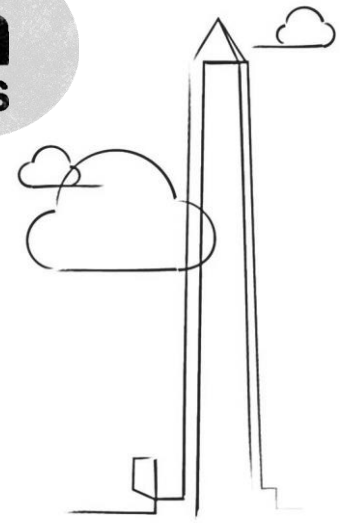
# Amazon Web Services

Steve Spano, Brig Gen (Ret), USAF
GM, Defense and National Security
AWS, Worldwide Public Sector



# Overview

Historical Perspective of IT
Transformational Value of Cloud
Why organizations are choosing AWS?
How organizations are using AWS

# Transformational Value of Cloud

- Re-leveling the playing field for innovation
- Disrupting current business models
- Driving new organizational constructs
- Commoditizing IT and service delivery
- Accelerating speed, agility, and innovation

# What is Cloud Computing?

The on-demand delivery of IT resources via the Internet with pay-as-you-go pricing

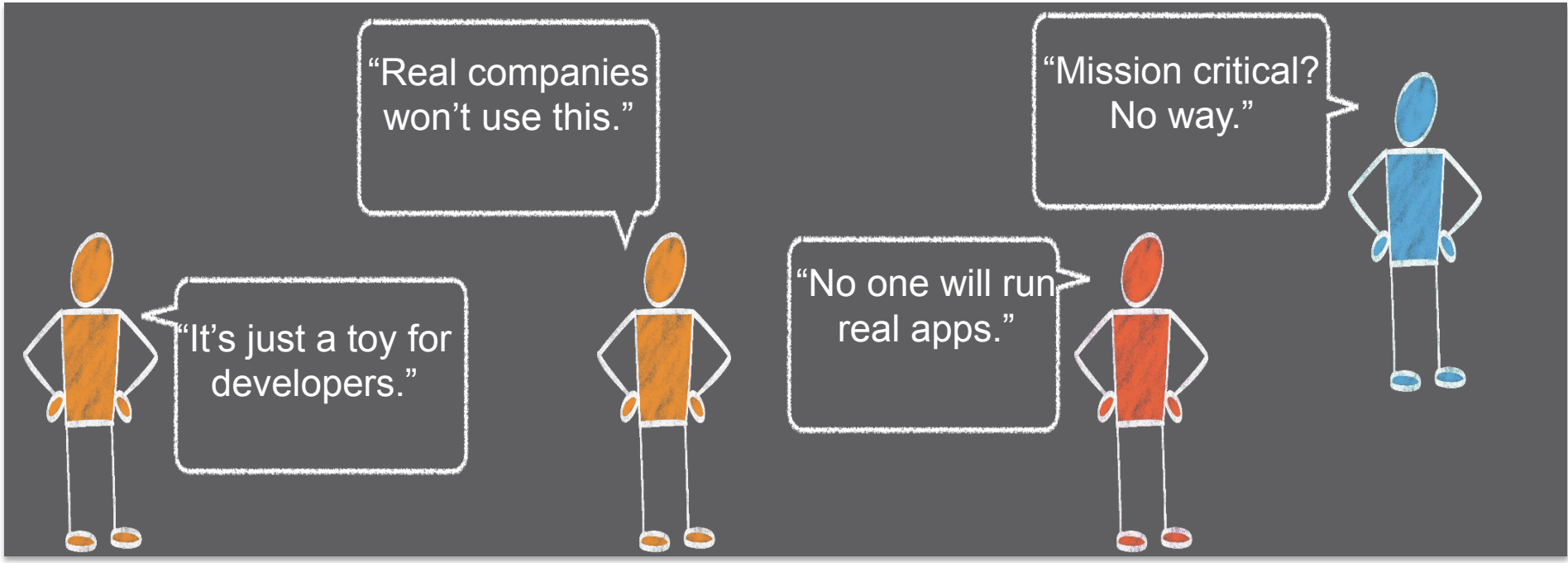
- **Pay on-demand --** not buying assets
- **Our platform --** your implementation
- **Awesome --** not magical

Programmable Infrastructure

Elastic Services

Design for high availability

"First they ignore you, then they laugh at you, then they fight you, then you win" Mahatma Gandhi



# Now, the Cloud Brings You the World's Biggest Events

SUPER BOWL XLVI

london

dancing with the stars

Mars Rover

Obama for America

# AWS Cloud Adoption in the Public Sector

**800+** Government Agencies

**2,400+** Education Institutions

# Growing Public Sector Partner Eco System

amazon web services | Partner Network
CONSULTING PARTNER

AQUILENT
Booz | Allen | Hamilton
strategy and technology consultants
Smartronix
DLT SOLUTIONS
URS
8K Miles
SRA INTERNATIONAL, INC
cloudnexa
DATAPIPE
Managed IT Services
Dewberry
BlueRiver INFORMATION TECHNOLOGY
info|RELIANCE
UNISYS
SAIC
accenture
High performance. Delivered.
A&T Systems Inc.
Let us show you what real performance is.
HARRIS
FOUR POINTS TECHNOLOGY
Deloitte.
ppc
Cognizant
softwareONE
The Software Licensing Experts
2ND watch
TVAR SOLUTIONS
Capgemini
CONSULTING. TECHNOLOGY. OUTSOURCING
CLOUDREACH
Make It Happen
CITYTECH
INFOZEN
FUJISOFT
Globant
we are ready
Infosys
shi
CACI
EVER VIGILANT
protera
RUNEZE
INGRAM MICRO
Partner Smart
ICE
systems
JJC
TECHNOLOGY, INC.

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TECHNOLOGY PARTNER

Adobe
esri
Microsoft
Xceedium
redhat
SUSE
EQUINIX
ORACLE
SAP
ACQUIA
Appian
ACTUATE
The people behind BIRT
Alfresco
CloudCheckr
panzura
Cloud Storage Made Seamless
bmcsoftware FEDERAL
ca
CITRIX
CYCLECOMPUTING
mongoDB
heroku
ALERTLOGIC
attunix
sumologic
LAYER 7 TECHNOLOGIES
NetApp
LIVING PLANIT
IMPROVING QUALITY OF LIFE THROUGH TECHNOLOGY
puppet labs
Engine Yard
Pega
RIGHT SCALE
riverbed
SafeNet
sonian
Cloud Powered Archiving and Search
Symantec
TREND MICRO

# CLOUDDEVELOPERS

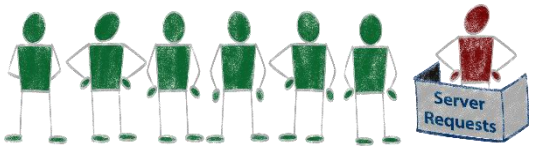
Mobile, Big Data & Service Models:
Critical Take-Aways for Cloud Developers

SUMMIT & EXPO 2014

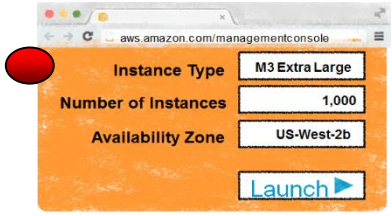
Why are organizations adopting cloud computing and AWS so quickly?

# #1: Agility:

Old World:
Infrastructure in Weeks




AWS:
Infrastructure in Minutes




**Add New Dev Environment**

**Add New Prod Environment**

**Add New Environment in Japan**

**Add 1,000 Servers**

**Remove 1,000 Servers**

**Deploy 1 PB Data Warehouse**

**Shut down 1 PB Data Warehouse**

Everything changes with this kind of agility

# It's Not Just Having Services in a Couple of Regions

## AWS Global Infrastructure

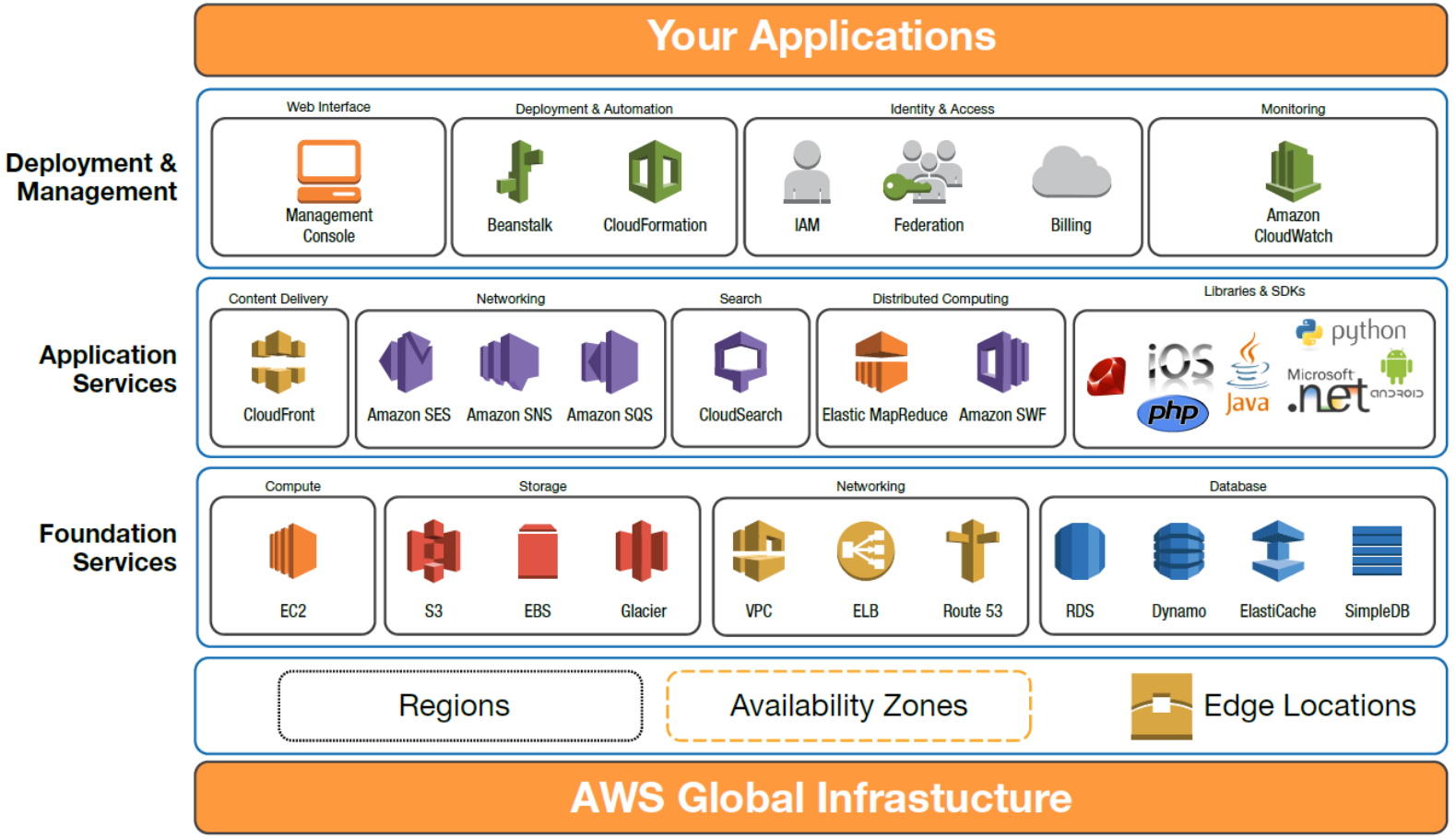
- 10 Regions (including GovCloud US)
- 26 Availability Zones
- 51 Edge Locations

# Every Imaginable Use Case

| | | | | | | |
|---|---|---|---|---|---|---|
| OUTBACK STEAKHOUSE | BandPage | NASA | airbnb | ticketmaster | LIONSGATE | NASDAQ |
| Free steak campaign | Facebook page | Mars exploration ops | Consumer social app | Ticket pricing optimization | SAP & Share Point | Securities Trading Data Archiving |
| Unilever | LAMBORGHINI | SAMSUNG | S&P CAPITAL IQ | Pfizer | Spotify | foursquare |
| Gene sequencing | Marketing web site | Interactive TV apps | Financial markets analytics | R&D data analysis | Consumer social app | Big data analytics |
| FCB | Washington Trust Bank | NETFLIX | RED LION HOTELS CORPORATION | THOMSON REUTERS | The Washington Post | Flipboard |
| Web site & media sharing | Disaster recovery | Media streaming | Web and mobile apps | Streaming webcasts | Facebook app | Consumer social app |

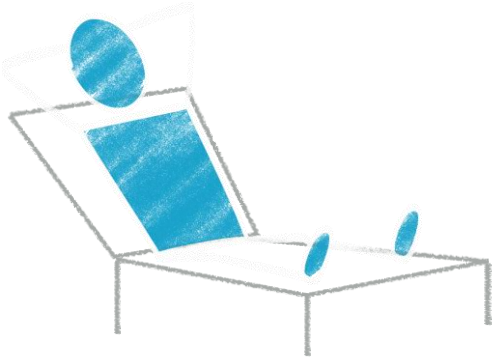
# #2: Platform Breadth

A broad and deep platform helps customers build sophisticated, scalable applications


Your Applications
Deployment & Management
Web Interface
Management Console
Deployment & Automation
Beanstalk
CloudFormation
Identity & Access
IAM
Federation
Billing
Monitoring
Amazon CloudWatch
Application Services
Content Delivery
CloudFront
Networking
Amazon SES
Amazon SNS
Amazon SQS
Search
CloudSearch
Distributed Computing
Elastic MapReduce
Amazon SWF
Libraries & SDKs
iOS
python
Java
Microsoft .net
php
android
Foundation Services
Compute
EC2
Storage
S3
EBS
Glacier
Networking
VPC
ELB
Route 53
Database
RDS
Dynamo
ElastiCache
SimpleDB
Regions
Availability Zones
Edge Locations
AWS Global Infrastucture

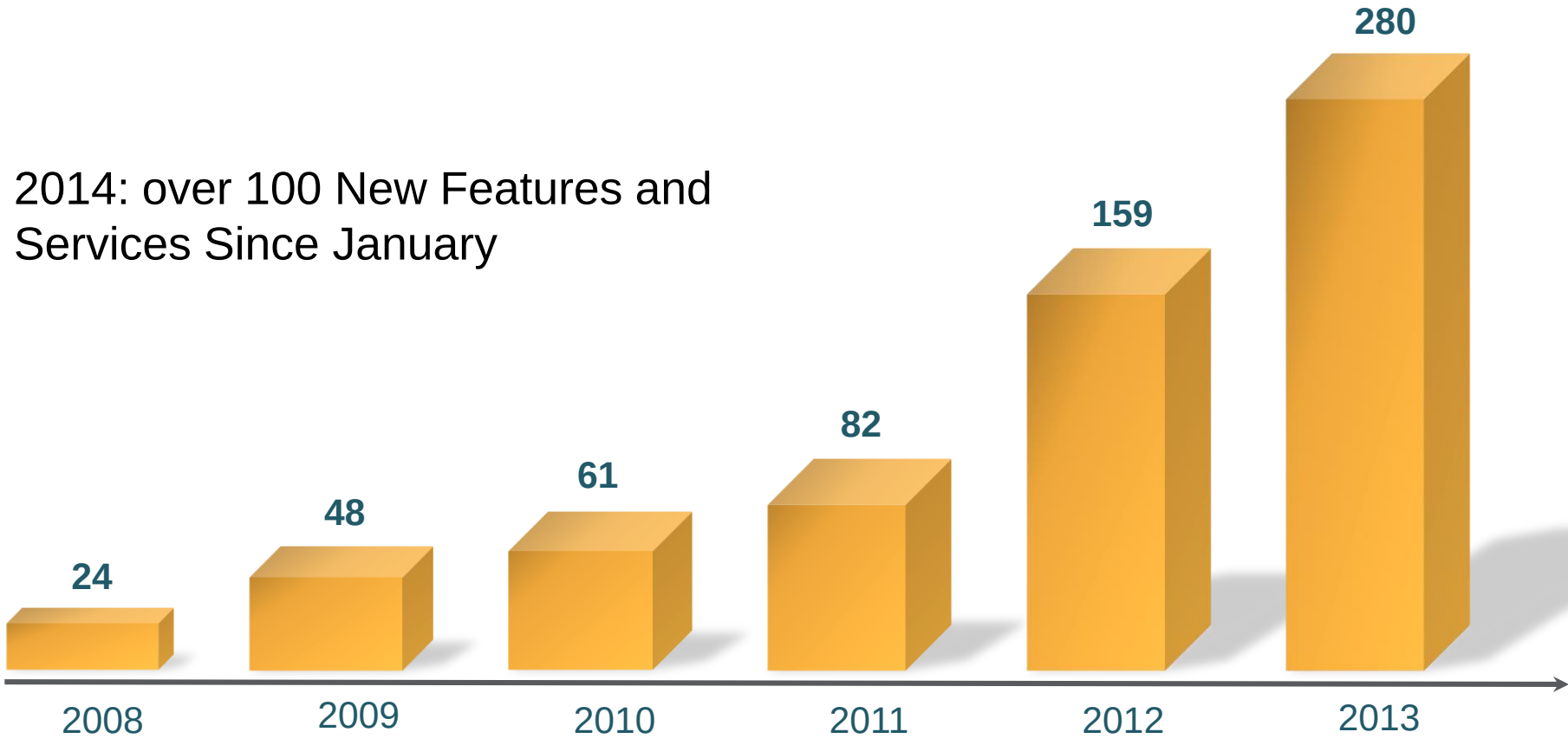
# #3: Continual Iteration and Innovation

AWS continuously upgrades infrastructure, so you don't have to



# AWS Pace of Innovation

2014: over 100 New Features and Services Since January



# #4: Cost Savings and Flexibility

**1**

**Replace up-front capital expense with low variable cost**

**"Average of 400 servers replaced per customer"**

**2**

**Economies of scale allow us to continually lower costs**

**42 Price Reductions**

**3**

**Pricing model choice to support variable & stable workloads**

**On-demand**

**Reserved**

**Spot**

**4**

**Save more money as you grow bigger**

**Tiered Pricing**

**Volume Discounts**

**Custom Pricing**

# #5 Security: Architected for Enterprise Security Requirements

**amazon web services**

- Facilities
- Physical security
- Compute infrastructure
- Storage infrastructure
- Network infrastructure
- Virtualization layer (EC2)
- Hardened service endpoints
- Rich IAM capabilities

**Customer**

- Network configuration
- Security groups
- OS firewalls
- Operating systems
- Applications
- Proper service configuration
- Account management
- Authorization policies

AICPA SOC · FedRAMP · FISMA · ISO · SOC 3 · ITAR · HIPAA · ISAE 3402 Type 2 · PCI DSS Level 1 Service Provider · FIPS 140-2 · MPAA

## A Shared Responsibility Model

# The Journey We're Seeing with AWS Customers

## 1

### Dev & Test

*Development and test environments*

## 2

### True Production

*Build production apps*
*Migrate production apps*
*Marketing*

## 3

### Mission Critical

*Build mission-critical apps*
*Migrate mission-critical apps*

## 4

### All-in

*Corporate standard*

Gartner®

"Increasingly, organizations are asking what can't go to the cloud, rather than what can…"

"AWS is the overwhelming market share leader, with **more than five times the compute capacity** in use than the aggregate total of the other fourteen providers."

Gartner

Source: Gartner (August 2013)

Gartner "Magic Quadrant for Cloud Infrastructure as a Service," Lydia Leong, Douglas Toombs, Bob Gill, Gregor Petri, Tiny Haynes, August 19, 2013. This Magic Quadrant graphic was published by Gartner, Inc. as part of a larger research note and should be evaluated in the context of the entire report.. The Gartner report is available upon request from Steven Armstrong (asteven@amazon.com). Gartner does not endorse any vendor, product or service depicted in its research publications, and does not advise technology users to select only those vendors with the highest ratings. Gartner research publications consist of the opinions of Gartner's research organization and should not be construed as statements of fact. Gartner disclaims all warranties, expressed or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose.

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