Managing Innovation at Scale

Senior Vice President, Utility Computing

aws

WHO AM I?

20+ years at Amazon

For the last 11+ years...

Lead Product, Engineering, and Operations for AWS

© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

aws

WHO AM I?

© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

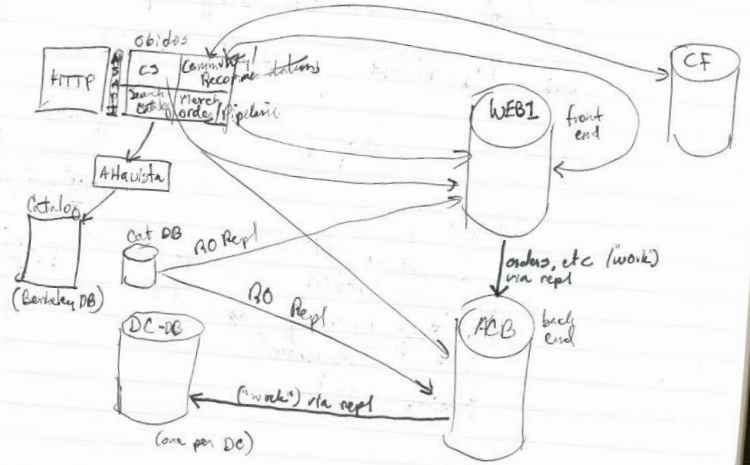
WHO AM I?

© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

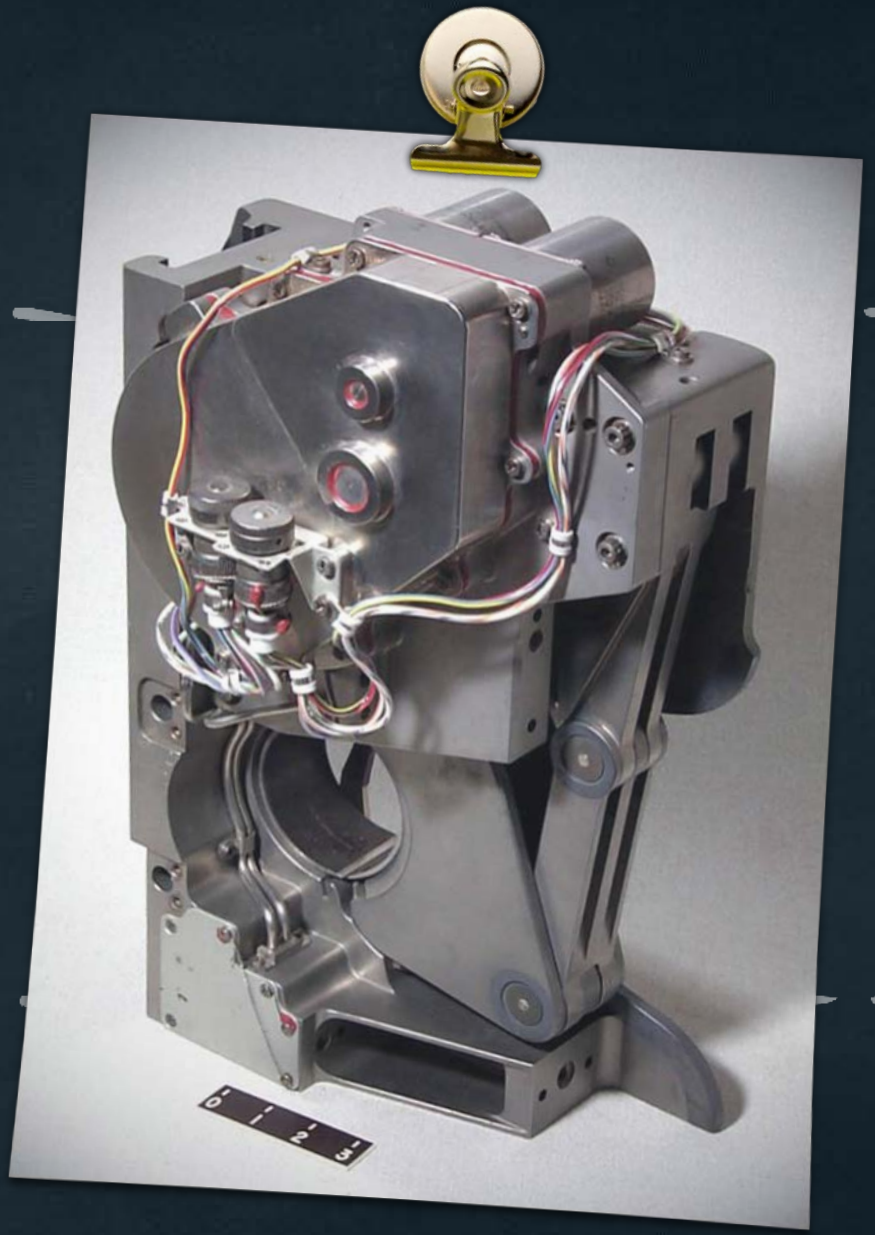
© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

12/15 Amazon Systems Overview

2 databases : WEB1, ACB (amazon.com.books)
Replication between them of: customer (customers, address, cc, ...) 2 way
order snapshot (customer orders) one way
Web site - "Obidos" N/S Commerce Server 1.21 NSAPI invoked application, HTML templ.
Catalog - Berkeley DB, read-only to website, updated atomically, search done using altavista
Obidos -
- Search & catalog (Berkeley DB)
- e-merchandising, order pipeline (WEB1)
- Community & recommendations (WEB1, CF - Collab filtering)
- Customer care (ACB & WEB1)



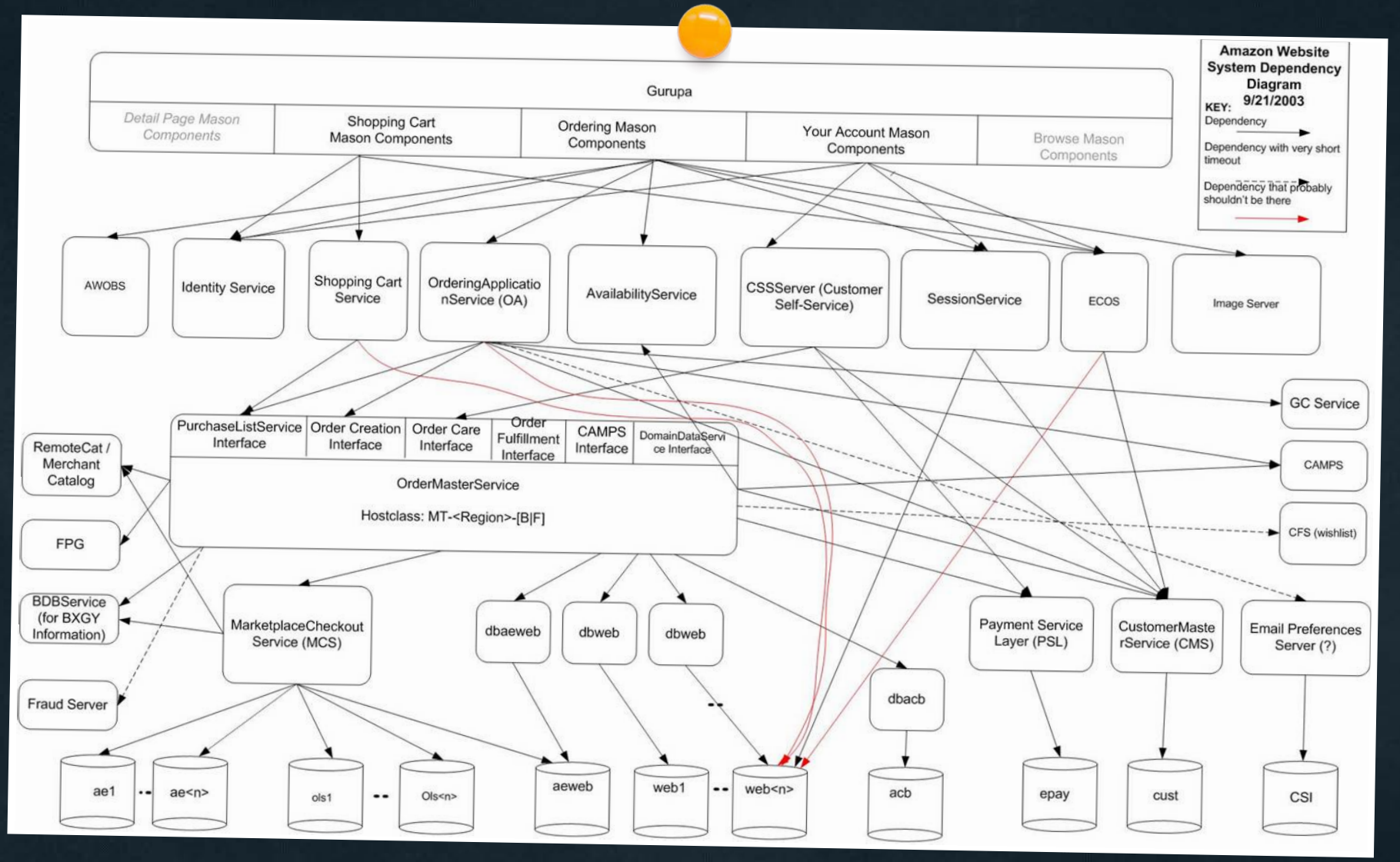
© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.



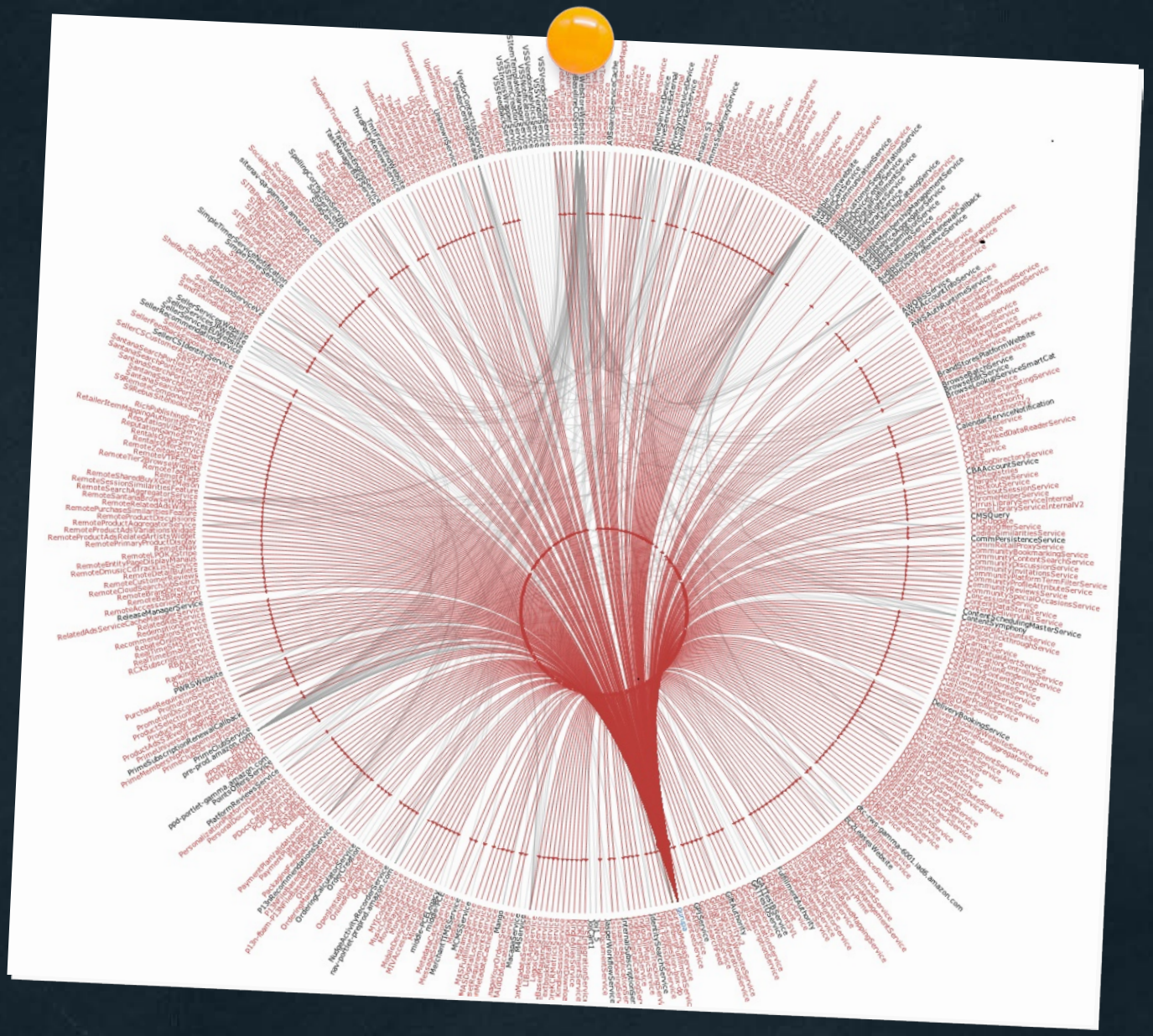
© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

Need a Service Here

© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.



© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.



© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

Ownership Model—2 Pizza Teams

Single team owns a service end-to-end
(they are the provider)

Able to feed the team with 2 pizzas

© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

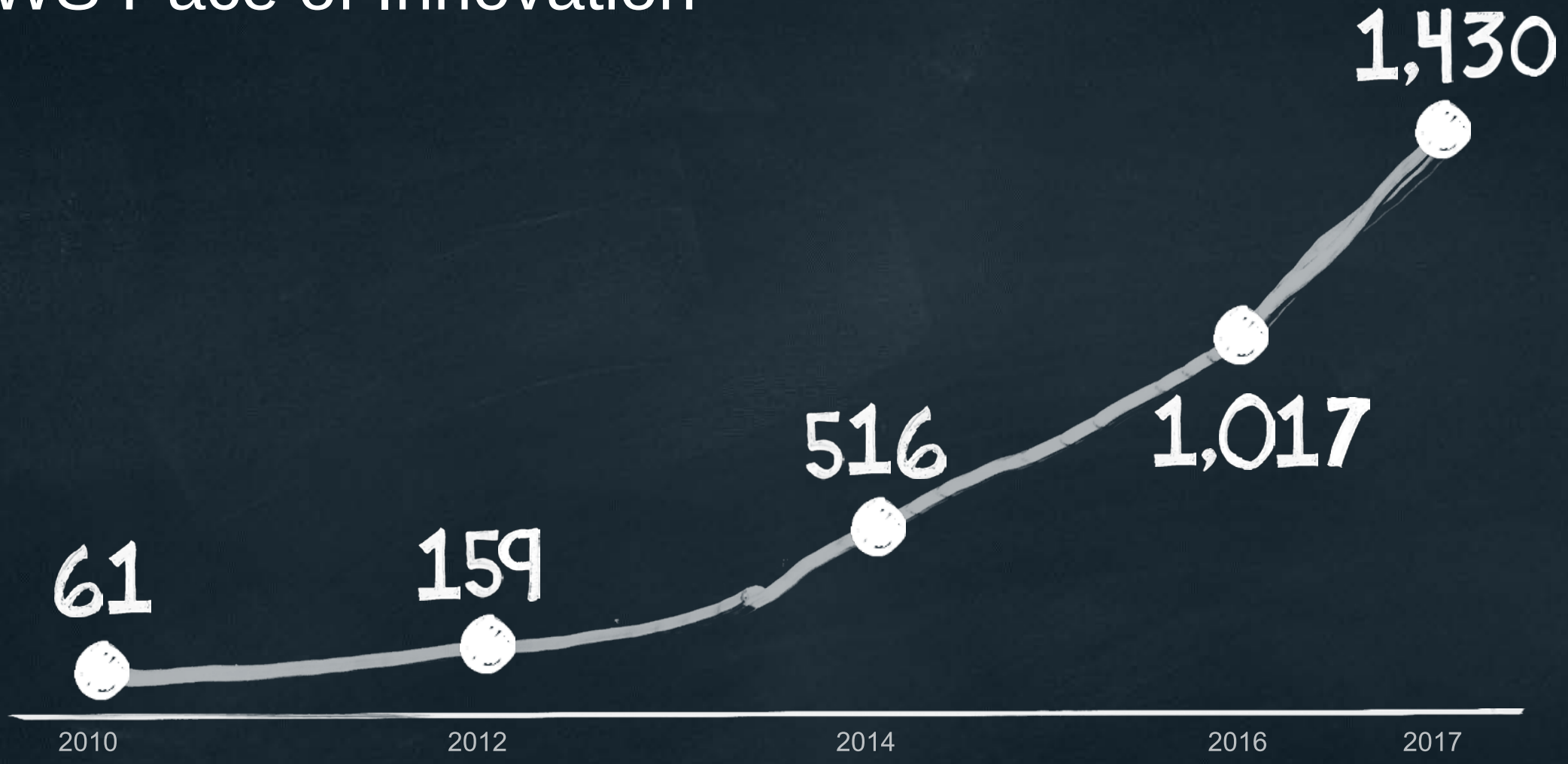
SINGLE-THREADED OWNERSHIP

© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

Ownership Drives Customer Focus

© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

AWS Pace of Innovation



** As of 1 January 2018*

© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

Fraud Prevention

Keep customers safe and keep their costs under control

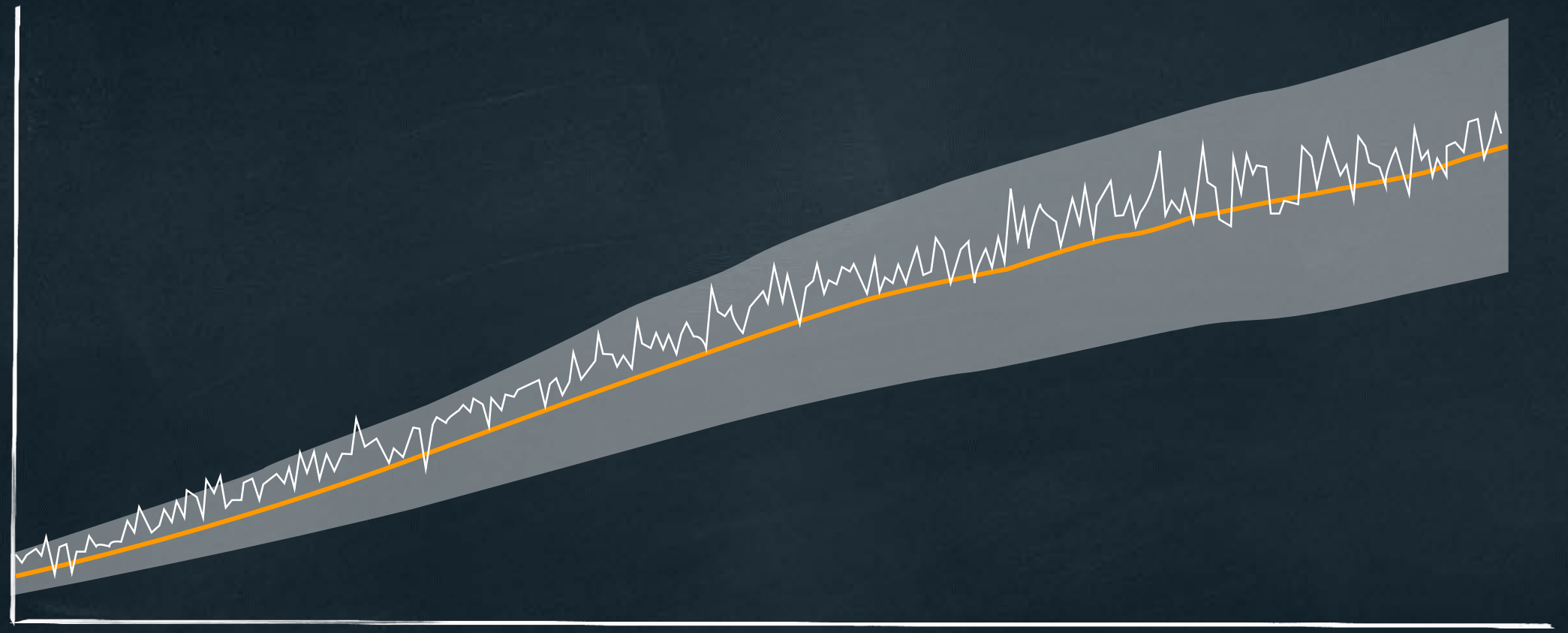
1. Real-time intelligence on the risk of an account
2. Mechanism to make this intelligence available to all services
3. Interpretability for the user

© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

Fraud Containment Scores

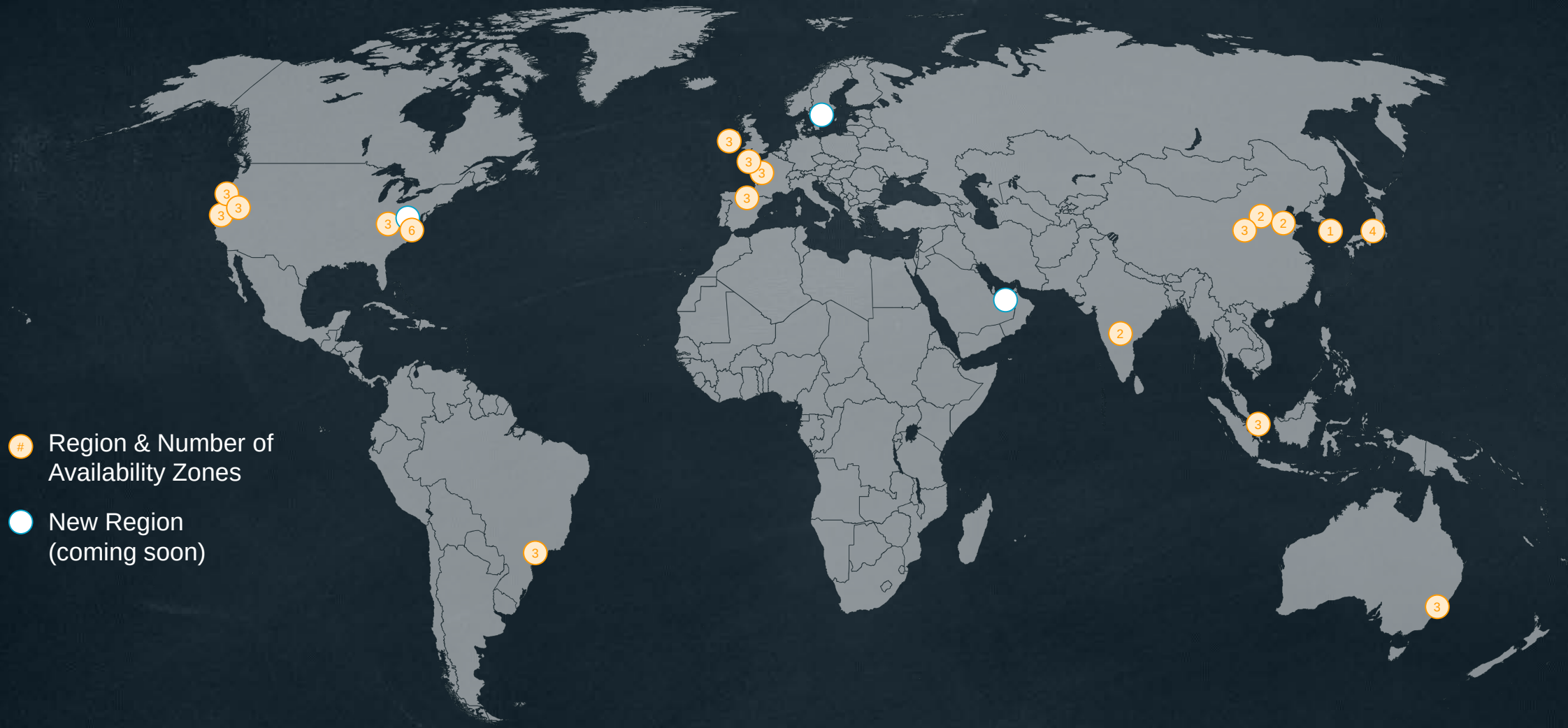
© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

Supply Chain Forecasting



© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

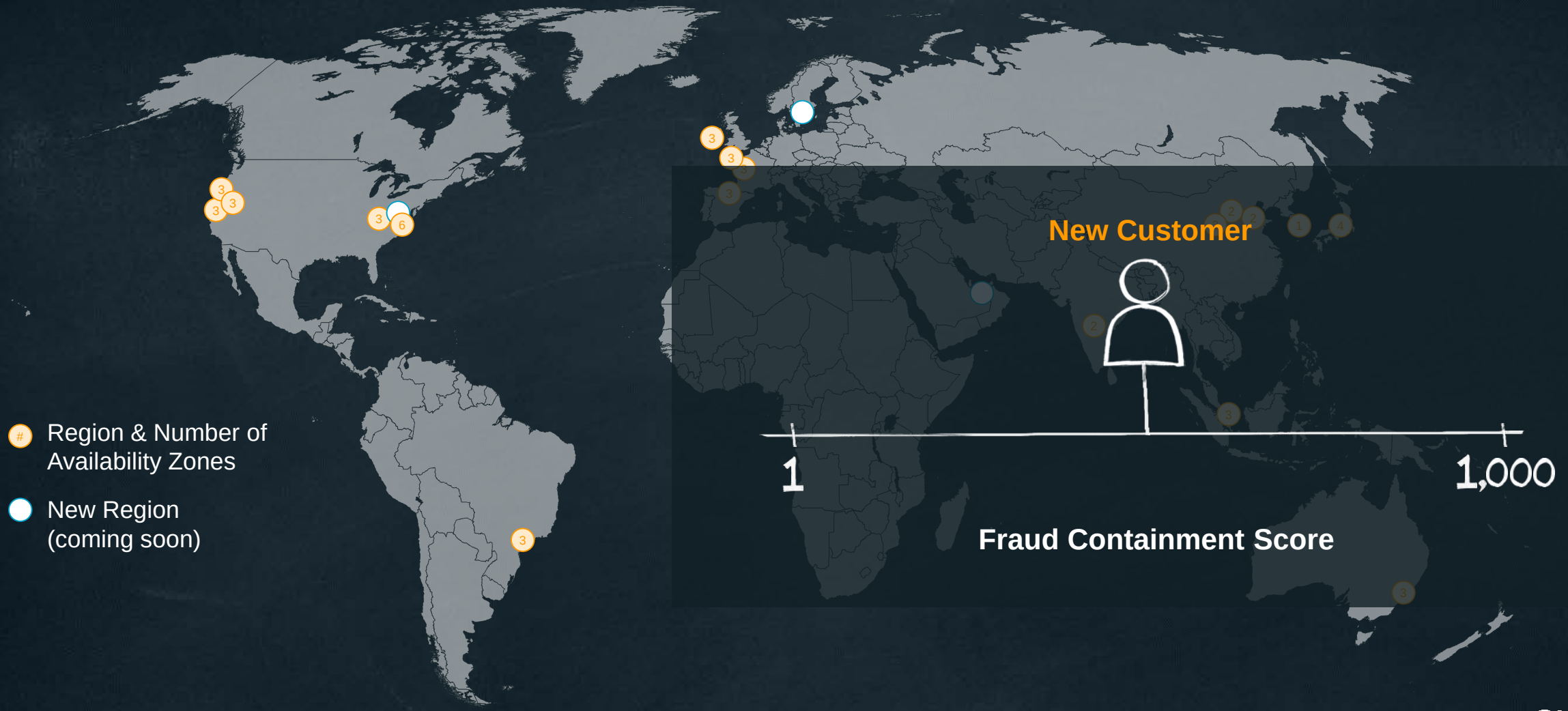
Admission Control



- # Region & Number of Availability Zones
- New Region (coming soon)

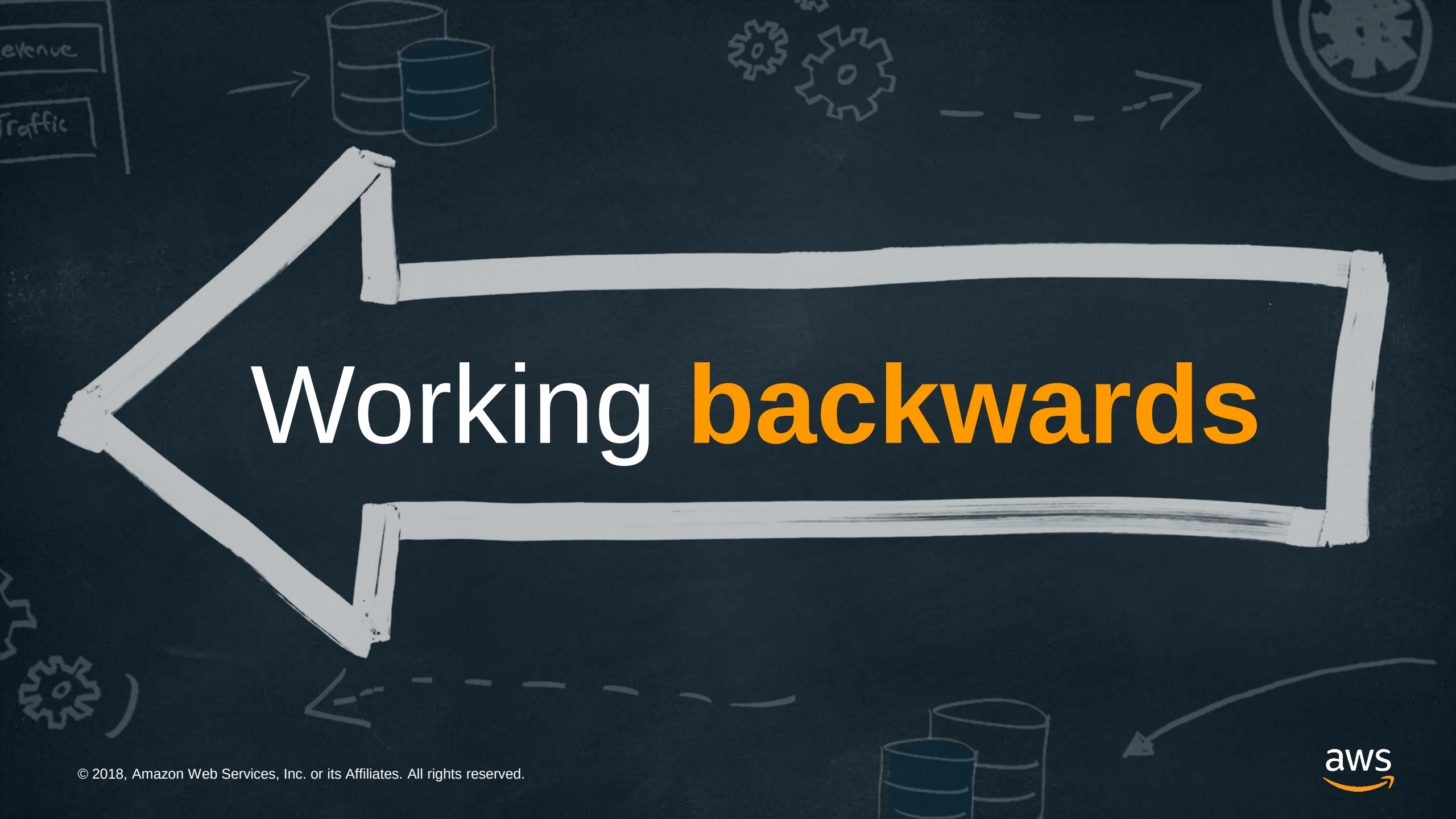
© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

Admission Control



- # Region & Number of Availability Zones
- New Region (coming soon)

© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.



© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

EXAMPLE

Amazon Connect

© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

Press Release

SEATTLE—March 28, 2017 -Amazon Web Services, Inc. (AWS), an Amazon.com company (NASDAQ: AMZN), today announced Amazon Connect, a self-service, cloud-based contact center service that makes it easy for any business to deliver better customer service at lower cost. Amazon Connect is based on the same contact center technology used by Amazon customer service associates around the world to power millions of customer conversations. Setting up a cloud-based contact center with Amazon Connect is as easy as a few clicks in the AWS Management Console, and agents can begin taking calls within minutes. There are no up-front payments or long-term commitments and no infrastructure to manage with Amazon Connect; customers pay by the minute for Amazon Connect usage plus any associated telephony services. To get started with Amazon Connect, visit https://aws.amazon.com/connect.

© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

Press Release

What's being announced?

Who are the intended customers?

What is the job to be done, and how does this solve?

Why is this service remarkable or unique?

Simple, clinical; avoids hyperbole

© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

FAQ

What is Amazon Connect?

Amazon Connect is a self-service, cloud-based contact center service that makes it easy for any business to deliver better customer service at lower cost

Can I really set up Amazon Connect in minutes?

Yes. We encourage you to go to the Amazon Connect console and set up an Amazon Connect Virtual Contact Center now

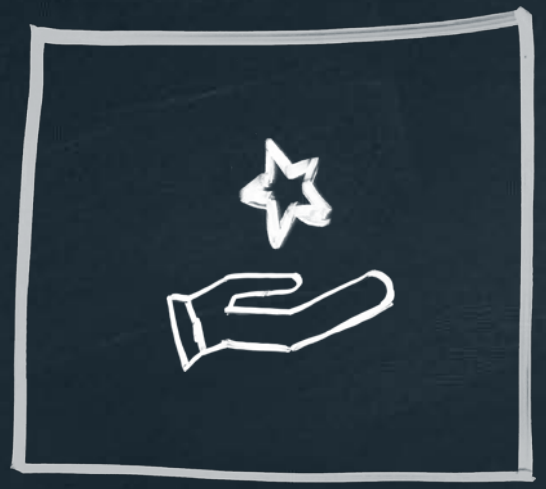
Is Amazon Connect scalable?

Yes, the technology that powers Amazon Connect has been proven to scale with the needs of Amazon's award winning customer service. It's in use by teams ranging from ten to tens of thousands of agents

© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

FAQ

Adds **detail** to what's introduced in the PR



Provides specifics about the **customer experience**—API, desktop, web, mobile

Explains the **relationship with other services**

Proposes a **pricing structure**

© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

Questions We Often Ask in the FAQ

What will customers most like in this service?

What will customers be most disappointed with at launch?

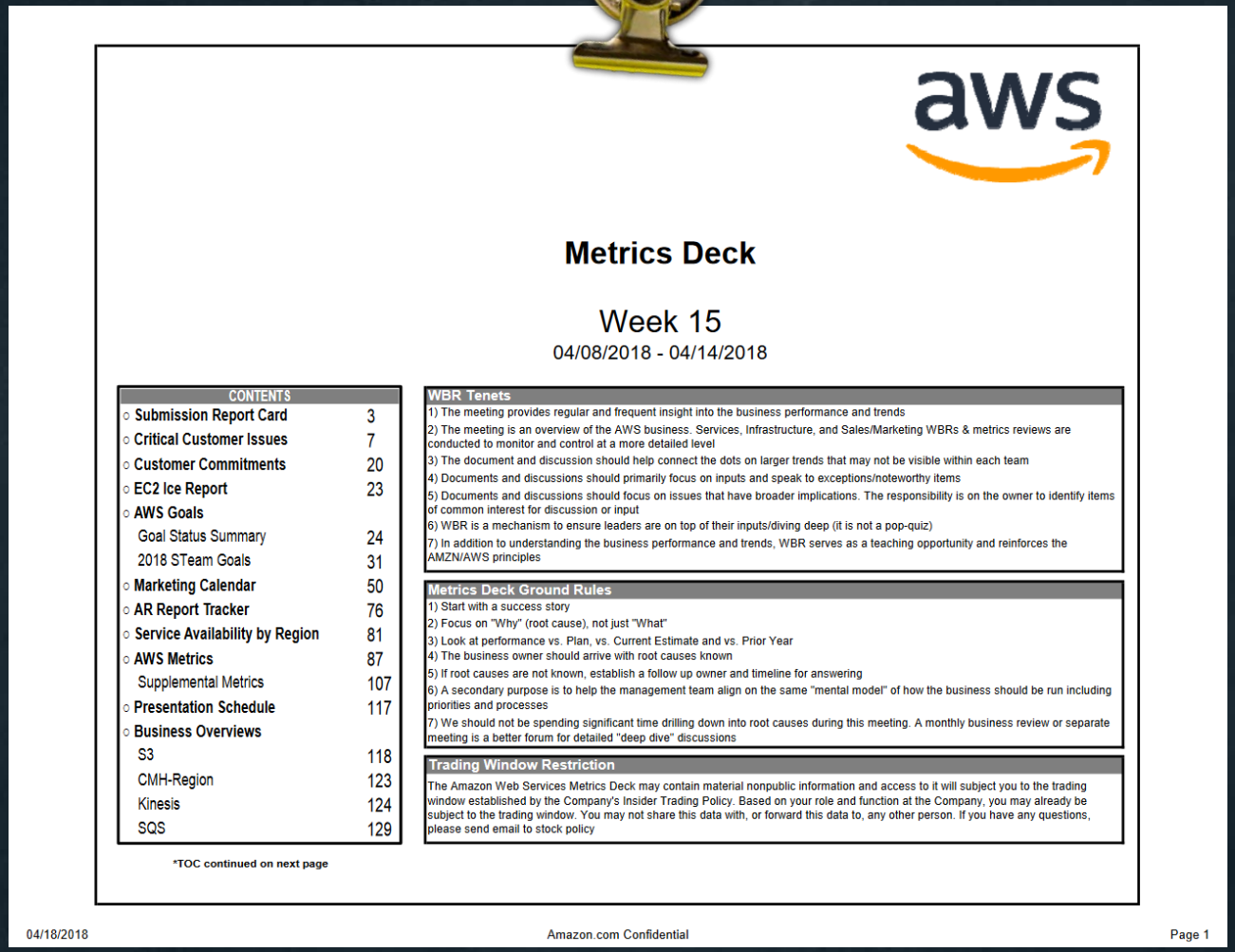
What relevant use cases would not be addressed by your service?

Are we making decisions that take us through “one-way doors”?

What do you want someone sitting across the table at lunch saying about your product?

© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

Inspection: WBR



aws

Metrics Deck

Week 15

04/08/2018 - 04/14/2018

CONTENTS

○ Submission Report Card	3
○ Critical Customer Issues	7
○ Customer Commitments	20
○ EC2 Ice Report	23
○ AWS Goals	
Goal Status Summary	24
2018 STeam Goals	31
○ Marketing Calendar	50
○ AR Report Tracker	76
○ Service Availability by Region	81
○ AWS Metrics	87
Supplemental Metrics	107
○ Presentation Schedule	117
○ Business Overviews	
S3	118
CMH-Region	123
Kinesis	124
SQS	129

*TOC continued on next page

WBR Tenets

1) The meeting provides regular and frequent insight into the business performance and trends
2) The meeting is an overview of the AWS business. Services, Infrastructure, and Sales/Marketing WBRs & metrics reviews are conducted to monitor and control at a more detailed level
3) The document and discussion should help connect the dots on larger trends that may not be visible within each team
4) Documents and discussions should primarily focus on inputs and speak to exceptions/noteworthy items
5) Documents and discussions should focus on issues that have broader implications. The responsibility is on the owner to identify items of common interest for discussion or input
6) WBR is a mechanism to ensure leaders are on top of their inputs/diving deep (it is not a pop-quiz)
7) In addition to understanding the business performance and trends, WBR serves as a teaching opportunity and reinforces the AMZN/AWS principles

Metrics Deck Ground Rules

1) Start with a success story
2) Focus on "Why" (root cause), not just "What"
3) Look at performance vs. Plan, vs. Current Estimate and vs. Prior Year
4) The business owner should arrive with root causes known
5) If root causes are not known, establish a follow up owner and timeline for answering
6) A secondary purpose is to help the management team align on the same "mental model" of how the business should be run including priorities and processes
7) We should not be spending significant time drilling down into root causes during this meeting. A monthly business review or separate meeting is a better forum for detailed "deep dive" discussions

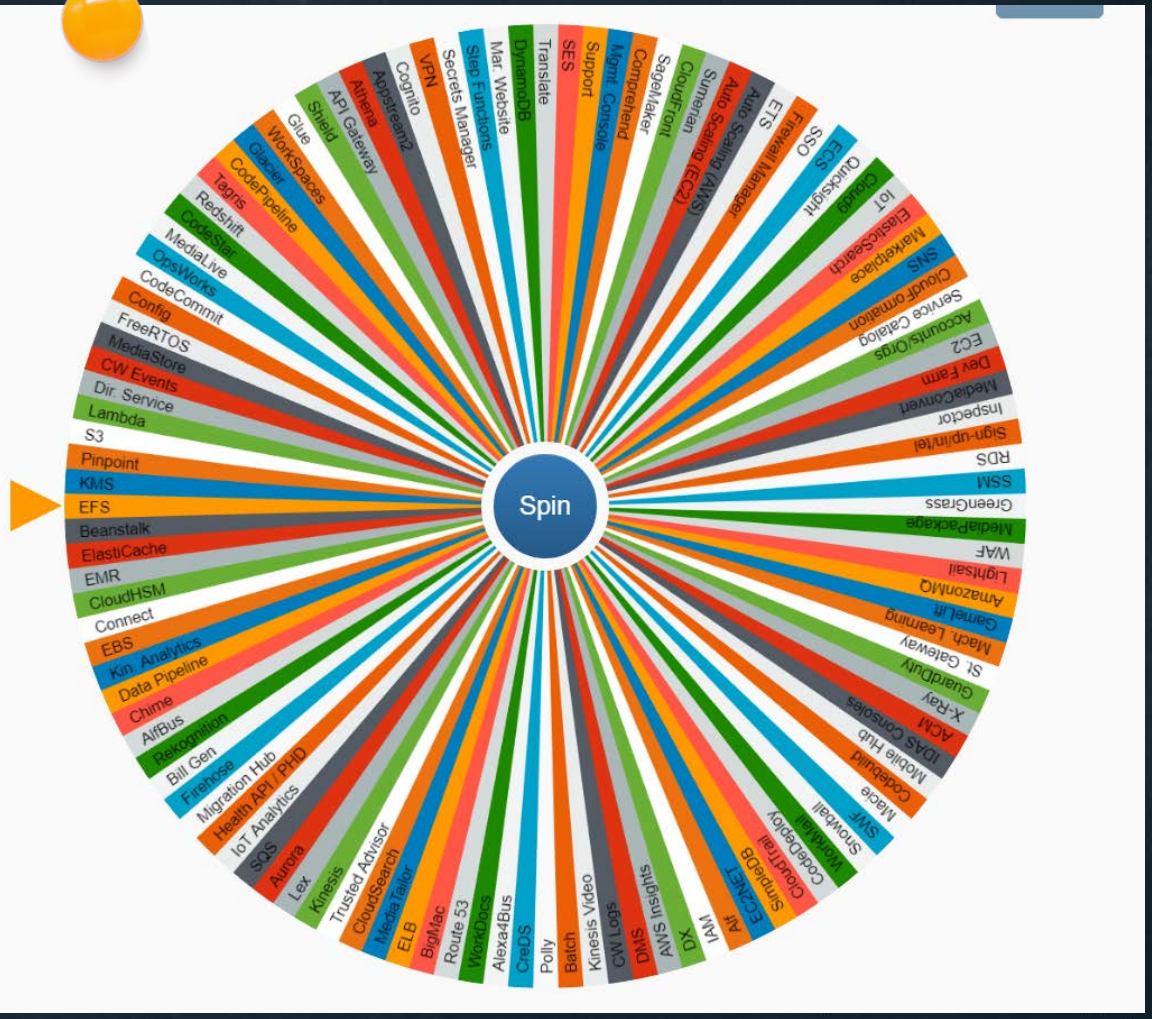
Trading Window Restriction

The Amazon Web Services Metrics Deck may contain material nonpublic information and access to it will subject you to the trading window established by the Company's Insider Trading Policy. Based on your role and function at the Company, you may already be subject to the trading window. You may not share this data with, or forward this data to, any other person. If you have any questions, please send email to stock policy

© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

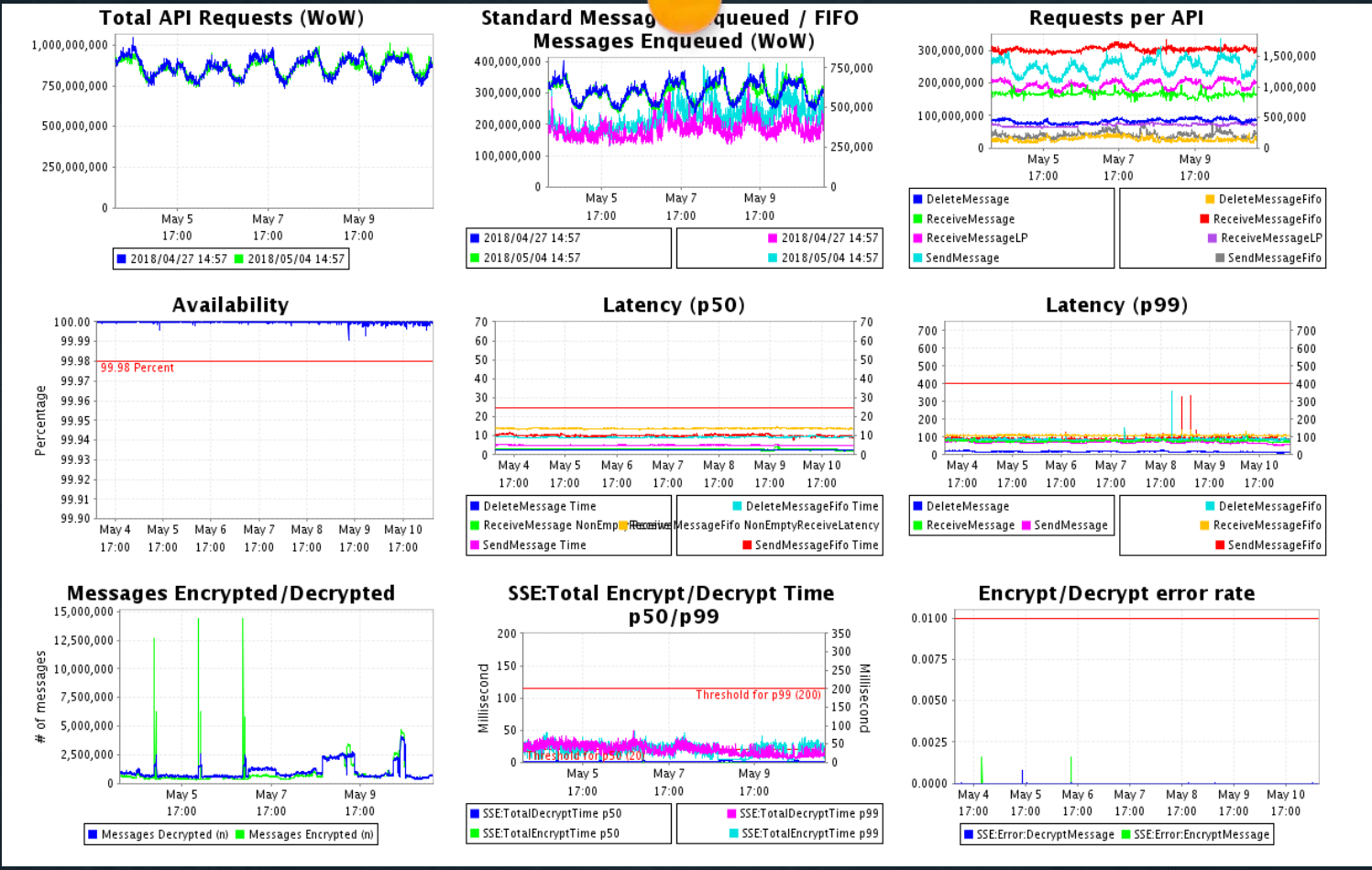
aws

Inspection: The Wheel



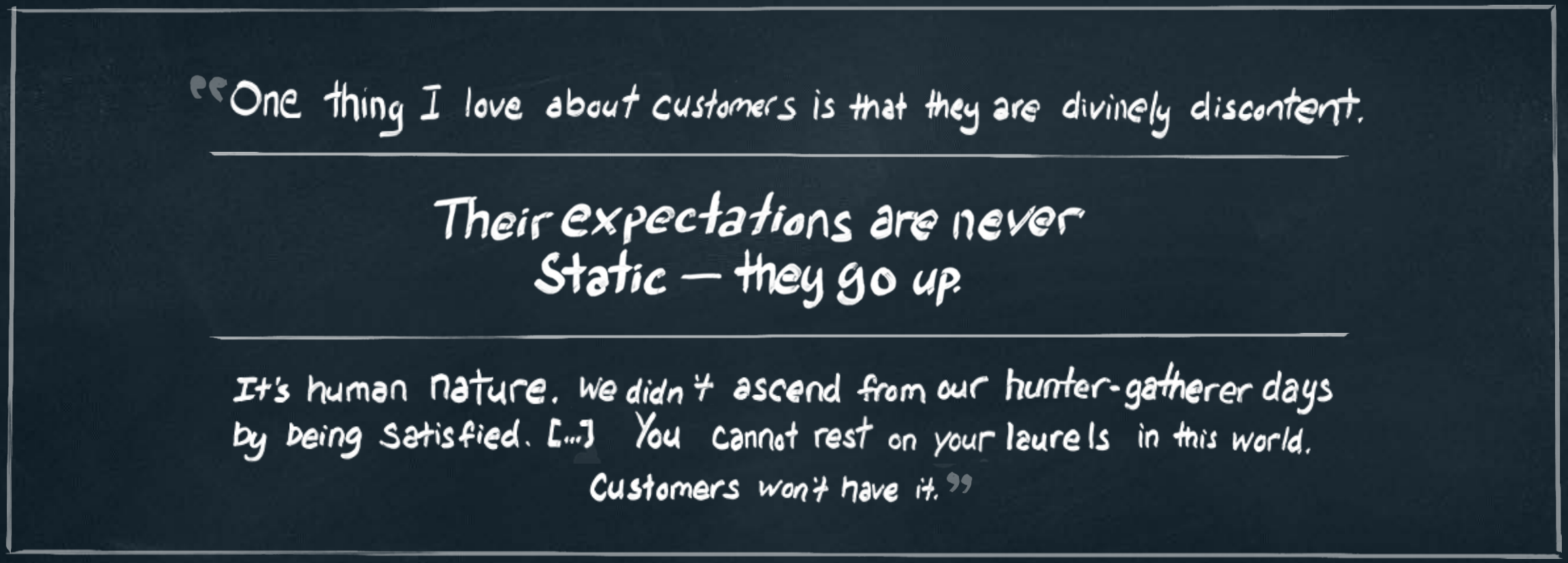
© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

Inspection: Service Dashboard



© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

What Makes it Work?

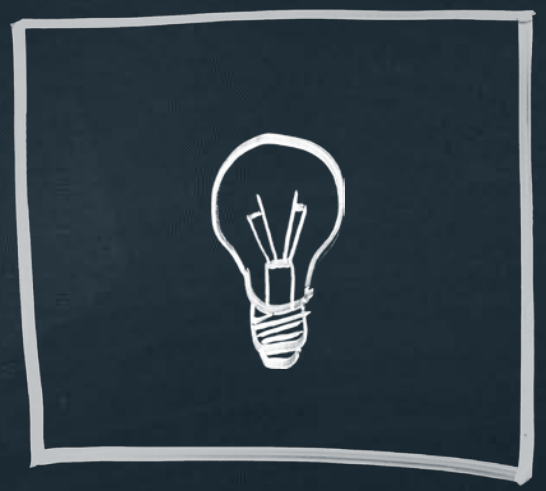


© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

High Standards

They are **teachable**

They are **domain specific**



You must **recognize** them

Must explicitly coach realistic **scope**

“And finally, high standards are fun! Once you’ve tasted high standards, there’s no going back.”

© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

Scope

© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.

© 2018, Amazon Web Services, Inc. or its Affiliates. All rights reserved.