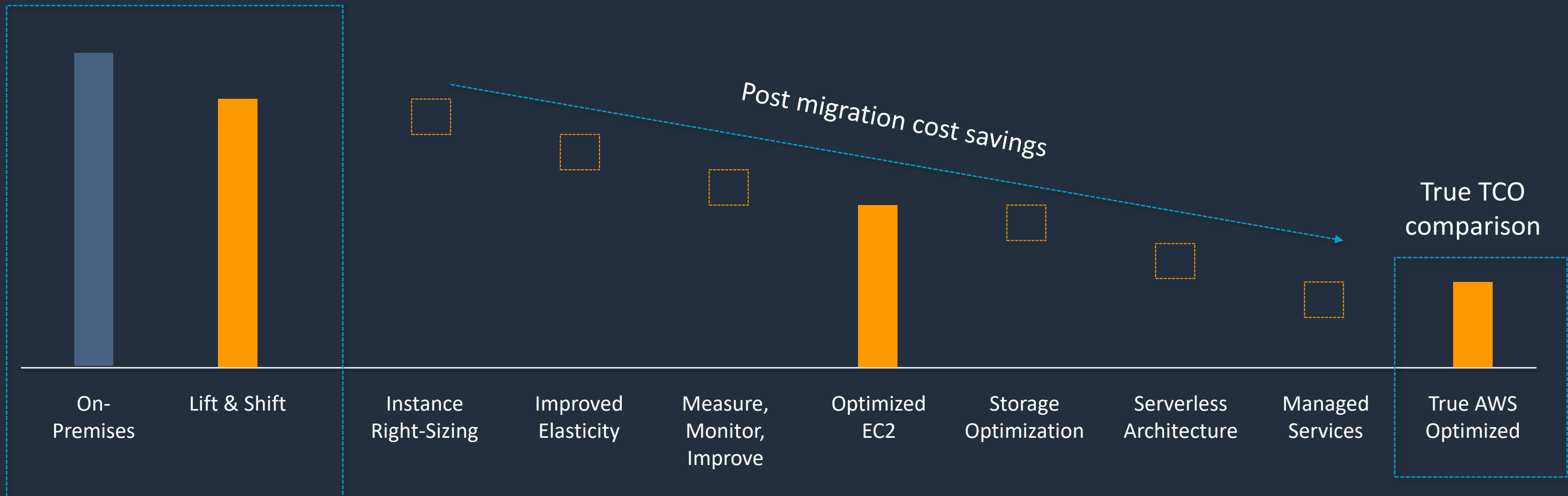Use existing staff for higher-value work

Create momentum to grow new skills and processes

Invent and iterate with flexible resources

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Cost savings improve through optimizations

Typical TCO comparison

Post migration cost savings

True TCO comparison

| On-Premises | Lift & Shift | Instance Right-Sizing | Improved Elasticity | Measure, Monitor, Improve | Optimized EC2 | Storage Optimization | Serverless Architecture | Managed Services | True AWS Optimized |

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Ensure migration success

with the most comprehensive set of services and expertise developed helping thousands of enterprises.
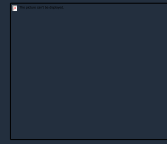
Migration
Methodology

Migration Services
and Tools
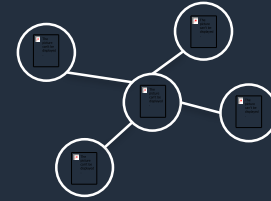
AWS Partner
Network

AWS Professional
Services

AWS
Investment

AWS Training &
Certification

AWS Managed
Services

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Migration business outcomes

News Corp

Consolidated 56 datacenters to 6 and saved over $100M in avoided capital over three years

FINRA

Moved 90% of data volumes to AWS and elevated security, compliance and resilience of stock trade validations

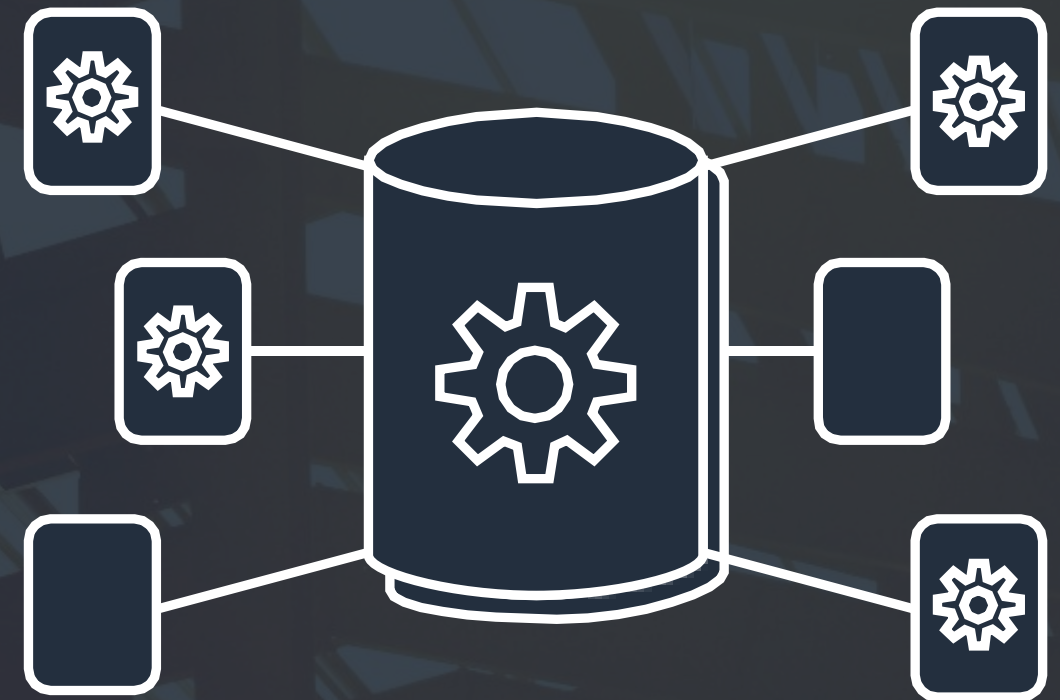**FICO**

Migrated from private cloud to AWS and reduced time to market for new features on flagship credit scoring product

GE Healthcare

On-premises data center couldn't scale to meet data growth from IoT sensors, now they have unlimited data growth

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Modern application development practices

Architecture evolution

When the impact of change is small, release velocity can increase
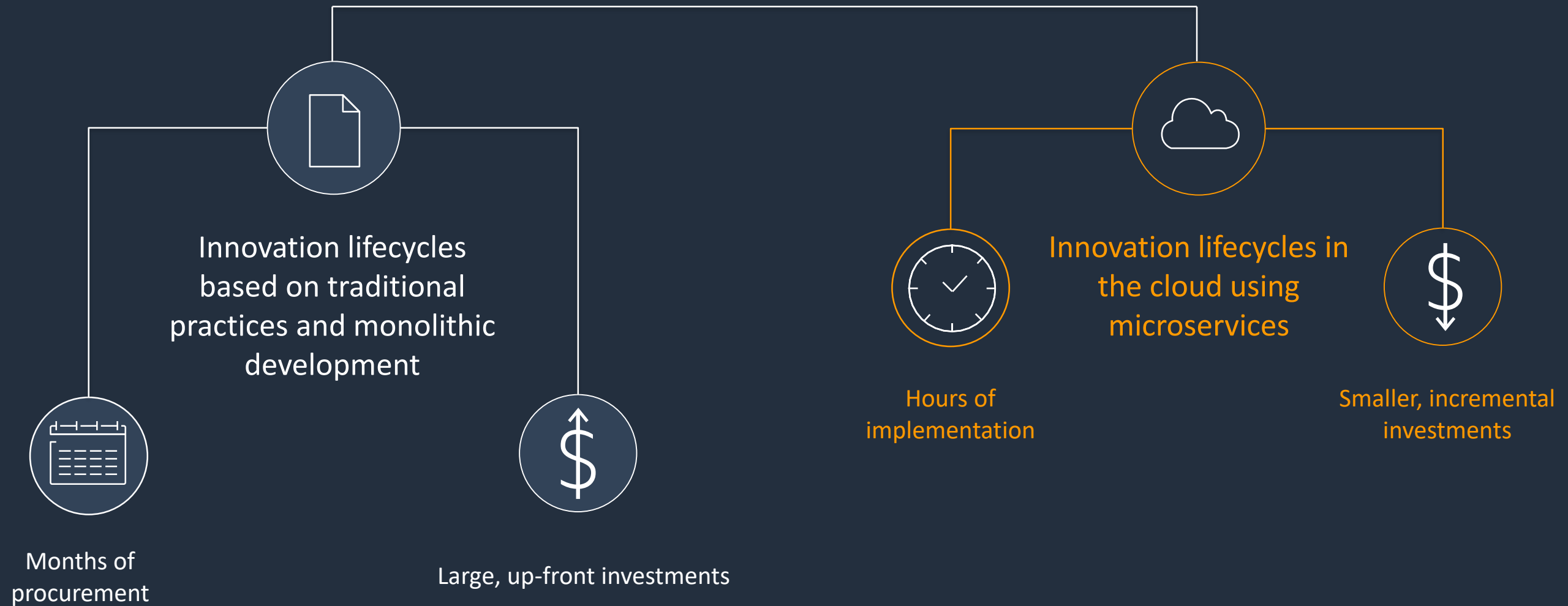
Monolithic application
Does everything
Shared release pipeline
Rigid scaling
High impact of change
Hard to adopt new technologies

Microservices
Does one thing
Independent deployments
Independent scaling
Small impact of change
Choice of technology

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Get from idea to implementation with AWS modern application development

Innovation lifecycles based on traditional practices and monolithic development

Months of procurement

Large, up-front investments

Innovation lifecycles in the cloud using microservices

Hours of implementation

Smaller, incremental investments

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Create more secure, reliable and scalable applications faster

FICO — developed innovative new features in one day instead of weeks

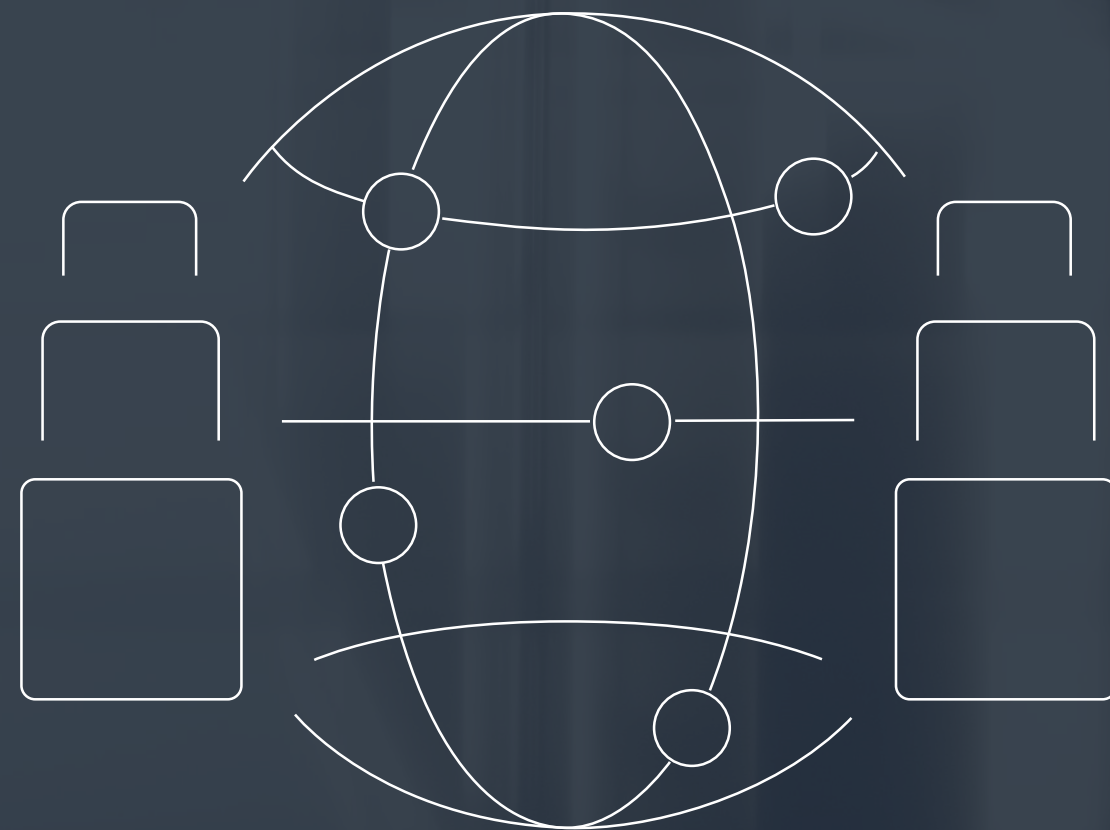**Coca-Cola** — cut processing time from 36 hours to 10 seconds

FINRA — created a stock trade validation system in 3 months

The Washington Post — releases over 50+ deployments per hour

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Faster, deeper insights

Gain Faster, Deeper Insights

Transform data into value, without compromising on security or governance

Speed decision-making to support your business

Deepen customer relationships

Reduce business risk

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Put AI to work for your business

Customer experience

Business operations

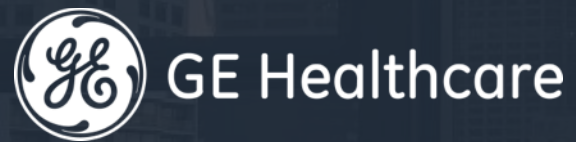**Decision making**

Innovation

Competitive advantage

40% of digital transformation initiatives supported by AI in 2019 *- IDC 2018*

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More machine learning happens on AWS than anywhere else

Domino's — Personalize customer experience with Amazon Personalize

GE Healthcare — Better healthcare outcomes using Machine learning

SIEMENS — Accelerating financial analysis with SageMaker

SAMSUNG — Responding to cyber threats in shipbuilding and marine industry

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Ensure security and resiliency

Elevate your security with AWS

Inherit global security and compliance controls

Largest network of security partners and solutions

Scale with superior visibility and control

Automate with comprehensive, integrated security services

Highest standards for privacy and data security

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Inherit global security and compliance controls

Certifications / Attestations		
C5	DE	✓
Cyber Essentials Plus	GB	✓
DoD SRG	US	✓
FedRAMP	US	✓
FIPS	US	✓
IRAP	AU	✓
ISO 9001	🌐	✓
ISO 27001	🌐	✓
ISO 27017	🌐	✓
ISO 27018	🌐	✓
K-ISMS	KR	✓
MTCS	SG	✓
PCI DSS Level 1	🌐	✓
SEC Rule 17-a-4(f)	US	✓
SOC 1, SOC 2, SOC 3	🌐	✓

🌐 = industry or global standard

Laws / Regulations / Privacy		
Agentina Data Privacy		✓
CISPE	EU	✓
EU Model Clauses	EU	✓
FERPA	US	✓
GDPR	EU	✓
GLBA	US	✓
HIPAA	US	✓
HITECH	🌐	✓
IRS 1075	US	✓
ITAR	US	✓
My Number Act	JP	✓
UK DPA - 1988	GB	✓
VPAT/Section 508	US	✓
Data Protection Directive	EU	✓
Privacy Act [Australia]	AU	✓
Privacy Act [New Zealand]	NZ	✓
PDPA—2010 [Malaysia]	MY	✓
PDPA—2012 [Singapore]	SG	✓
PIPEDA [Canada]	CA	✓
Spanish DPA Authorization	ES	✓
Spanish DPA Authorization	ES	✓

Alignments / Frameworks		
CIS (Center for Internet Security)	🌐	✓
CJIS (US FBI)	US	✓
CSA (Cloud Security Alliance)	🌐	✓
ENS High	ES	✓
EU-US Privacy Shield	EU	✓
FFIEC	US	✓
FISC	JP	✓
FISMA	US	✓
G-Cloud	GB	✓
GxP (US FDA CFR 21 Part 11)	US	✓
ICREA	🌐	✓
IT Grundschutz	DE	✓
MITA 3.0 (US Medicaid)	US	✓
MPAA	US	✓
NIST	US	✓
PHR	US	✓
Uptime Institute Tiers	🌐	✓
Cloud Security Principles	GB	✓

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Share your security responsibility with AWS

Customer is responsible for
security in the cloud

Customer

AWS
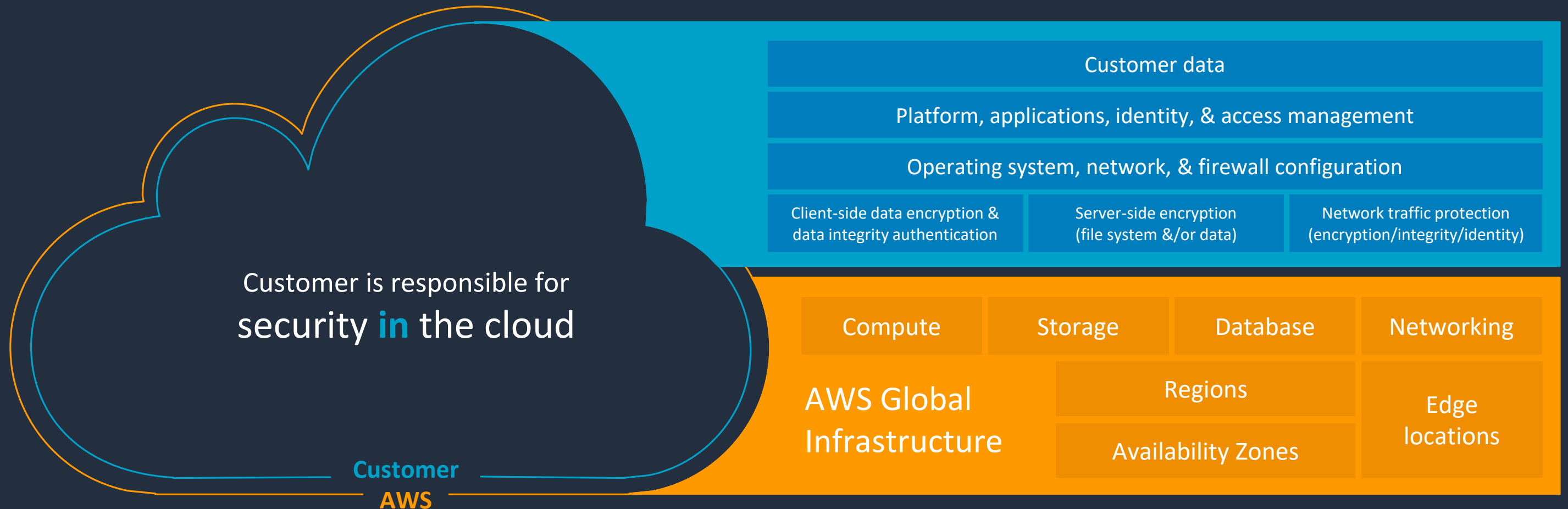
AWS is responsible for
security of the cloud

| Customer data |
| Platform, applications, identity, & access management |
| Operating system, network, & firewall configuration |

| Client-side data encryption & data integrity authentication | Server-side encryption (file system &/or data) | Network traffic protection (encryption/integrity/identity) |

| Compute | Storage | Database | Networking |

AWS Global Infrastructure

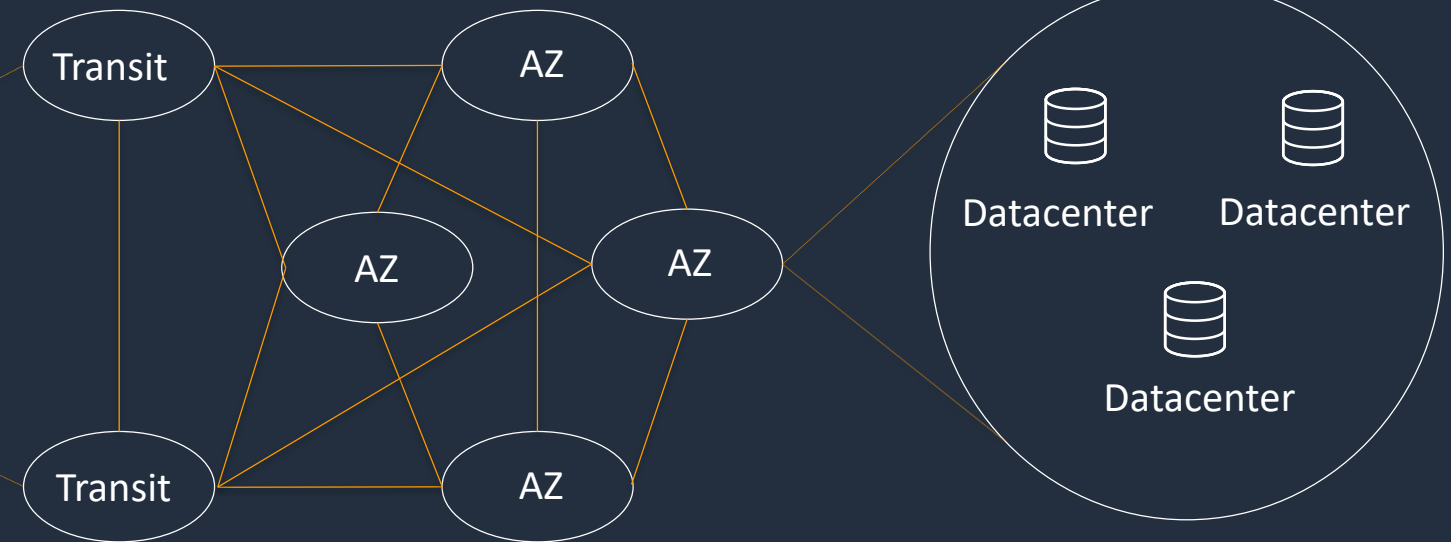| Regions | Edge locations |
| Availability Zones | |

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Scale globally with resilience in every region

The largest global foot print consistently built with a multi-AZ and multi-datacenter design
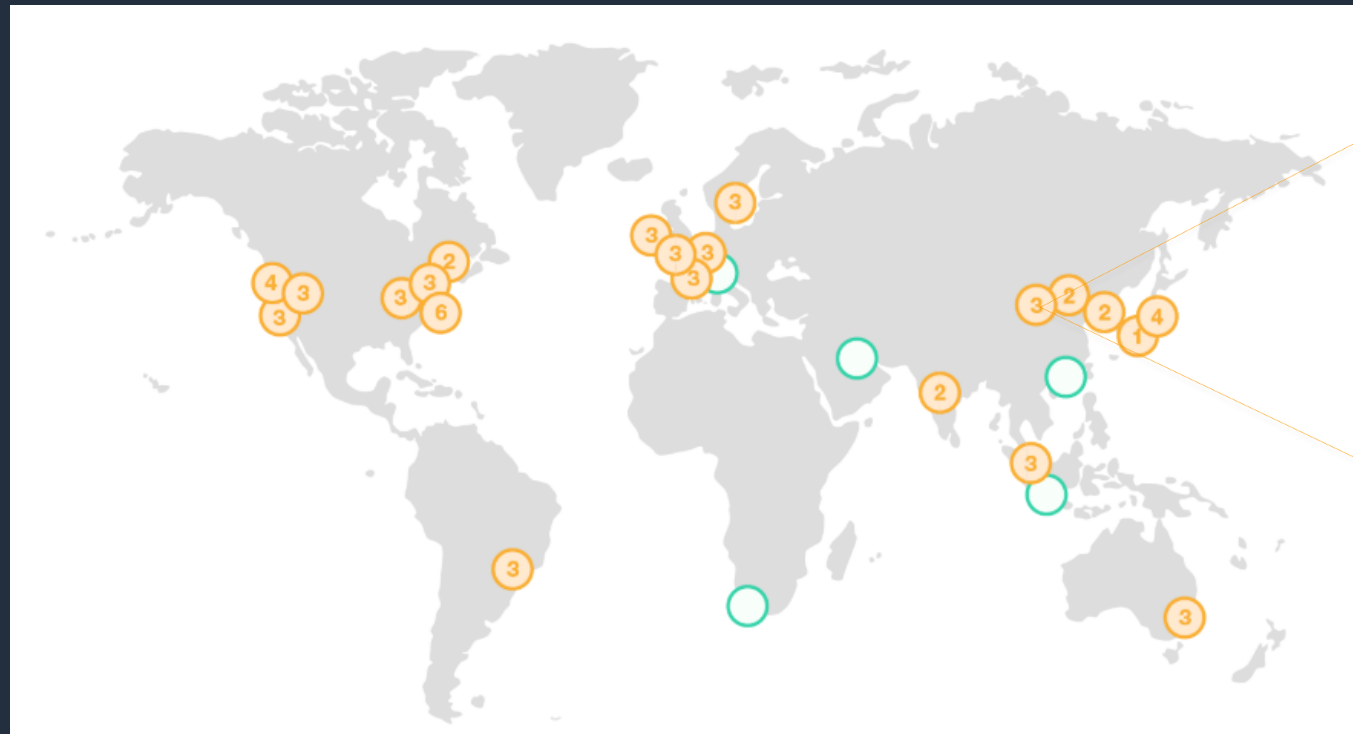
AWS Region

AWS Availability Zone (AZ)

A Region is a physical location in the world where we have multiple **Availability Zones.**

Availability Zones consist of one or more discrete data centers, each with redundant power, networking, and connectivity, housed in separate facilities.

Region & Number of Availability Zones

Announced Regions

Bahrain, Cape Town, Jakarta, and Milan

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Financial industry regulatory authority

"We determined that security in AWS is superior to our on-premises data center across several dimensions, including patching, encryption, auditing and logging, entitlements, and compliance."

- John Brady, CISO FINRA

FINra

Looks for fraud, abuse, and insider trading over nearly 6 billion shares traded in U.S. equities markets every day

Processes approximately 6 terabytes of data and 37 billion records on an average day
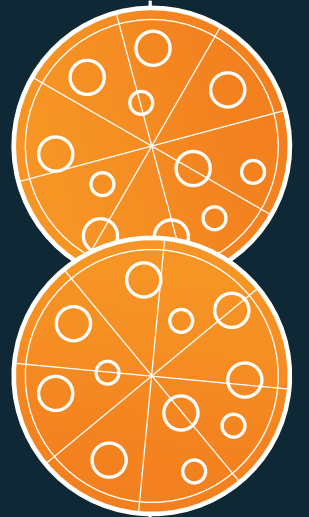
Went from 3–4 weeks for server hardening to 3–4 minutes

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Organize for speed and agility

Most organizational models are activity-based

Business Analyst

Product Manager

Project Managers

Developers

Testers

Implementers

Designers

Operations & Support
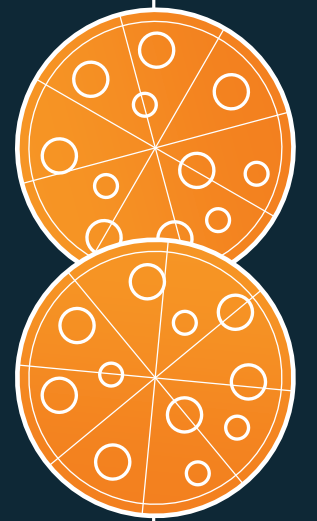
Amazon achieves speed and agility with two-pizza teams
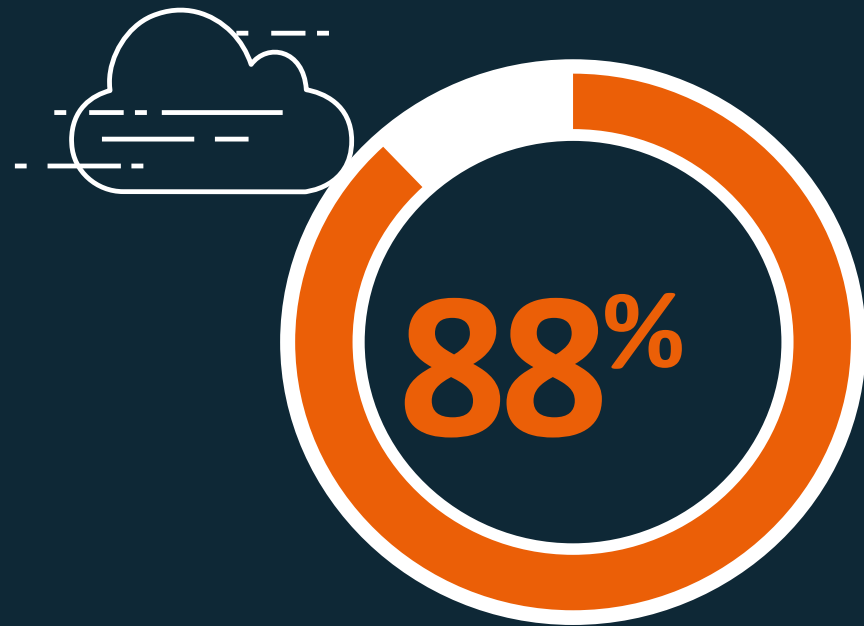
Small, decentralized teams are nimble
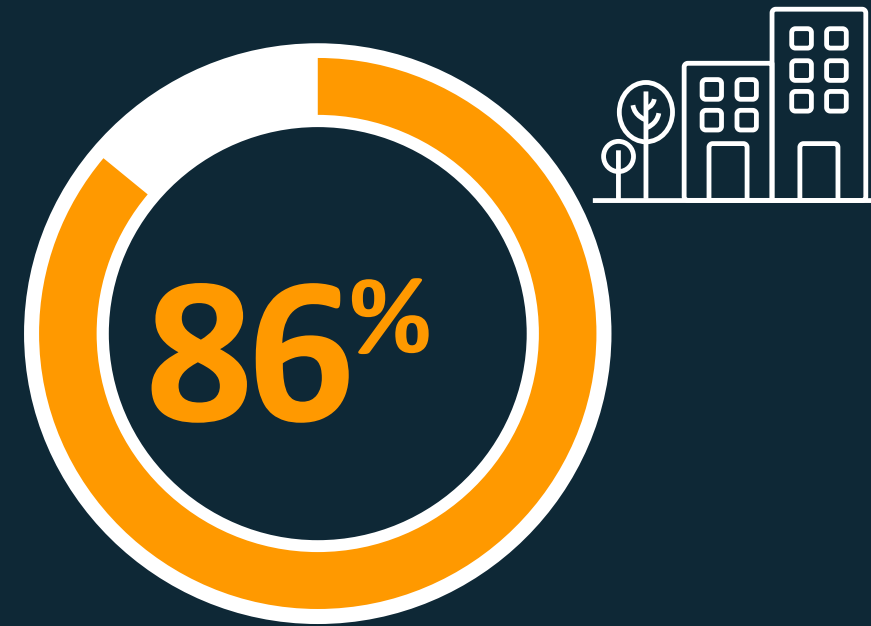
Own/run what you build

Bridge skills and experience gaps
AWS Customer Enablement

Enterprise business transformation challenge

88%

enterprises have a
cloud-first strategy

86%

infra spend still
on-premises

"The biggest inhibitor to cloud adoption is lack of skills.
Enterprises can't hire and train fast enough."

Gartner 2019

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AWS Customer Enablement

Bridging cloud-skills gaps to accelerate business outcomes

AWS customer enablement benefits

The strongest
AWS technical skills

The deepest
enterprise experience

Building culture and
process, not just tech

Experiential
learning for your teams

Work side-by-side
with partners and ISVs

Faster
business transformation

aws

Move from ideas to implementation easier, faster, more securely, and at a lower cost with AWS

Most functionality

Largest community of customers and partners

Most Secure

Most proven operational expertise

Fastest pace of innovation

Partner with the leader in cloud computing

$31B
revenue run-rate

52%
market share

$2.1B
quarterly YoY growth

Millions
of active users

The cloud market leader by revenue

The cloud leader by segment

The largest cloud growth

The largest number of customers

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Thank-you!

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