



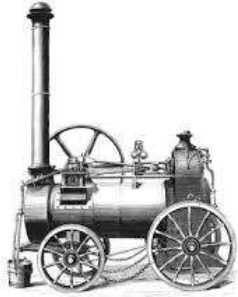
Julien Simon, Principal Technical Evangelist, AWS

julsimon@amazon.fr - @julsimon



*Moulin Saulnier, Chocolaterie Meunier,
Noisiel, 1872.*





1784

Steam Power

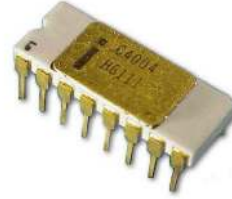
Mechanical
Production



1870

Electricity

Mass
Production



1971

Microprocessors

Automated
Production



Today

Cloud, Mobile, IoT, ???

Digital
Production

We stand on the brink of a technological **revolution** that will fundamentally alter the way we live, work, and relate to one another.

In its scale, scope, and complexity, the ***transformation*** will be unlike anything we have experienced before.

Why Software Is Eating The World

By [MARC ANDREESSEN](#)

This week, Hewlett-Packard (where I am on the board) announced that it is exploring jettisoning its struggling PC business in favor of investing more heavily in software, where it sees better potential for growth. Meanwhile, Google plans to buy up the cellphone handset maker Motorola Mobility. Both moves surprised the tech world. But both moves are also in line with a trend I've observed, one that makes me optimistic about the future growth of the American and world economies, despite the recent turmoil in the stock market.



In an interview with WSJ's Kevin Delaney, Groupon and LinkedIn investor Marc Andreessen insists that the recent popularity of tech companies does not constitute a bubble. He also stressed that both Apple and Google are undervalued and that "the market doesn't like tech."

In short, software is eating the world.

More than 10 years after the peak of the 1990s dot-com bubble, a dozen or so new Internet companies like Facebook and Twitter are sparking controversy in Silicon Valley, due to their rapidly growing private market valuations, and even the occasional successful IPO. With scars from the heyday of Webvan and Pets.com still fresh in the investor psyche, people are asking, "Isn't this just a dangerous new bubble?"

I, along with others, have been arguing the other side of the case. (I am co-founder and general partner of venture capital firm Andreessen-Horowitz, which has invested in Facebook,

Groupon, Skype, Twitter, Zynga, and Foursquare, among others. I am also personally an investor in LinkedIn.) We believe that many of the prominent new Internet companies are building real, high-growth, high-margin, highly defensible businesses.

Mobile has eaten the world



Tech 2015: Deep Learning And Machine Intelligence Will Eat The World



Anthony Wing Kosner, CONTRIBUTOR

Quantum of Content and innovations in user experience

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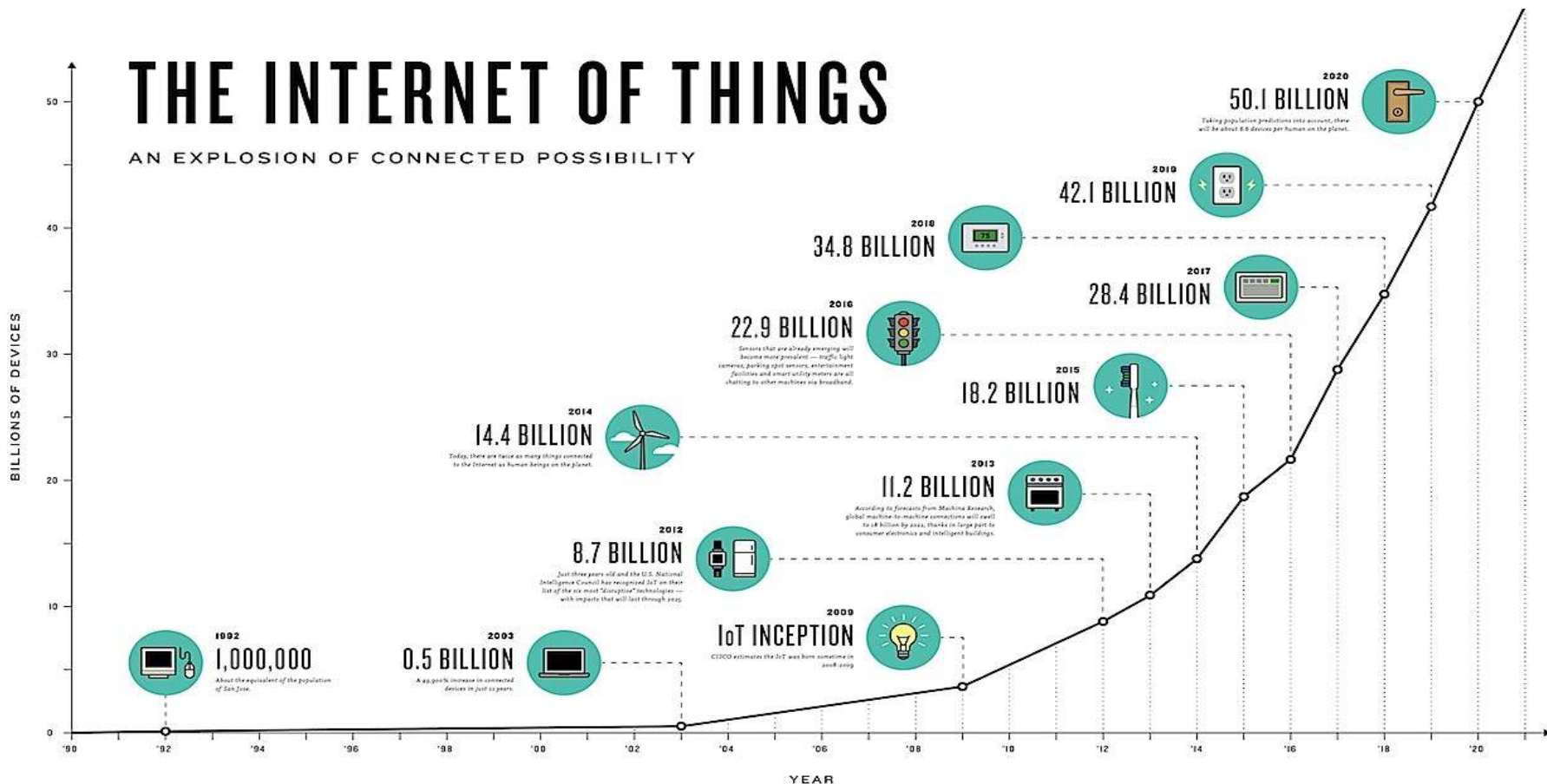
FULL BIO ▼

Despite what [Stephen Hawking](#) or Elon Musk say, [hostile Artificial Intelligence](#) is not going to destroy the world anytime soon. What is certain to happen, however, is the continued ascent of the practical applications of AI, namely deep learning and machine intelligence. The word is spreading in all corners of the tech industry that the biggest part of big data, the unstructured part, possesses learnable patterns that we now have the computing power and algorithmic leverage to discern—and in short order.

IoT is coming and it's hungry too!

THE INTERNET OF THINGS

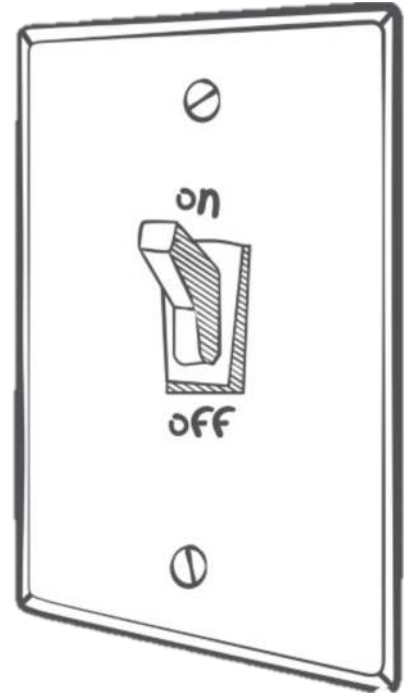
AN EXPLOSION OF CONNECTED POSSIBILITY



Revolution

Companies need agile tools to reinvent themselves

- Self-service: everything an API call away
- Move from CAPEX to OPEX
 - Pay as you go
 - Low cost of experimentation and failure
- Focus on business value, not on heavy lifting
 - Managed services
 - Built-in scalability
 - Built-in high availability
 - Built-in security



Jeff Immelt: GE is on track to become a 'top 10 software company'



Matt Rosoff

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🕒 Sep. 29, 2015, 8:36 PM 🔥 609



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When you think of GE, your first thought probably isn't software.

But CEO Jeff Immelt is on a mission to change that.

GE's software business is "growing 20 percent per year, and we have about \$6 billion in orders this year. We'd like to be at \$10 billion by 2020," he explained to Business Insider. (GE later clarified that they want to be at \$15 billion by that date.)



Chip Somodevilla/Getty Images

Jeff Immelt

& Depth Of Fe

« I'm not going to sell another aircraft engine because I run a global data center operation really well »

JIM FOWLER
CIO, GE

A man with glasses and a mustache, wearing a light blue shirt and a grey blazer, is speaking at a podium. The background is a blurred image of server racks in a data center.

*« We want to be in the business of building
great apps for our customers »*

ROB ALEXANDER
CIO, CAPITAL ONE

“For our market surveillance systems, we are looking at about 40% [savings with AWS], but the real benefits are the business benefits: we can do things that we physically weren’t able to do before, and that is priceless.”

Steve Randich – CIO, FINRA

AWS adoption in Financial Services

Industry Leaders

- Oversight, guidance and thought leadership from **16 C-suite executives** and **25 strategy officers** of global financial institutions



Over 80% use AWS

Innovators

- In-person and phone interviews with **100+ innovative new entrants** and **subject matter experts**



Over 80% are all-in on AWS

AWS



Global Leader

- 1,000,000+ active customers
- Fastest tech company to reach a \$10 billion revenue run rate (faster than Amazon.com)
- More than ten times more compute capacity in use than the aggregate total of the other 14 providers in this Magic Quadrant

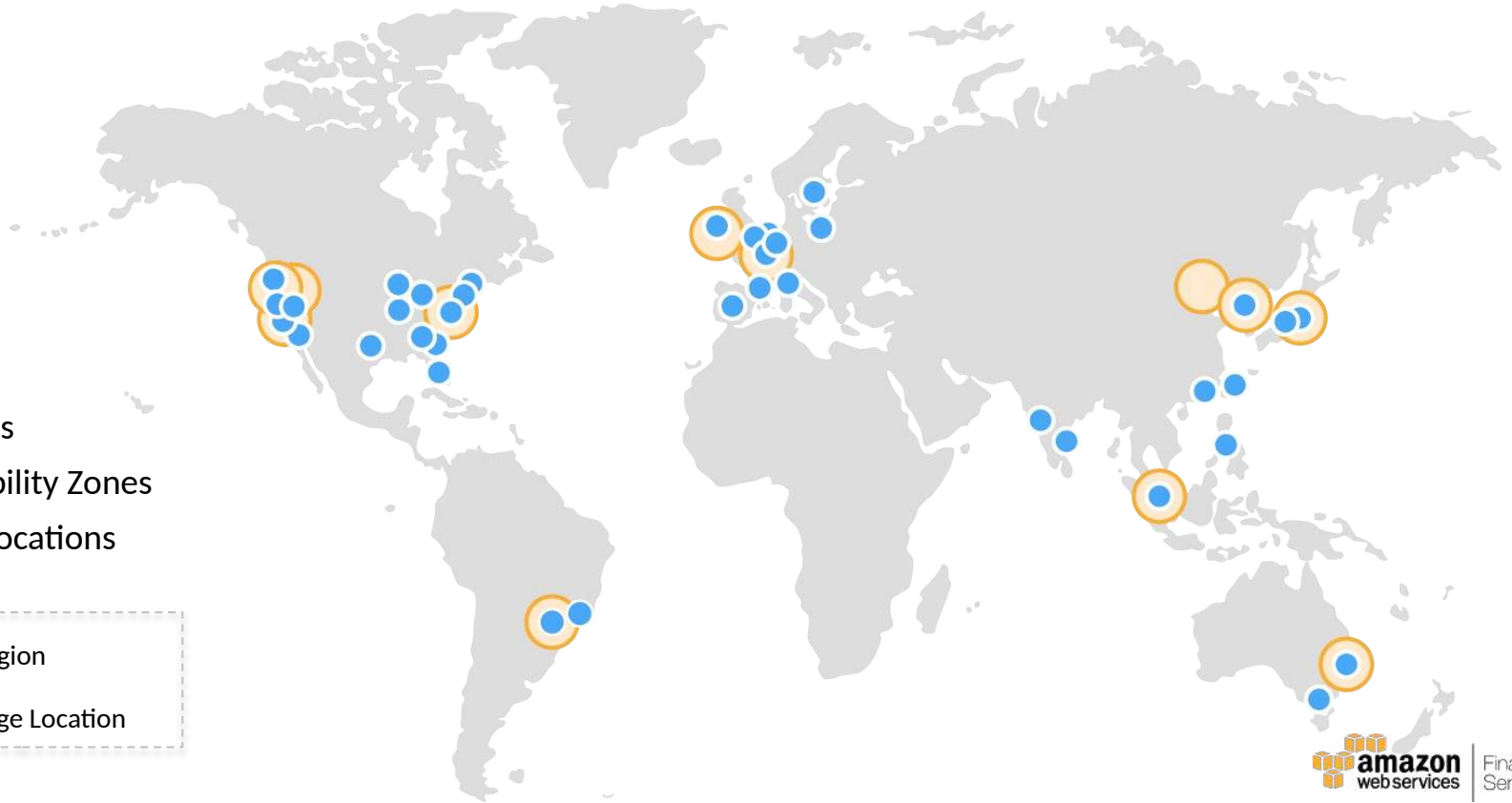
Figure 1. Magic Quadrant for Cloud Infrastructure as a Service, Worldwide



Source: Gartner (May 2015)

Global Infrastructure

12 Regions
33 Availability Zones
54 Edge Locations



Shutting Down Public Cloud, Gives Two Months to Move Data

BY YEVGENIY SVERDLIK ON FEBRUARY 12, 2016



954



Tweet

3,886



Like



Share

[REDACTED], which scaled its public cloud ambitions, is shutting down its [REDACTED] vice, which competes head to head with Amazon Web Services and Microsoft Azure.

The company notified its cloud customers to change Thursday, giving them two months to move data or lose it forever. It has already shut down its public cloud compute services for

[REDACTED], which has been backing off on ambitious public cloud plans for a year, is now calling it quits, sunsetting [REDACTED] Public Cloud in January 2016.

[REDACTED], which has spent the past year downplaying what had once been an aggressive push into the business of providing a “public cloud,” is exiting that business altogether.

The company will “sunset” its product, [REDACTED] Public Cloud, on Jan. 31, 2016, according to a new [blog post](#) by [REDACTED] senior vice president of [REDACTED]

Transformation

The Journey to the Cloud

Lift and Shift	Optimized for Cloud	Designed for Cloud
<p>Leverage AWS Compute, AWS Storage and also AWS Network and Security services while moving workloads to the cloud</p> <p>e.g : AWS Storage, Compute</p> <p>Cost Reduction: 10% - 30%</p> <p>1 – 3 months</p>	<p>Benefits from AWS Managed Services to improve agility, scalability and to reduce cost</p> <p>e.g : RDS, Aurora, RedShift, Kinesis</p> <p>Cost Reduction: up to 50%</p> <p>3 – 9 months</p>	<p>Design new products and services by leveraging the whole AWS cloud platform.</p> <p>e.g : AWS Lambda, containers, NoSQL...</p> <p>Cost Reduction: up to 75%</p> <p>3 - 12 months</p>

The Journey to the Cloud

Strategy #1:
Cloud for Development & Test Environments



Oracle Enterprise Applications
Reduced test environment costs

Strategy #2:
Build New Apps in the Cloud



New Services Offering
Financial Records Delivery

Strategy #3:
Use Cloud to Make On-Premises Apps Better



Big Data Analytics
Export operational data to AWS for analytics processing

Strategy #4:
Cloud Apps that Integrate with On-Premises Apps



Access cloud resources on demand to meet
business apps requirements and deadlines

Strategy #5:
"All-in"

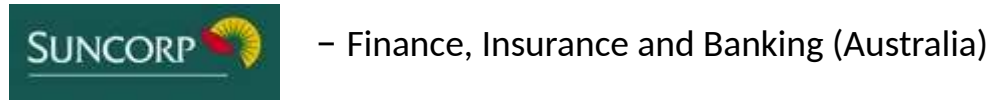


Migration of nearly 2,000 applications
into the cloud in 18 months

AWS is helping Financial Services transform legacy IT



In 2014, Nasdaq replaced the existing data warehouses for its US equities and options exchanges with Amazon Redshift. **On a nightly basis, Nasdaq loads approximately 5 billion rows of data into Redshift within a 4-6 hour window.** Amazon Redshift now powers a number of data analytics applications at Nasdaq, including its billing system for US customers. In 2015, Nasdaq is expanding its use of Redshift to its global exchange properties.



Suncorp is a diversified Australian financial services company which runs a complex and expensive IT environment to support 14 brands and 4 lines of business in 5 countries. Recognizing that the company's talent was its competitive advantage, Suncorp adopted a culture of innovation to re-imagine the IT landscape. By choosing AWS to support Agile principles and practices, **Suncorp was able to launch a working virtual private cloud and virtual data center in under three months and plans to move 2,000 applications to AWS.**



Trading Technologies, a leading global provider of a derivatives trading platform to the financial services industry, has built their **next-generation trading platform using a hybrid architecture, with its backbone built on AWS spanning all nine publicly available AWS regions** which are then connected to co-located infrastructure at each of the global exchanges to which Trading Technologies provides trading access to its customers.

AWS is helping Financial Services transform legacy IT



– Global Risk Management, Insurance and Reinsurance

Aon Benfield Analytics offers industry-leading catastrophe management, actuarial, rating agency advisory and risk and capital strategy expertise. **By using AWS GPU instances, Aon Benfield is able to perform actuarial calculations with greater computing power, in shorter time frames, and for less cost** than on-premise deployments and CPU cores.



– Multinational Mortgage Insurance, Reinsurance and Other Financial Services

This multinational customer's loan information platform runs entirely on AWS and leverages a large portfolio of AWS services to help automate the end-to-end process. Applications interact with the loan platform to ingest large amounts of data directly into Amazon S3, taking advantage of the storage service's scalability and security. A workflow process is kicked off to classify and extract information from the documents and populate data stores to support transactional and analytical functions. The platform leverages the built-in security features offered by AWS along with third-party solutions for above the hypervisor controls to meet the stringent security needs of the customer's business partners.



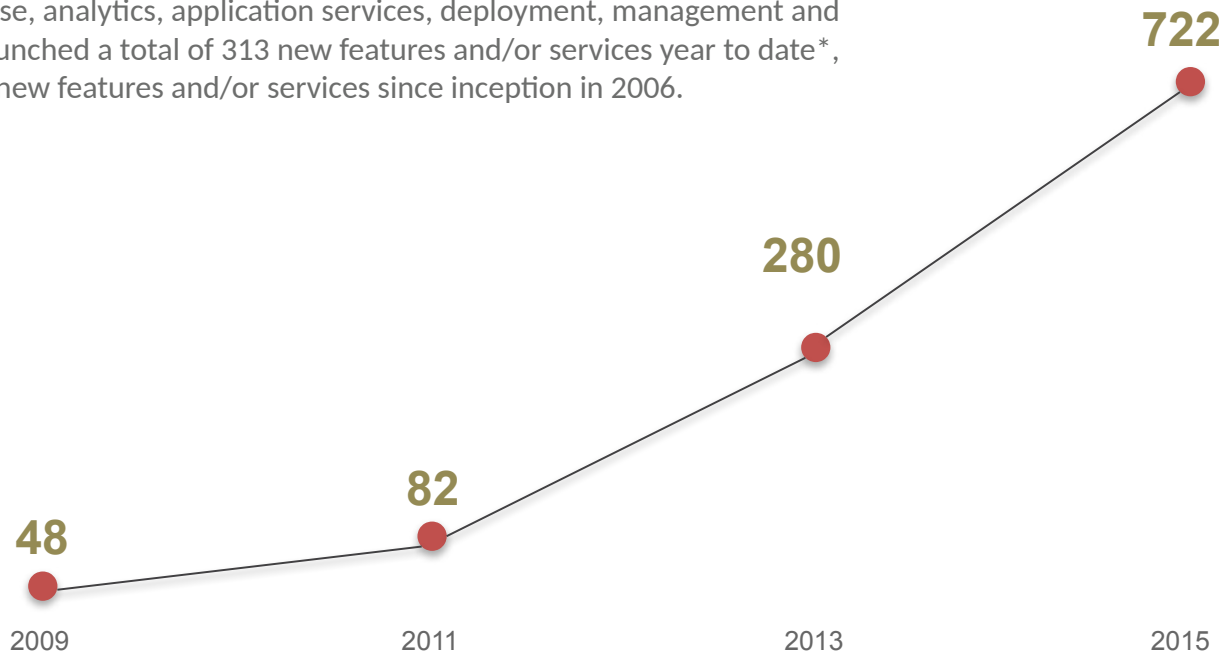
– U.S. Regulator

FINRA, the primary regulatory agency for broker-dealers in the US, uses AWS extensively in their IT operations and has migrated key portions of its technology stack to AWS including Market Surveillance and Member Regulation. For market surveillance, each night FINRA loads approximately 35 billion rows of data into Amazon S3 and Amazon EMR to monitor trading activity on exchanges and market centers in the US.

Innovation

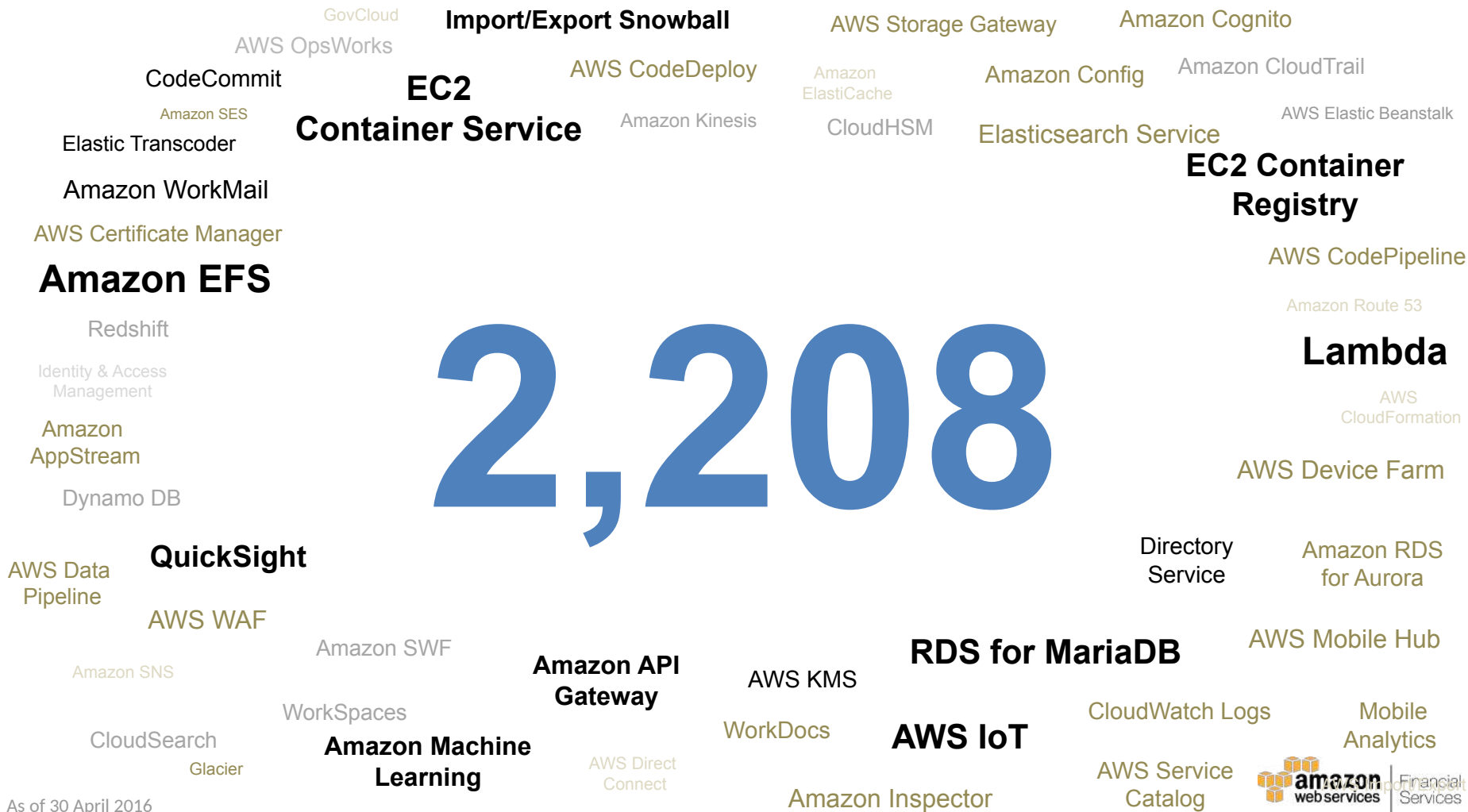
AWS Pace of Innovation

AWS has been continually expanding its' services to support virtually any cloud workload and now has more than 70 services that range from compute, storage, networking, database, analytics, application services, deployment, management and mobile. AWS has launched a total of 313 new features and/or services year to date*, for a total of 2,208 new features and/or services since inception in 2006.



* As of 30 April 2016

2,208



AWS is helping Financial Services innovate



Broadridge – Global Investor Communications and Technology Solutions

Broadridge, in partnership with Pitney Bowes, in June 2014 launched a technology platform delivered through AWS named Inlet to make it easier for companies to provide millions of consumers access to their most important documents from hundreds of providers in just a few clicks. **Broadridge will use Inlet to deliver investment industry content through its relationships with thousands of financial services companies, including banks, broker-dealers, mutual funds, as well as corporate issuers.** Content will include monthly statements, trade confirmations, tax documents and regulatory disclosures.



SIMPLE – Online Bank

Simple is an online bank that **uses AWS to run its virtual banking platform** and meet payment card industry (PCI) data security standard (DSS) compliance for its development and production environments. **By using AWS, Simple can automate processes that once took months to complete** and instead focus on its customer service rather than managing IT infrastructure.



– 8th Largest Bank in the US

Capital One is one of the US's largest banks and offers credit cards, checking and savings accounts, auto loans, rewards, and online banking services for consumers and businesses. **Capital One is using AWS as a central part of its technology strategy**, and plans to reduce its data center footprint from 8 to 3 by 2018. It is using or experimenting with nearly every AWS service to develop, test, build, and run its most critical workloads, including its new flagship mobile-banking application.

AWS is helping Financial Services innovate

“Banks aren’t being disrupted by FinTech technology, they’re being disrupted by customer expectations.”

- McKinsey & Company



Personal Investing



Wealth Management



Banking



Bitcoin/Blockchain



Brokerage



Investing

The “S” word...

Security is
our first priority
(rule #1 for all
Amazon employees)

Rule #2:
When in doubt,
follow rule #1

AWS customers are in control

AWS provides the same, familiar approaches to security that enterprises have been using for decades with increased visibility, control, and auditability.

Visibility

View your entire
infrastructure with one
click

Deep insight with AWS
CloudTrail

Control

You have sole authority
on where data is stored

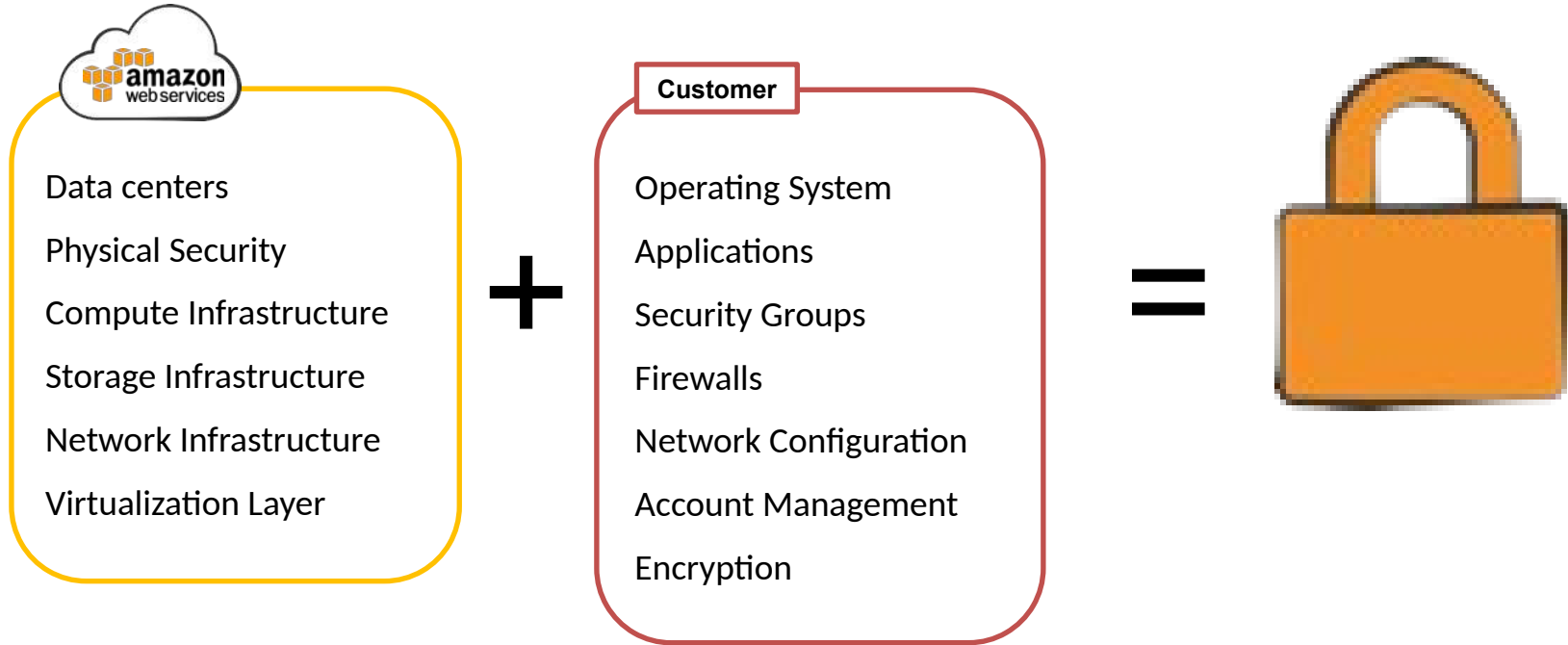
Shared responsibility
model

Auditability

3rd Party Validation – Certifications for Workloads that Matter



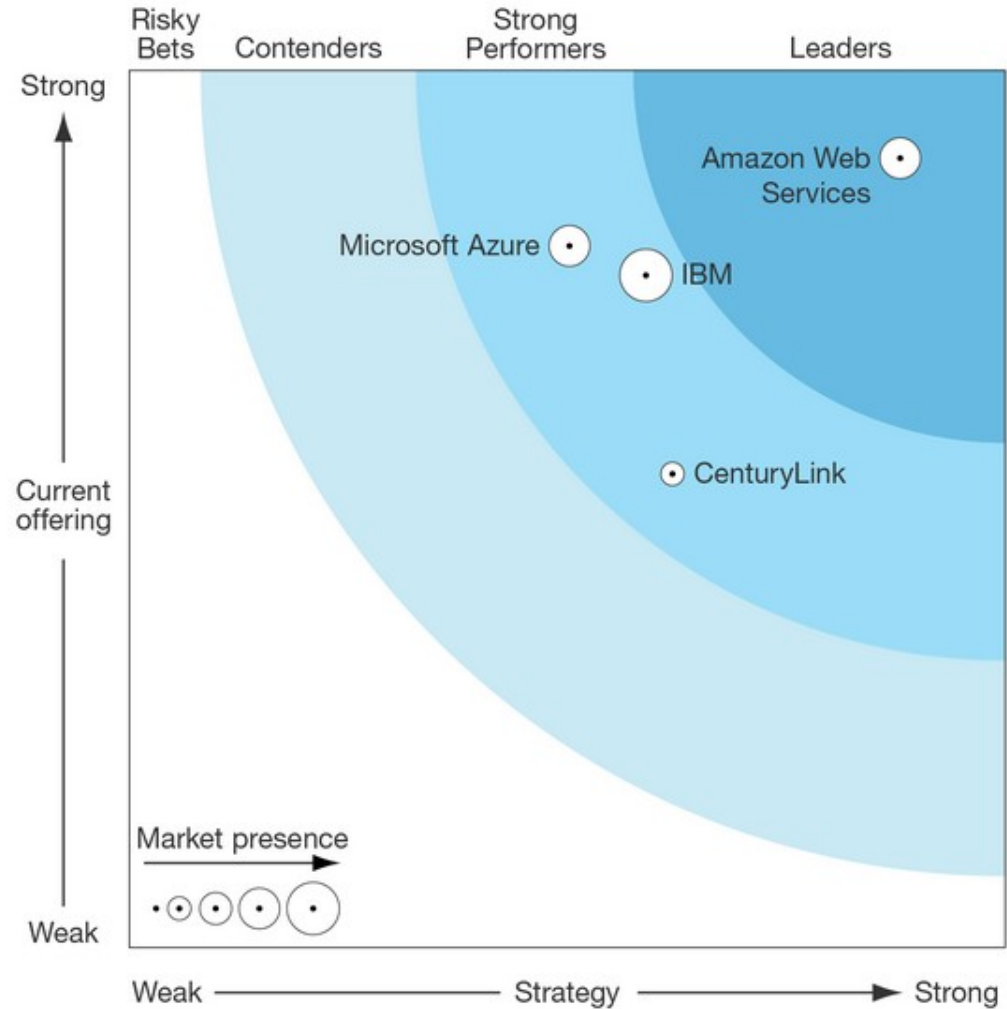
Shared Responsibility Model



The Forrester Wave™:

Public Cloud Platform Service Providers' Security

Q4 2014



AWS helps Financial Services improve Security

*“The financial service industry attracts some of the worst cyber criminals. 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

Wrap up

AWS adoption in Financial Services is a reality

- Migration & transformation of legacy IT
- Rapid innovation for market leaders and FinTech
- Increased security & compliance

Save the date : 31/05/2016

<http://aws.amazon.com/fr/summits/paris/>





THANK YOU!

Julien Simon, Principal Technical Evangelist, AWS

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