Move fast, build things
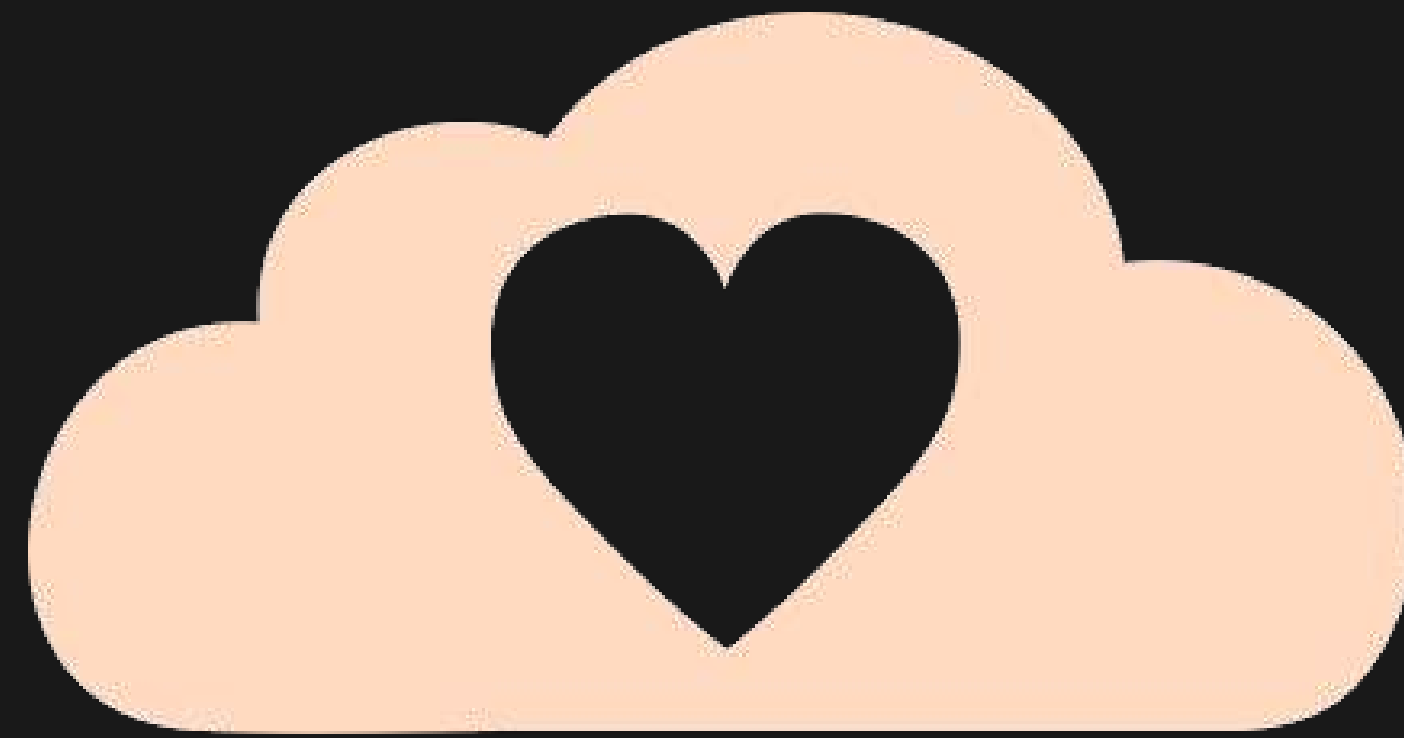
Julien Simon, Principal Technical Evangelist

Amazon Web Services

@julsimon

Why are people so passionate about the Cloud?

Freedom

to dream,
to experiment,
to mine data,
to deploy,
to scale

Freedom to dream

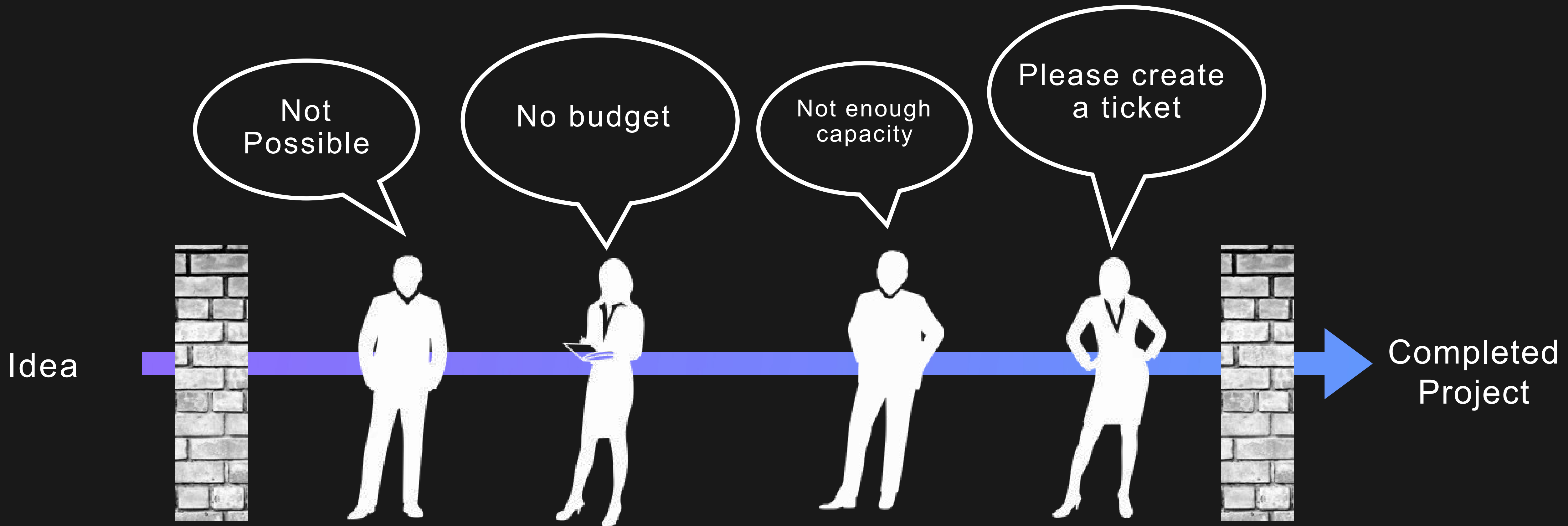# On AWS from day 1

Freedom to experiment

Key Components Of Agility

Vast infrastructure technology platform

+
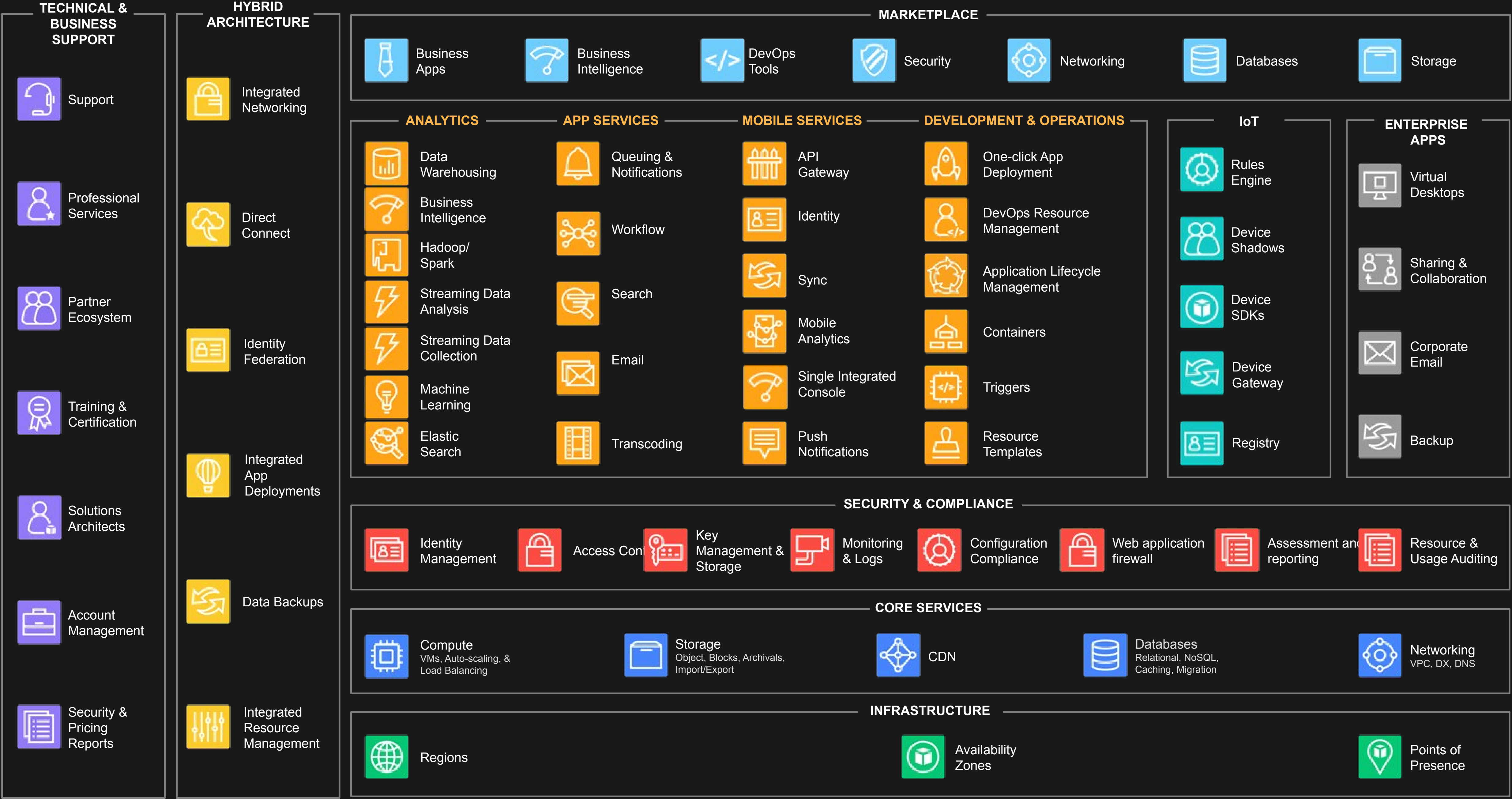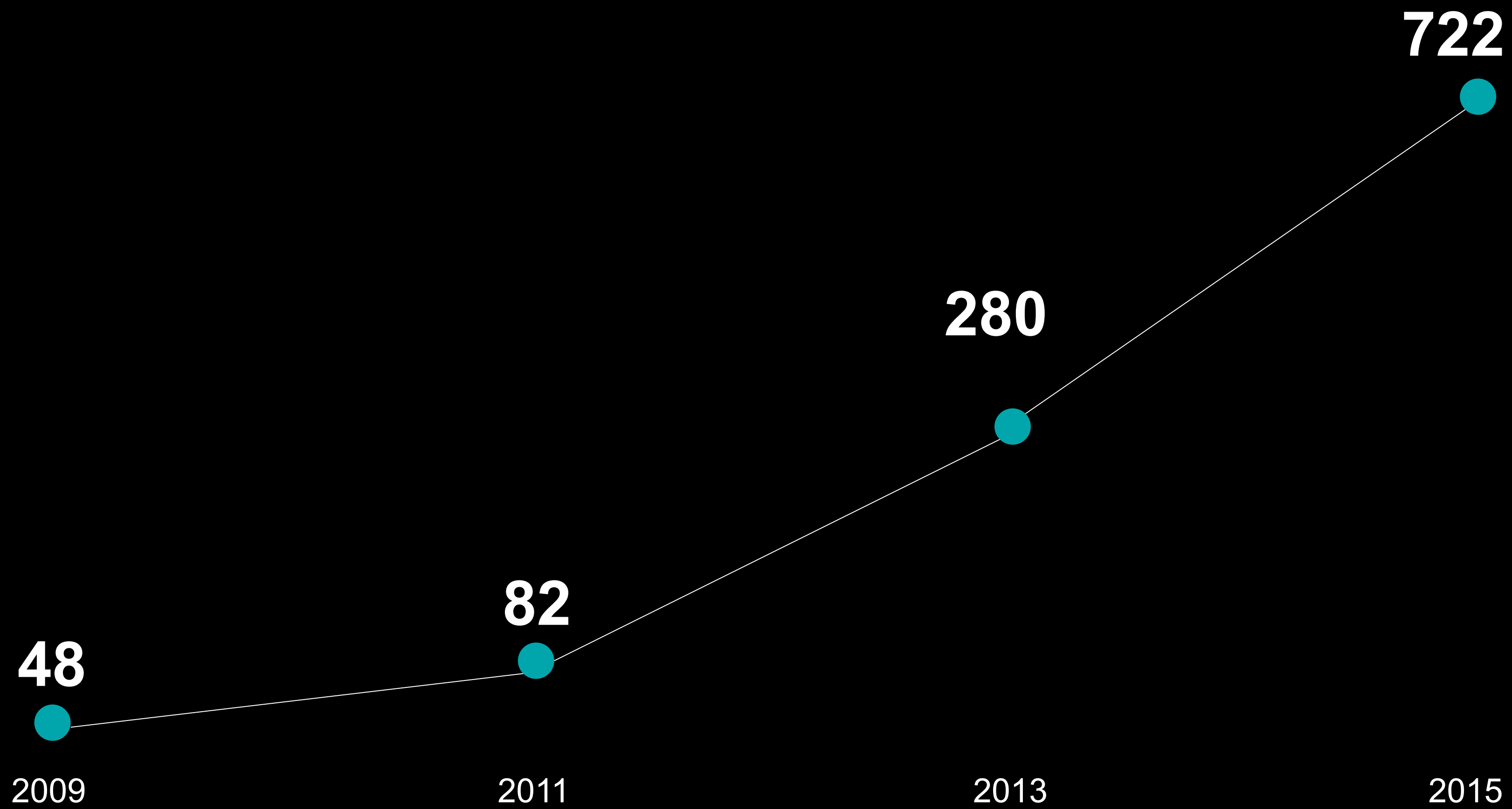
Quick provisioning

=

True Agility

TECHNICAL & BUSINESS SUPPORT

- Support
- Professional Services
- Partner Ecosystem
- Training & Certification
- Solutions Architects
- Account Management
- Security & Pricing Reports

HYBRID ARCHITECTURE

- Integrated Networking
- Direct Connect
- Identity Federation
- Integrated App Deployments
- Data Backups
- Integrated Resource Management

MARKETPLACE

- Business Apps
- Business Intelligence
- DevOps Tools
- Security
- Networking
- Databases
- Storage

ANALYTICS

- Data Warehousing
- Business Intelligence
- Hadoop/Spark
- Streaming Data Analysis
- Streaming Data Collection
- Machine Learning
- Elastic Search

APP SERVICES

- Queuing & Notifications
- Workflow
- Search
- Email
- Transcoding

MOBILE SERVICES

- API Gateway
- Identity
- Sync
- Mobile Analytics
- Single Integrated Console
- Push Notifications

DEVELOPMENT & OPERATIONS

- One-click App Deployment
- DevOps Resource Management
- Application Lifecycle Management
- Containers
- Triggers
- Resource Templates

IoT

- Rules Engine
- Device Shadows
- Device SDKs
- Device Gateway
- Registry

ENTERPRISE APPS

- Virtual Desktops
- Sharing & Collaboration
- Corporate Email
- Backup

SECURITY & COMPLIANCE

- Identity Management
- Access Control
- Key Management & Storage
- Monitoring & Logs
- Configuration Compliance
- Web application firewall
- Assessment and reporting
- Resource & Usage Auditing

CORE SERVICES

- Compute
  VMs, Auto-scaling, & Load Balancing
- Storage
  Object, Blocks, Archivals, Import/Export
- CDN
- Databases
  Relational, NoSQL, Caching, Migration
- Networking
  VPC, DX, DNS

INFRASTRUCTURE

- Regions
- Availability Zones
- Points of Presence

New AWS features

722

280

82

48

2009　　　　　　　2011　　　　　　　2013　　　　　　　2015

* As of 1 Mar 2016

GovCloud

AWS OpsWorks

CodeCommit

Import/Export Snowball

AWS Storage Gateway

Amazon Cognito

Amazon SES

**EC2
Container Service**

AWS CodeDeploy

Amazon
ElastiCache

Amazon Config

Amazon CloudTrail

Elastic Transcoder

Amazon Kinesis

CloudHSM

Elasticsearch Service

AWS Elastic Beanstalk

Amazon WorkMail

**EC2 Container
Registry**

AWS Certificate Manager

Amazon EFS

Redshift

AWS CodePipeline

Amazon Route 53

Lambda

Identity & Access
Management

2,002

AWS
CloudFormation

Amazon
AppStream

Dynamo DB

AWS Device Farm

QuickSight

Directory
Service

Amazon RDS
for Aurora

AWS Data
Pipeline

AWS WAF

Amazon SWF

RDS for MariaDB

AWS Mobile Hub

Amazon SNS

**Amazon API
Gateway**

AWS KMS

WorkSpaces

WorkDocs

CloudWatch Logs

Mobile
Analytics

CloudSearch

**Amazon Machine
Learning**

AWS Direct
Connect

AWS IoT

Glacier

AWS Service
Catalog

AWS Import/Export

Amazon Inspector

As of 1 Mar 2016

Self-service

Everything is a click or an API call away

Pay as you go

Free tier on many services

→ Low cost of experimentation

powered by
amazon
web services™

Freedom to mine your data

Collect → Store   ETL   Analyze → Consume

Applications

Web Apps

Mobile Apps
iOS | Android

Transactional Data

Logging

Logstash

Search Data

Flume

File Data

Log4J

fluentd

IoT

Stream Data

Store

SQL / **NoSQL** / **Cache**	Amazon ElastiCache		**Hot**
	Amazon DynamoDB		
	Amazon RDS		
Search	Amazon ES		**Warm**
File Storage	HDFS		**Hot**
	Amazon S3		
	Amazon Glacier		**Cold**
Stream Storage	Apache Kafka		**Hot**
	Amazon Kinesis		
	Amazon DynamoDB		**Hot**

Analyze

ML — Amazon ML

Interactive
- Amazon Redshift
- presto
- Impala
- Spark

Batch
- HIVE
- Pig

Stream Processing
- Spark Streaming
- APACHE STORM
- Amazon Kinesis
- AWS Lambda

Amazon Elastic MapReduce

Fast

Slow

Fast

Consume

Analysis & Visualization

Predictions

Amazon QuickSight

- tableau
- looker
- TIBCO Jaspersoft
- MicroStrategy
- kibana
- D3

Notebooks

- Apache Zeppelin
- IPython IP[y]: Interactive Computing

IDE

- RStudio

Apps & APIs

Case study: FINRA

Independent regulator for US equities and options trading

Over 10,000 EMR nodes to process 75 billion events daily

EMR	RDS	RedShift	S3	Glacier

FINRA estimates it will save up to $20 million annually by using AWS instead of a physical data center infrastructure

Case study: Boingo

- Largest operator of airport wireless hotspots in the world: 1M+ hotspots,100+ countries
- About 15 TB of data, growing at 2-3 TB per year
- Platform running on SAP (ETL) & Oracle 11g: low performance, heavy admin, high cost
- Evaluated Oracle Exadata, SAP HANA and Amazon Redshift
- Selected Amazon Redshift and migrated in 2 months

6-7x less expensive than alternatives

TCO Estimates — Exadata: $400,000; SAP HANA: $300,000; Redshift: $55,000

Query Performance: Existing System 2,700 (1 year of data), Redshift 15. Data Load Performance: Existing System 7,200 (1 million records), Redshift 15.
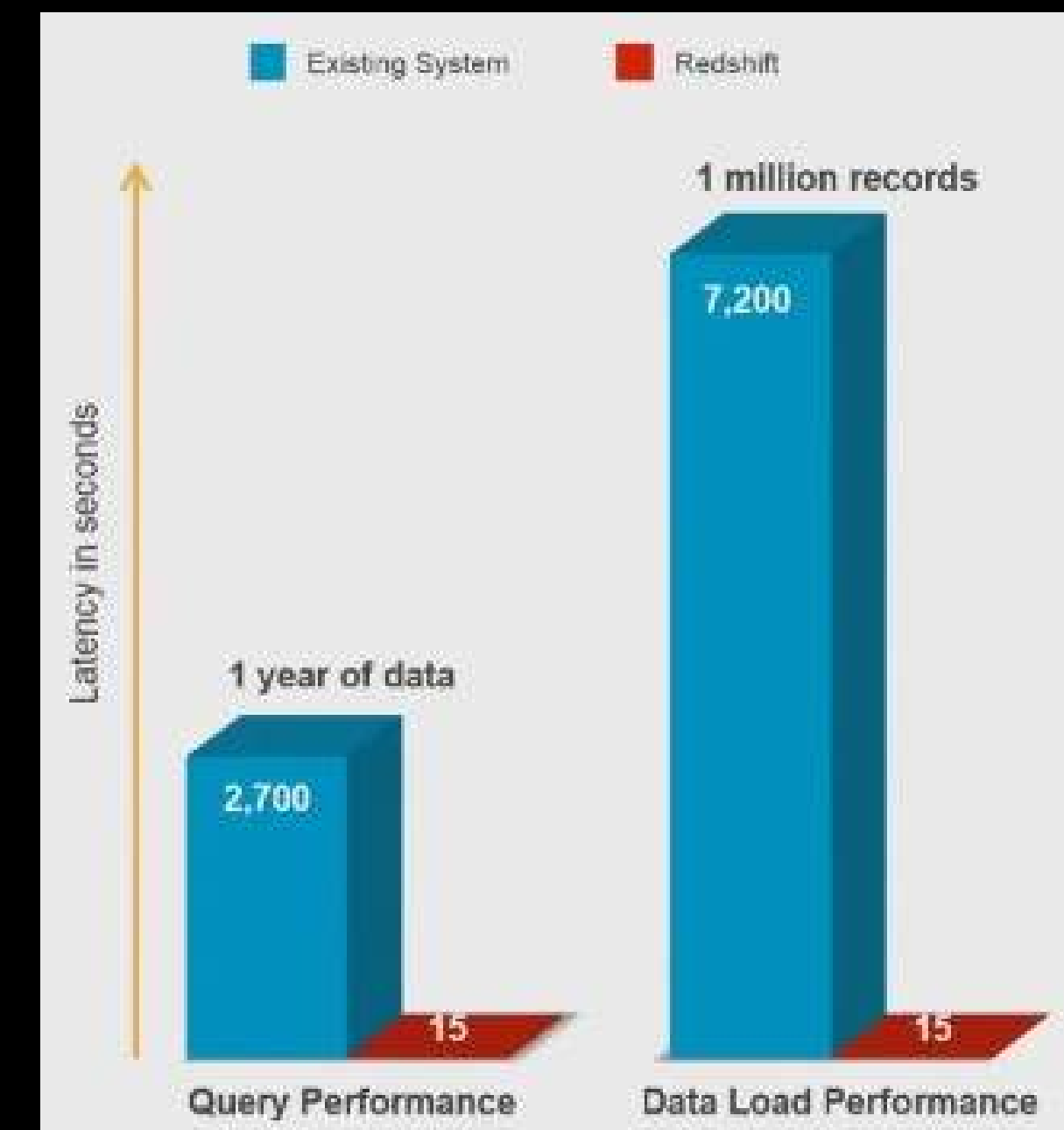
Queries 180x faster

Data load 480x faster

Freedom to deploy

where you like,

the way you like,

continuously,

securely

AWS Global Infrastructure

12 Regions

33 Availability Zones

54 Edge Locations

Region

Edge Location
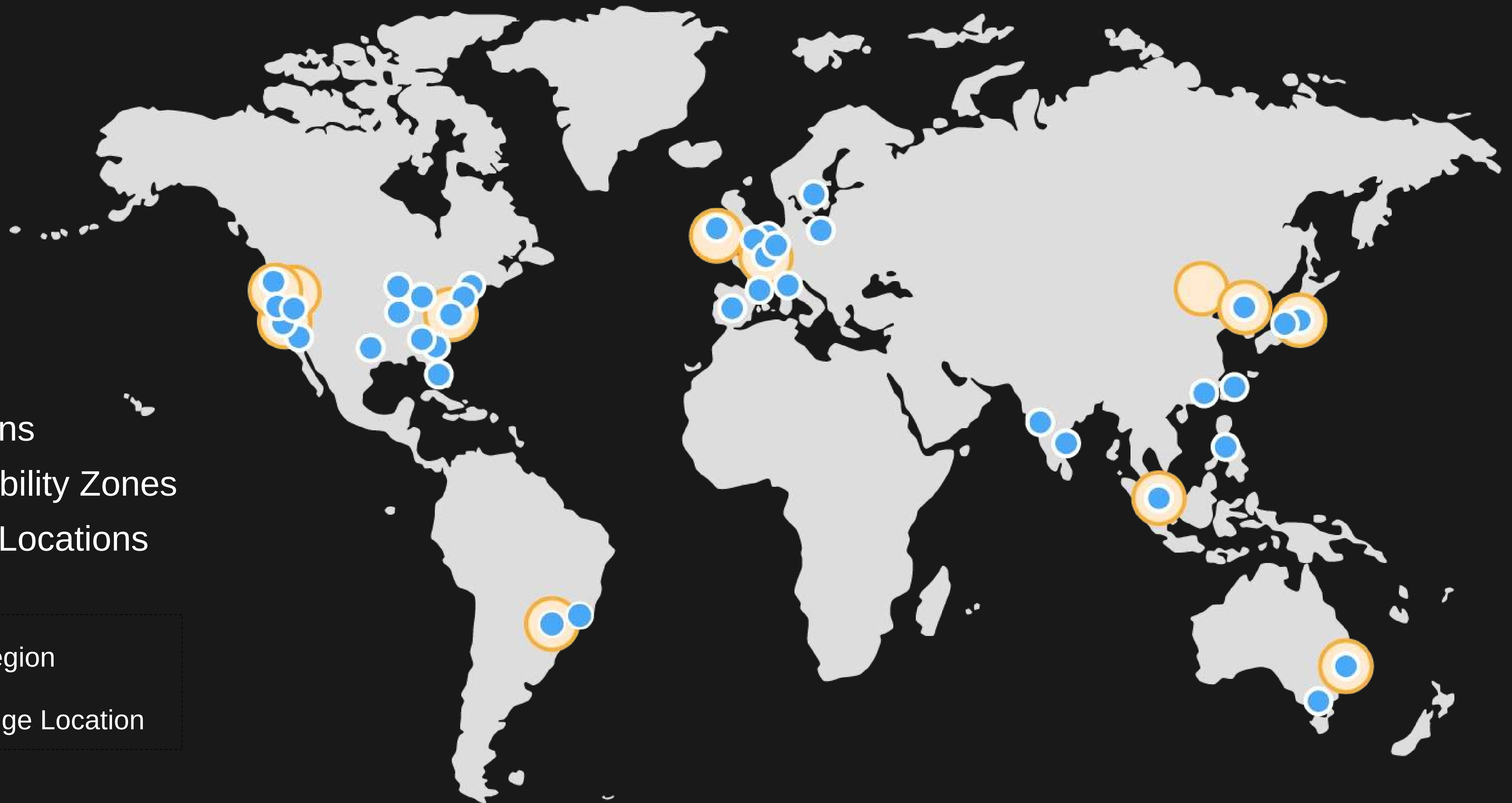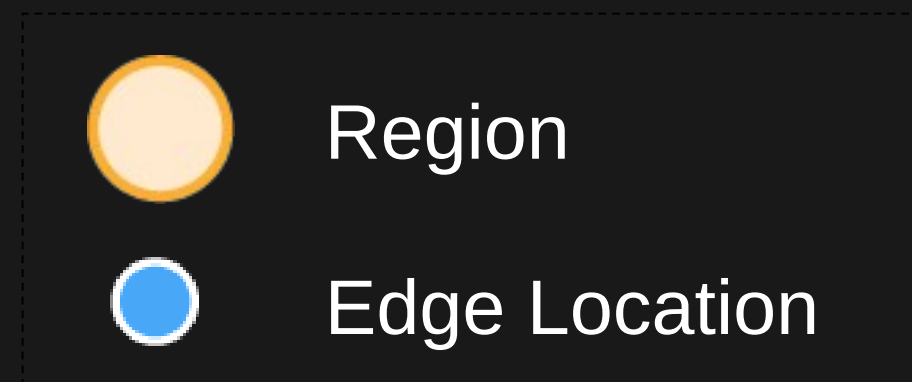
IaaS, PaaS, containers or serverless: your pick

EC2

Amazon Elastic Compute Cloud (EC2) provides resizable compute capacity in the cloud.

Elastic Beanstalk

AWS Elastic Beanstalk is an application container for deploying and managing applications.

Lambda

AWS Lambda is a compute service that runs your code in response to events and automatically manages the compute resources for you.

EC2 Container Service

Amazon ECS allows you to easily run and manage Docker containers across a cluster of Amazon EC2 instances.

Werner Vogels, CTO, Amazon.com
AWS re:Invent 2015

Case study : Localytics

https://aws.amazon.com/fr/solutions/case-studies/localytics/

Web and mobile app analytics and engagement company

100 billion data points monthly
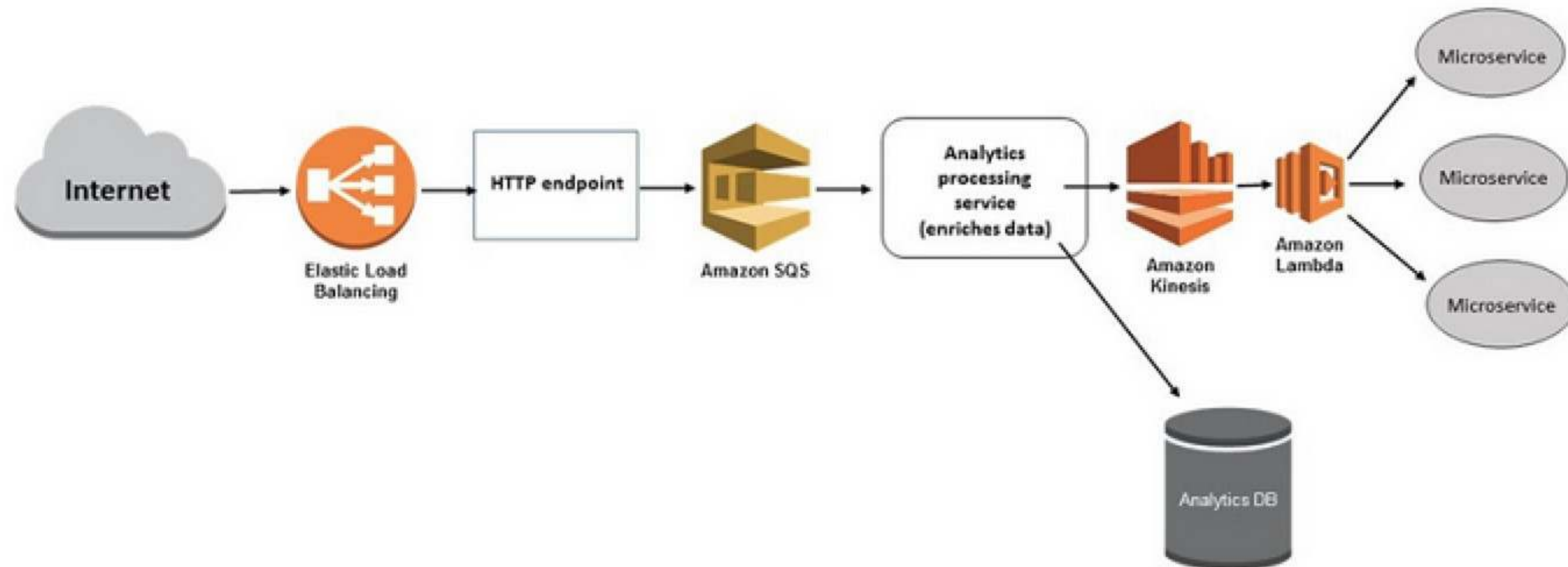
Case study: Nordstrom

https://aws.amazon.com/fr/solutions/case-studies/nordstrom/
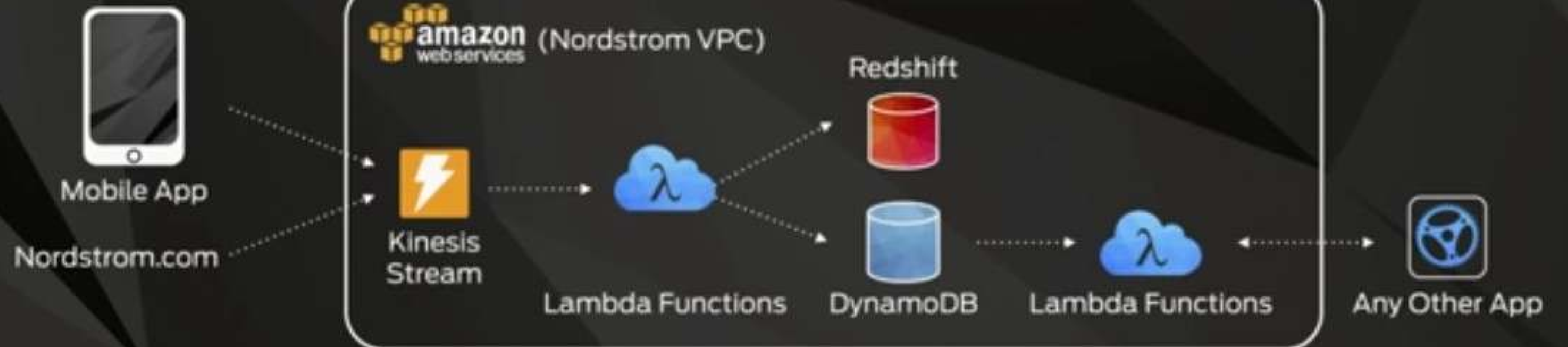
All-in on Amazon Web Services !

Case study: AdRoll

https://aws.amazon.com/fr/solutions/case-studies/adroll/
https://aws.amazon.com/fr/dynamodb/adtech/
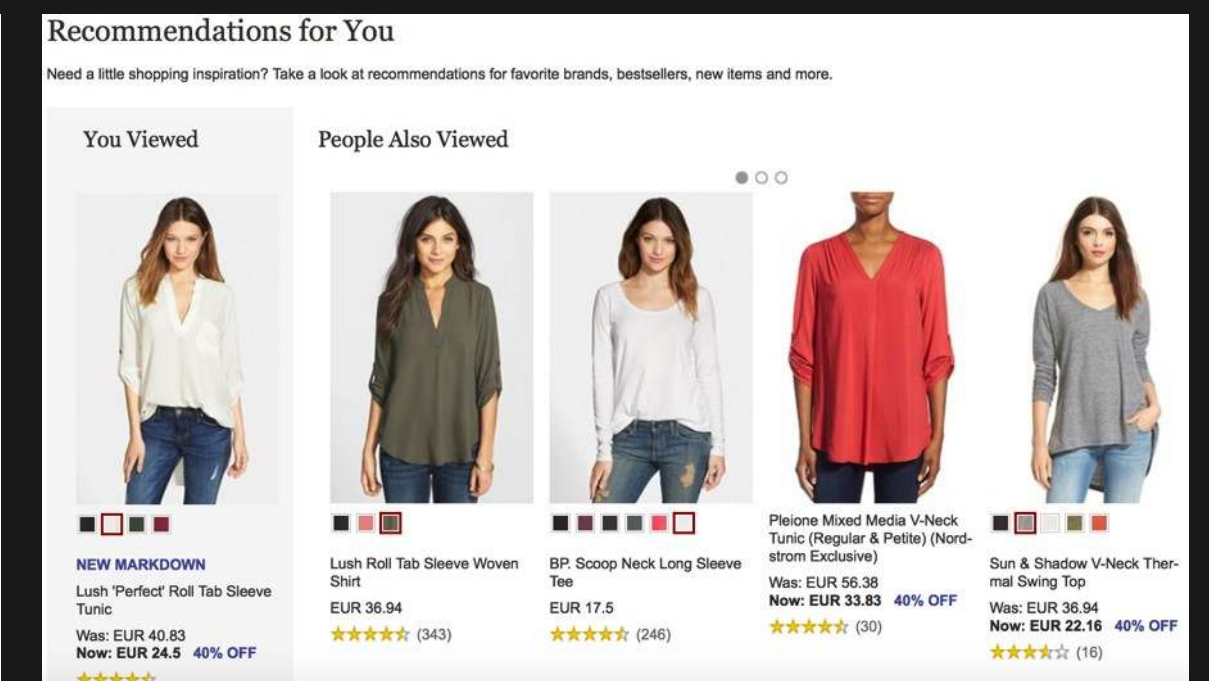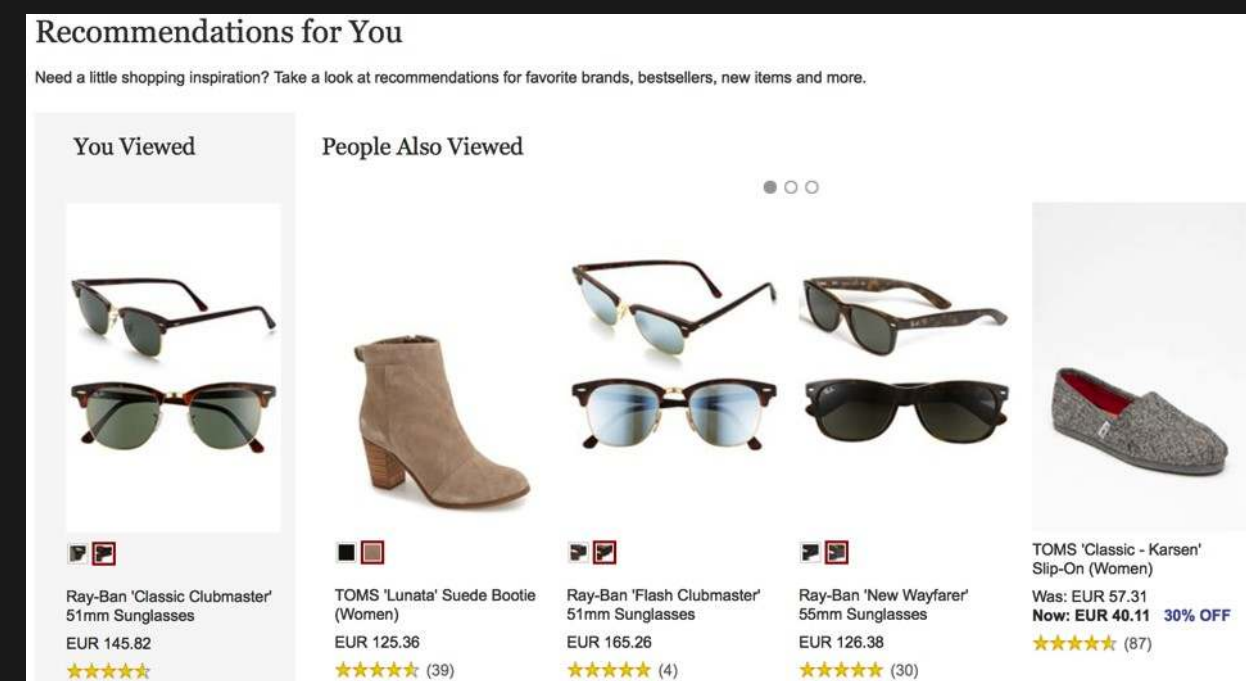
50 billion ad impressions daily
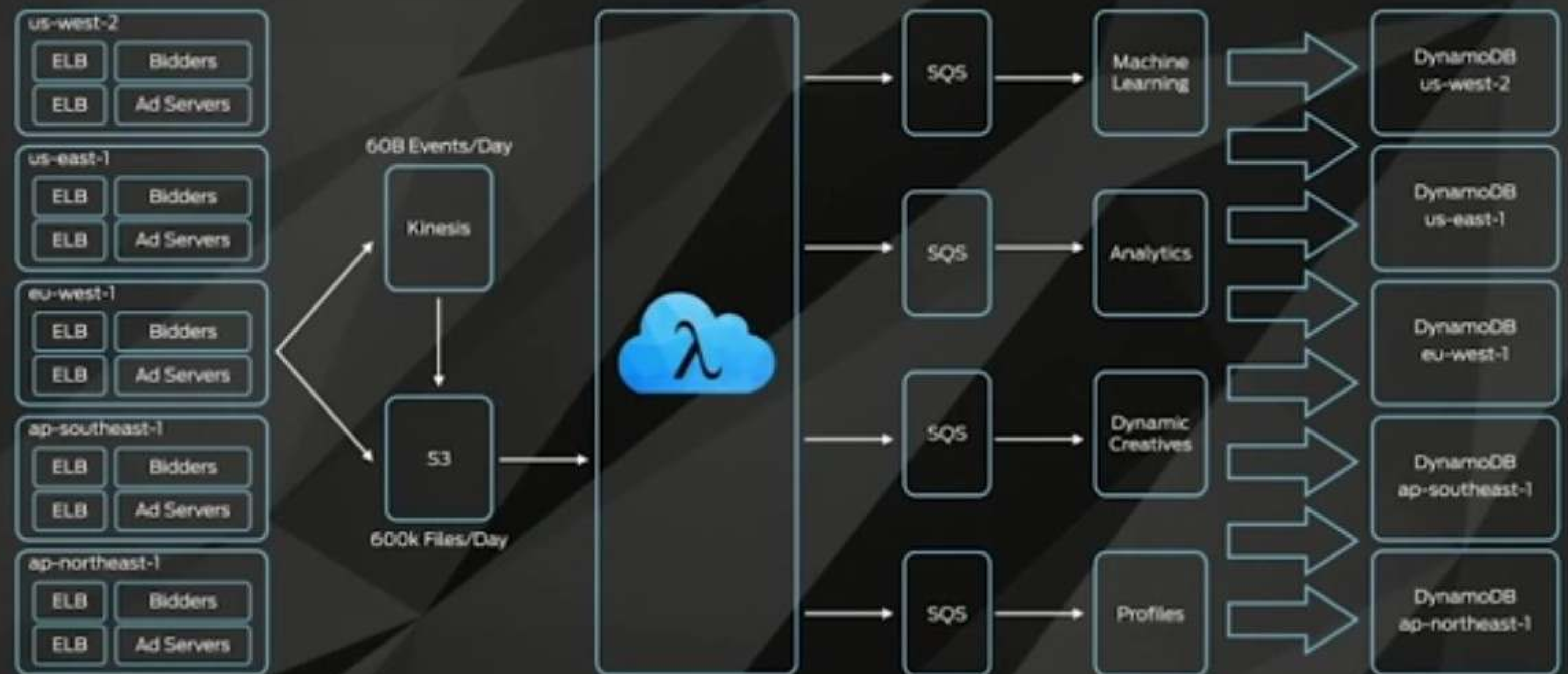
Deployments at Amazon.com

11.6s	1,079	10,000	30,000
Mean time between deployments (weekday)	Max number of deployments in a single hour	Mean number of hosts simultaneously receiving a deployment	Max number of hosts simultaneously receiving a deployment

With automated rollbacks

Case study : Career Builder

One of the largest online job sites in the US

24 million unique visitors monthly

CodeCommit

CodePipeline
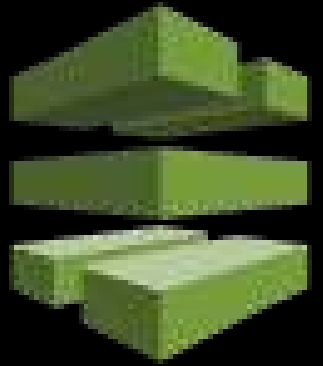
CodeDeploy
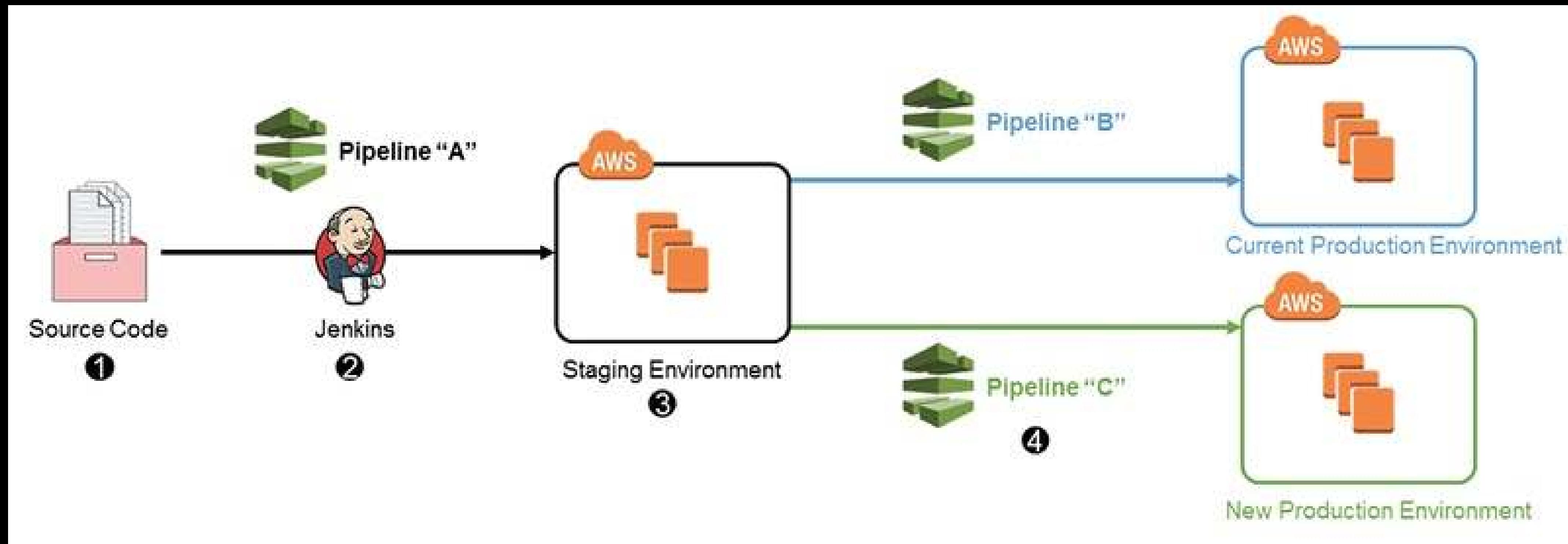
AWS Code partners

GitHub

Atlassian

circleci

CHEF

Jenkins

CloudBees

Travis CI

puppet labs

Solano Labs

CODESHIP

ANSIBLE

Apica

Runscope

XebiaLabs
Deliver Faster

BlazeMeter

Ghost Inspector

SALTSTACK

A Broad Set of Services to Secure your Applications

Networking

Virtual Private Cloud

Web Application Firewall

Encryption
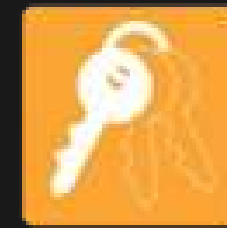
Key Management Service
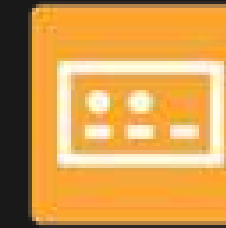
CloudHSM

Server-side Encryption

Identity

IAM

Active Directory Integration

SAML Federation

Compliance

Service Catalog

CloudTrail
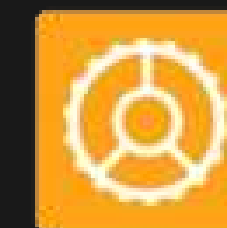
Config

Inspector
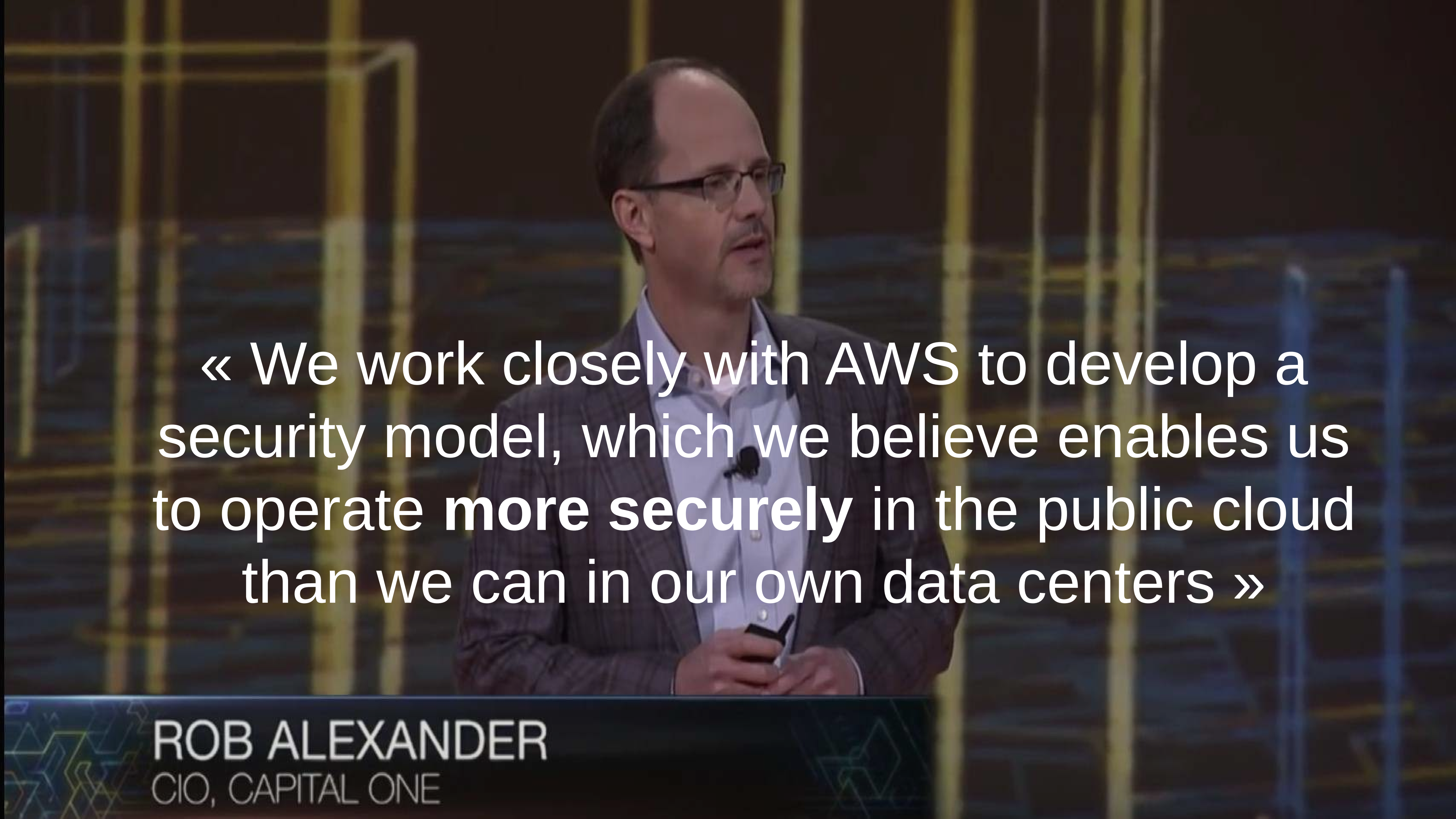
Move Fast OR Stay Secure

Move Fast **AN D** Stay Secure

« We work closely with AWS to develop a security model, which we believe enables us to operate **more securely** in the public cloud than we can in our own data centers »
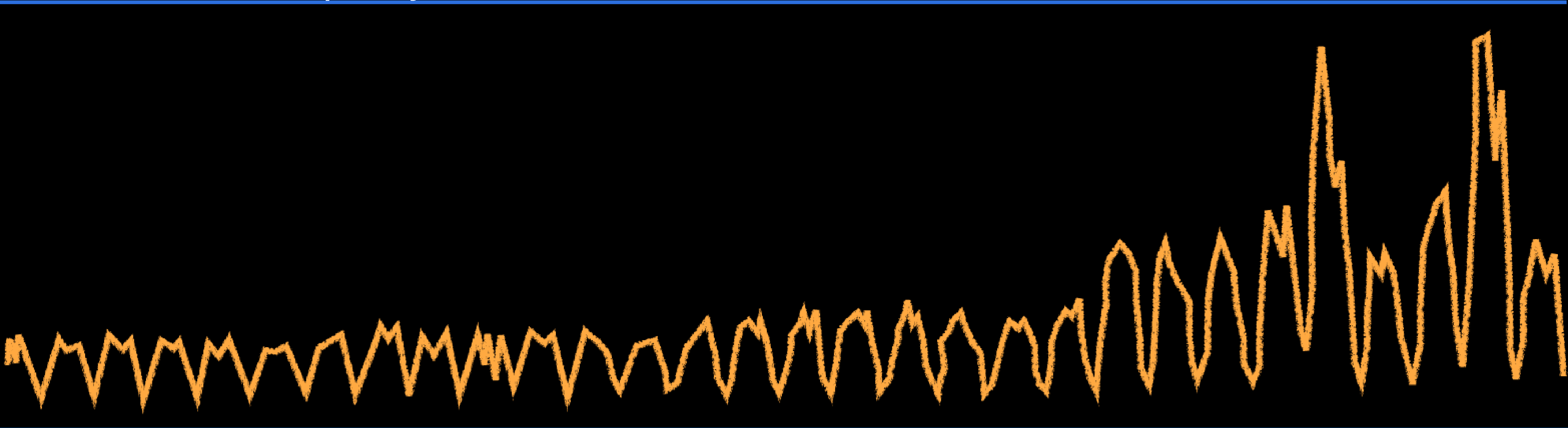
ROB ALEXANDER
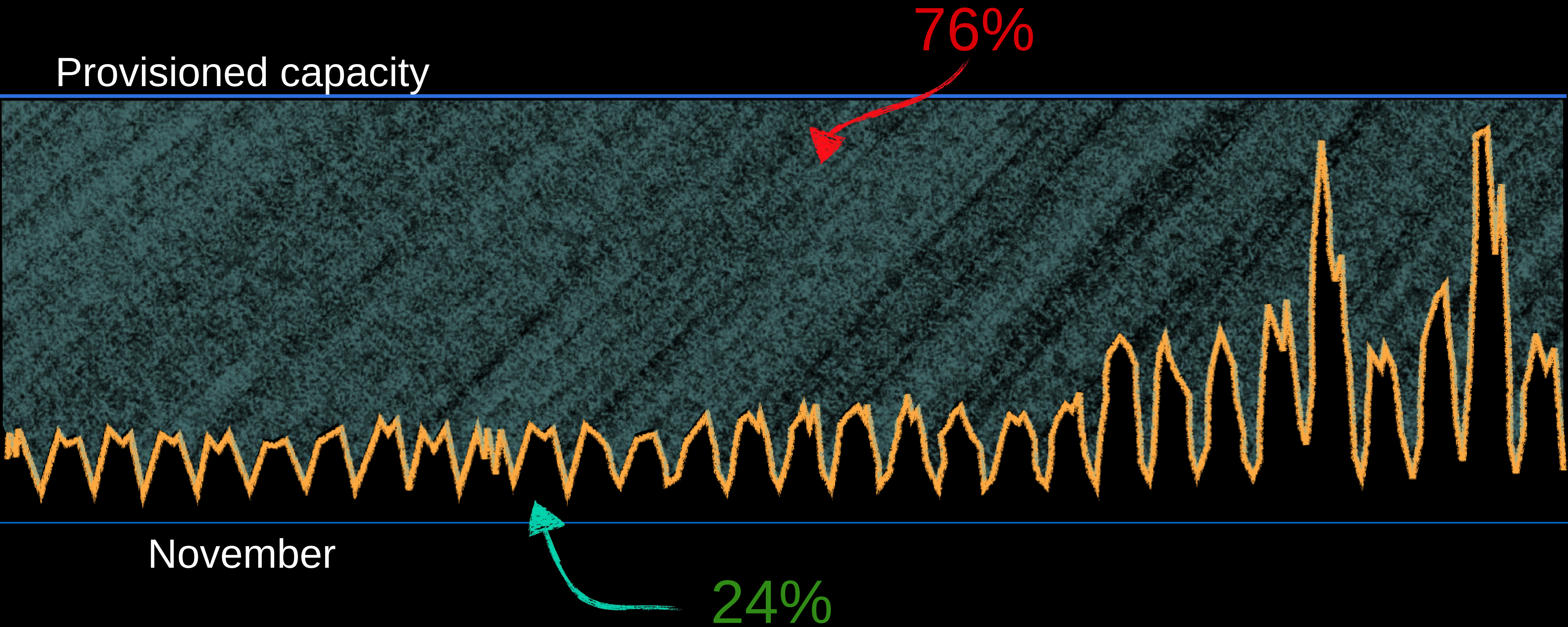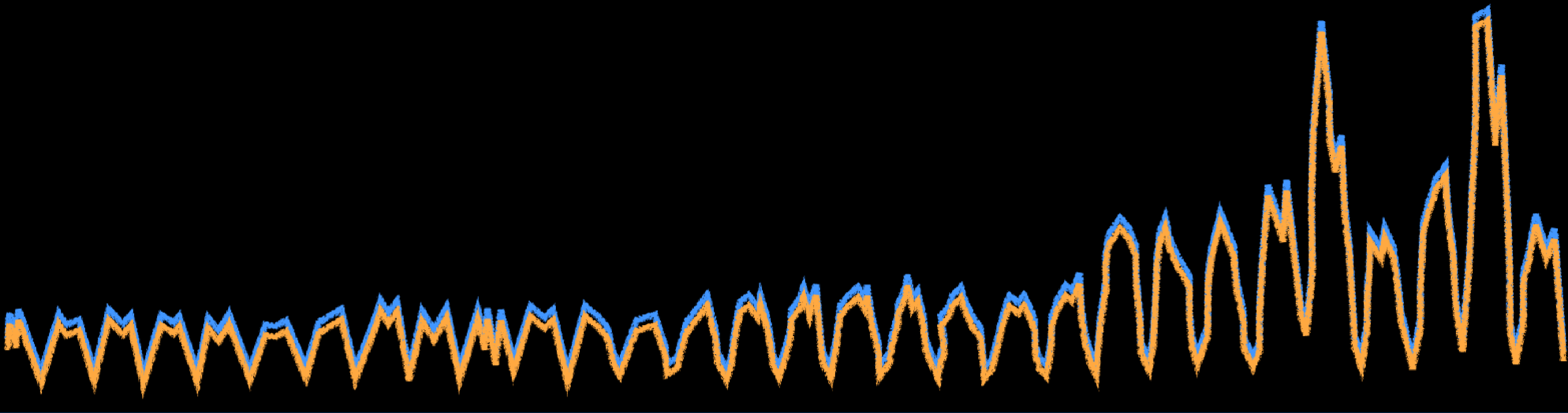CIO, CAPITAL ONE

Freedom to grow
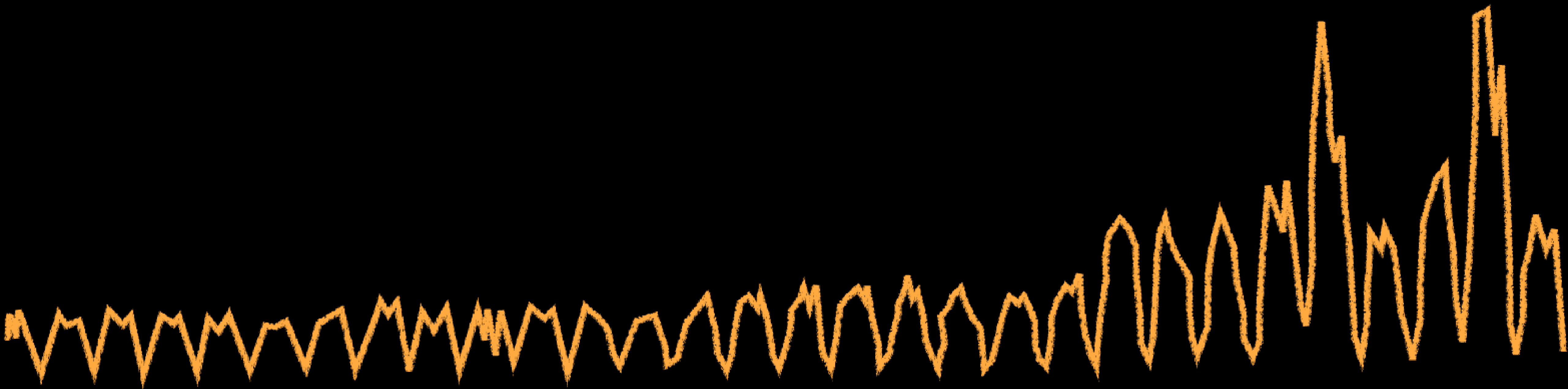
November

November

Supercell: 100 million active users daily

Ilkka Paananen @ipaananen · 7 mars   Voir la traduction 🌐

100MILLION! Huge milestone for us,wanted to share some thoughts and a video: supr.cl/100m #welovetuvalu

Hi Everyone,

Today we've announced a major milestone in Supercell's history: **100m daily active players!**

100 million! It blows my mind to think of that many people playing our games all around the world, every single day. I want to thank every single one of them: from Albania to Zimbabwe and everywhere else in between. Wish we had someone from Tuvalu! :-)

https://twitter.com/ipaananen/status/706844089216532480

Case study : Supercell

https://aws.amazon.com/fr/solutions/case-studies/supercell/

45 billion real-time events and 10 TB of data every day
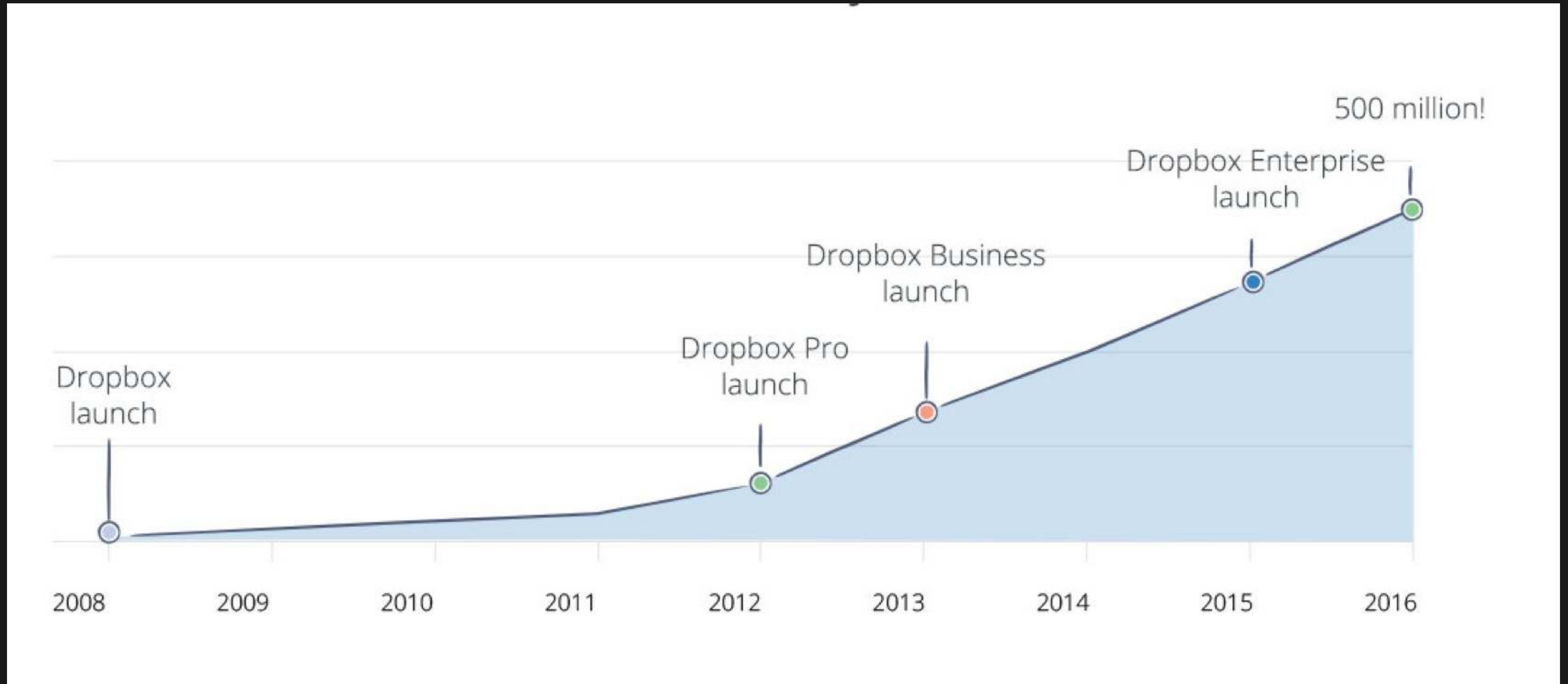
| Kinesis | EMR | DynamoDB | S3 | Glacier |

"We don't have to worry about being able to manage our infrastructure to match our growth — AWS tools make it easy for us."

Sami Yliharju, Services Lead

Dropbox: 500 million users

https://blogs.dropbox.com/dropbox/2016/03/500-million/

"AWS is the easy answer for any Internet business that wants to scale to the next level "

Nathan Blecharczyk, Co-founder & CTO of Airbnb

Freedom to Control Your Own Destiny

http://www.ebay.fr/itm/-/262328428090

Thank you!

… and keep rockin'! ☺