

The background features a vibrant, multi-colored gradient. It starts with a dark blue on the left, transitions through purple and magenta, and then into bright orange and yellow towards the right. A diagonal line separates the darker blue/purple area from the lighter orange/yellow area.

AWS  
re:Invent

ENT224-R

# Amazon Culture of Innovation

## **Giulia Rossi**

Senior BDM, Digital Innovation  
Amazon Web Services

## **Thomas Blood**

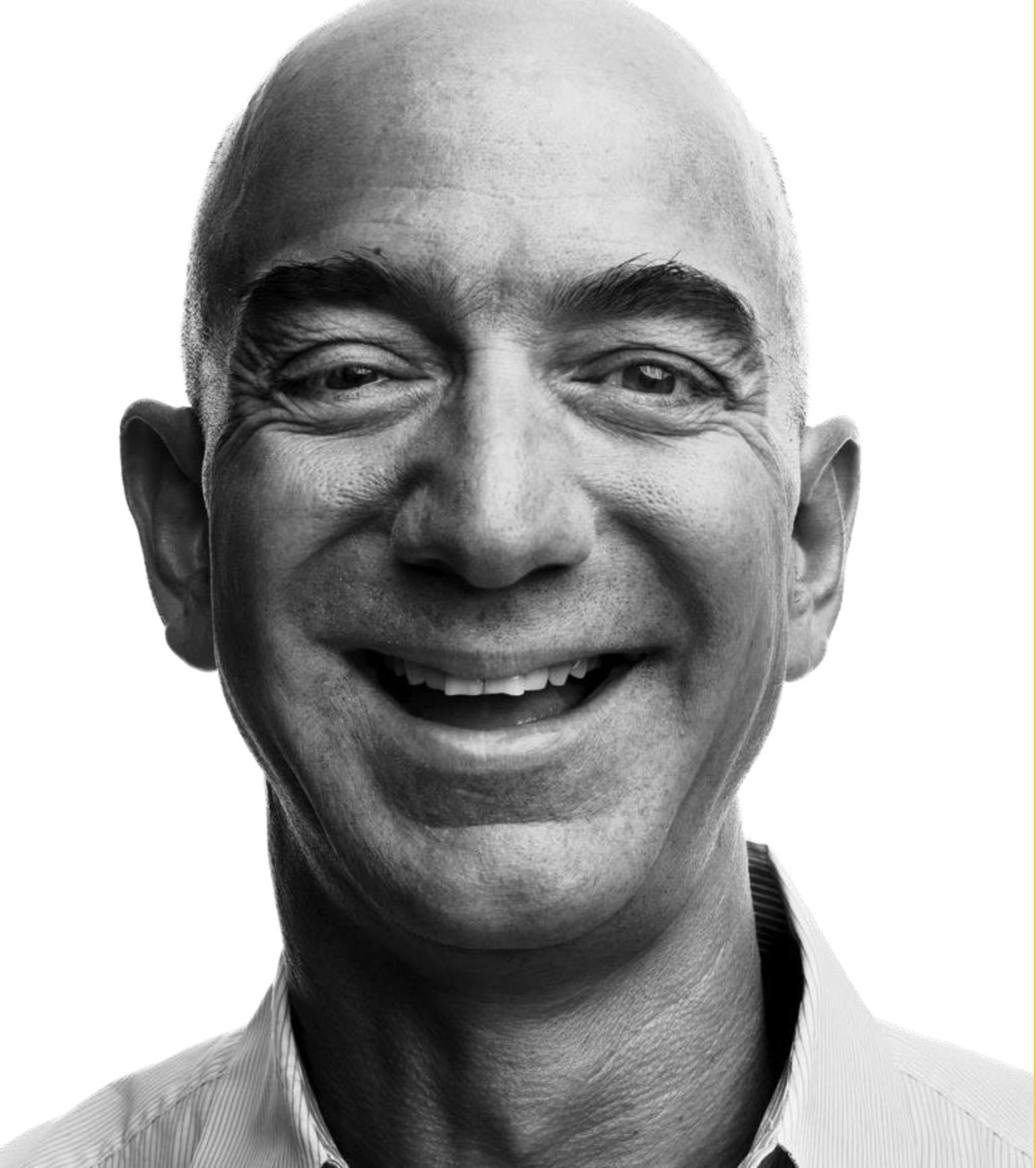
Enterprise Strategist  
Amazon Web Services

**Our mission:**

To be Earth's most  
customer-centric company

**Where innovation begins:**

Start with the customer  
and work backwards



“ There are many advantages to a customer-centric approach, but here’s the big one:

**Customers are always beautifully, wonderfully dissatisfied**, even when they report being happy and business is great.

Even when they don’t yet know it, customers want something better, and your desire to delight customers will drive you to invent on their behalf.”

**Jeff Bezos**

2016 letter to shareholders

- 1994 ○ Founded
- 1995 ○ Amazon.com
- 1998 ○ CDs and DVDs
- 2006 ○ AWS
- 2007 ○ Kindle
- 2011 ○ Video
- 2012 ○ Groceries
- 2014 ○ Alexa/Echo
- 2015 ○ Bookstores
- 2017 ○ Go

The Amazon Go logo is displayed in white text against a dark background. The word "amazon" is in a lowercase sans-serif font with a curved arrow underneath it, and the word "go" is in a similar lowercase sans-serif font.

No Lines.  
No Checkout.  
(No, Seriously.)

# How do we organize for innovation?

## **Culture**

Customer obsession, hire builders, let them build, support them with a belief system

## **Mechanisms**

Encoded behaviors that facilitate innovative thinking

## **Architecture**

Structure that supports rapid growth and change

## **Organization**

Small, empowered teams that own what they create

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Every one of us is a leader on our mission



## Invent and simplify

Leaders expect and require innovation and invention from their teams and always find ways to simplify. They are externally aware, look for new ideas from everywhere, and are not limited by “not invented here.” **As we do new things, we accept that we may be misunderstood for long periods of time.**



**Willingness to  
be misunderstood  
for a long time**



**75**

price reductions  
(since 2006)

**1,957**

new services and features  
introduced in FY18

**Millions**

of monthly active customers

# Bias for action

Speed matters in business. **Many decisions and actions are reversible** and do not need extensive study. We value calculated risk taking.



**Is it a one-way or  
a two-way door?**

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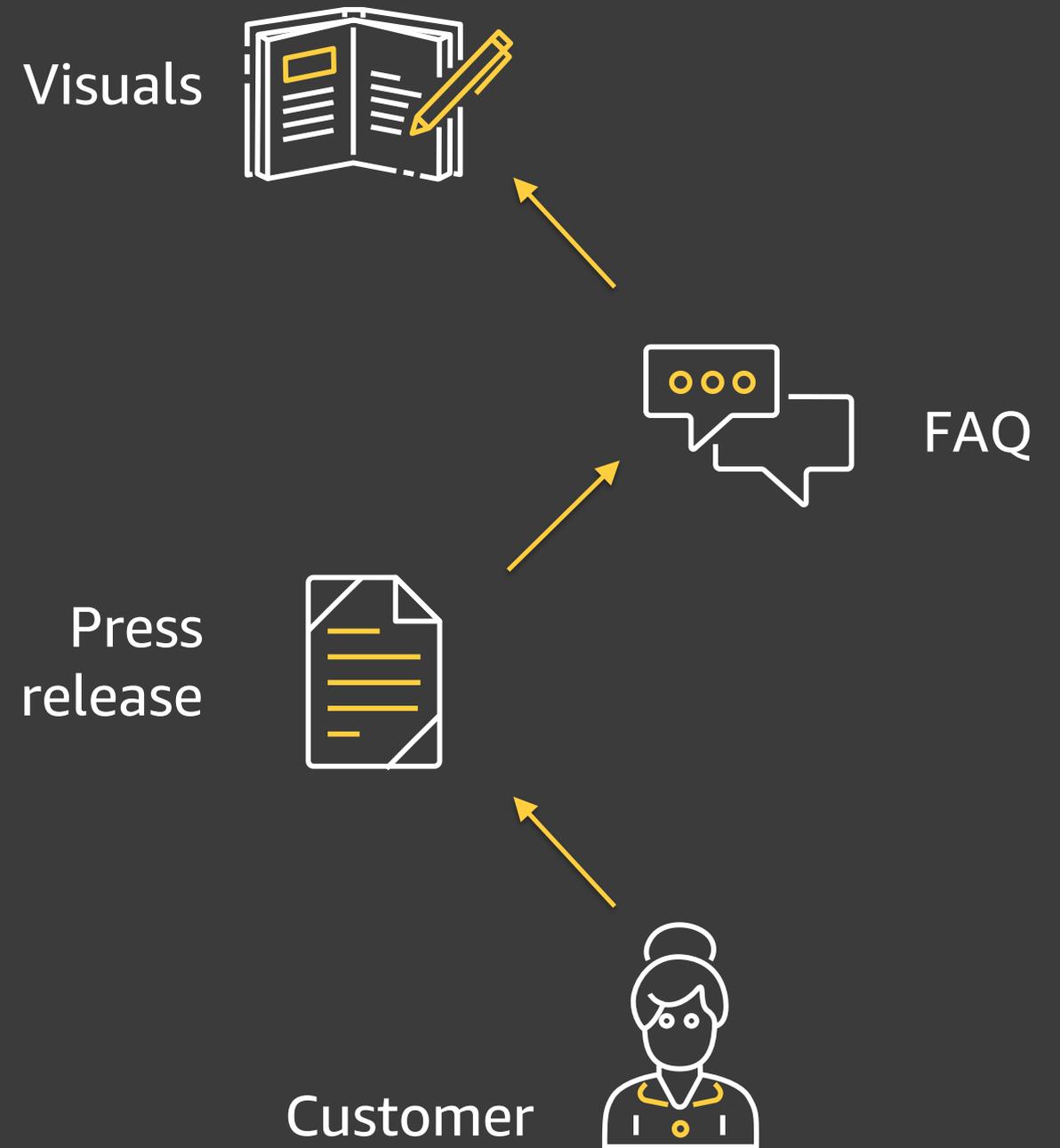
Structure that supports rapid growth and change

## **Organization**

Small, empowered teams that own what they create

# Working backwards is a process

Use it to get clarity, not to document what you've already decided to do





# Who is the customer?

Be specific about their context and needs



## Working backwards questions

Who is the customer?

What is the customer problem or opportunity?

Is the most important customer benefit clear?

How do you know what customers need or want?

What does the customer experience look like?

# Artifacts from the working backwards process

## Press release

Amazon Campus

Amazon.com confidential

Amazon Campus Launches First Multi-Channel Student Store at the University of California Berkeley  
[www.amazon.com/Campus](http://www.amazon.com/Campus) & [berkeley.amazon.com](http://berkeley.amazon.com)

**SEATTLE-(BUSINESS WIRE) – August 31st, 2014** – Since returning to school for the Fall semester, Berkeley students have experienced a fresh take on the college bookstore as the new Berkeley Student Store opened at an online address: [berkeley.amazon.com](http://berkeley.amazon.com).

The Amazon-run online Student Store brings Amazon's broad selection, low prices, and convenient shopping experience to the heart of Berkeley's campus and offers a number of additional student-focused features. With the launch of the Student Store, Berkeley students can now pay for any purchase on Amazon with their Cal1Card, buy course materials in any format via links in Berkeley's Learning Management System or directly on Amazon.com, pick up orders at convenient locations across campus, and receive FREE One-Day Shipping on textbooks sent to the campus area. Amazon Student members at Berkeley are eligible for FREE One-Day Shipping to campus on millions of additional products plus FREE Two-Day shipping on millions more.

"I've been an Amazon Student member for two years," explained Senior Aubrey ~~Primasoo~~, "Getting the extra free one day shipping was huge. I've been ordering everything from Amazon since I got back to school. I may never have to leave campus again."

Students can access these campus-specific payment methods and shipping benefits, along with the full selection of custom textbooks - typically available only through the university's licensed bookseller - by activating the Berkeley co-branded Amazon experience when they visit [berkeley.amazon.com](http://berkeley.amazon.com), sign up for Amazon Student and select 'Berkeley' as their school, or click on links to Amazon within the Berkeley Learning Management System.

In place of a traditional campus bookstore, Amazon has deployed Lockers across campus and built the first Amazon Student Lounge, a space that features a package pick up desk, technology showroom, and lounge area for students to study, meet, read or just relax in between classes. "Getting my textbooks was way easier this year. Instead of making the trip to the store to pick out my books

## FAQs

Amazon Campus

Amazon.com confidential

### II: Student Customer FAQs

**Q4: What do I get when Amazon is on my campus?** Students get a number of benefits when Amazon is on campus. By activating the co-branded experience on Amazon, students receive Free One Day shipping on textbooks to campus addresses, access to custom textbook selection, the ability to pay with their university ID card, and the ability to pick up Amazon.com orders at pick up points on campus. On campus, all students will have access to an Amazon Student Lounge.

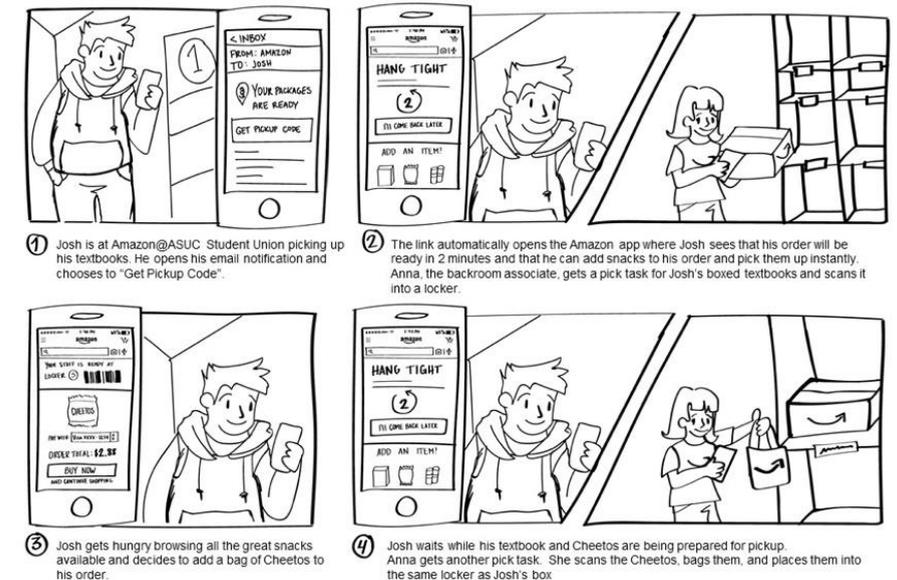
**Q5: How do I activate the co-branded experience?** Students at client universities will have four methods for opting into the co-branded experience: 1) visiting the co-branded subdomain directly by typing the URL ([berkeley.amazon.com](http://berkeley.amazon.com)) in their browser, or clicking an external link, 2) joining the Amazon Student program and selecting their school, 3) shopping for textbooks via links in their school's Learning Management System, 4) clicking on a Student Store merchandising placement on Amazon.com. Once customers have opted in, they will see a persistent co-branded toolbar on the top of the page whenever they return to Amazon.com. Customers can turn the experience off at any time by navigating to the 'Account Settings' menu in 'Your Account'.

**Q6: What do I get if I sign up for Amazon Student when Amazon is on my campus?** Amazon Student members at your school get all the standard benefits of the program *plus* Free One Day shipping to the campus area on millions of top selling products. Standard benefits include Free Two-Day shipping on Prime eligible items, unlimited instant streaming of Prime Instant Video content and access to the Kindle Owners' Lending Library. The cost of a Student membership will remain \$39/year.

**Q7: Why aren't there any 'grab and go' items available for purchase at the Student Lounge?** At launch, we will not be able sell products to customers "on demand" at the Student Lounge because we do not have a Point of Sale system or the ability to stock inventory for sale on site. However, we intend to offer this in the future for a small selection of top-selling products. In the meantime, customers may order items displayed in the Lounge by using the bar code scan feature in the Amazon Mobile App.

**Q8: Why is Free One Day shipping limited to campus addresses? Why don't I get Free One Day shipping to my parent's house?** By working directly with a university, Amazon is able to reduce costs associated with shipping orders to campus, a savings we want to pass on to all students at the school via Free One Day shipping for textbooks, and to our Amazon Student members via Free One Day shipping on millions of other eligible products. However, in order to provide these benefits at no additional cost, we must limit the geography in which we offer this benefit to those zip codes served from our on campus delivery station. Amazon Student members always receive Free Two-Day shipping on Prime eligible items, to campus or most other addresses in the continental US.

## Visuals



# FAQs

Include both customer FAQs and internal FAQs

Include the hard questions

Share your press release early to gather questions

## Sample customer FAQs

1. How is this different from what Amazon offers me today?
2. Can I get a refund if I'm dissatisfied?
3. Are there things I need to manage or keep track of?
4. How much does this cost?

## Sample internal FAQs

1. What decisions and guidance do we need today?
2. What customer feedback have we collected so far?
3. What will customers be most disappointed in?
4. What other options did we consider and reject?
5. What are our MLP features?
6. What are our hotly debated topics?
7. Are we stepping through any "one-way doors"?
8. Who is the single-threaded leader?

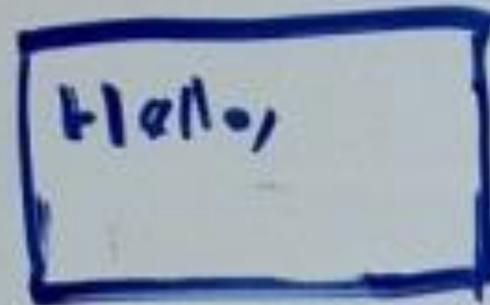
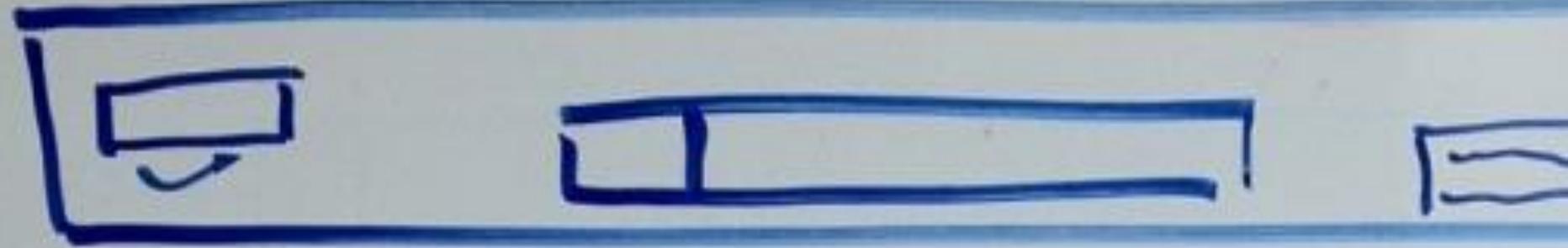
# Visuals

Show the customer experience

Rough idea—rough drawing

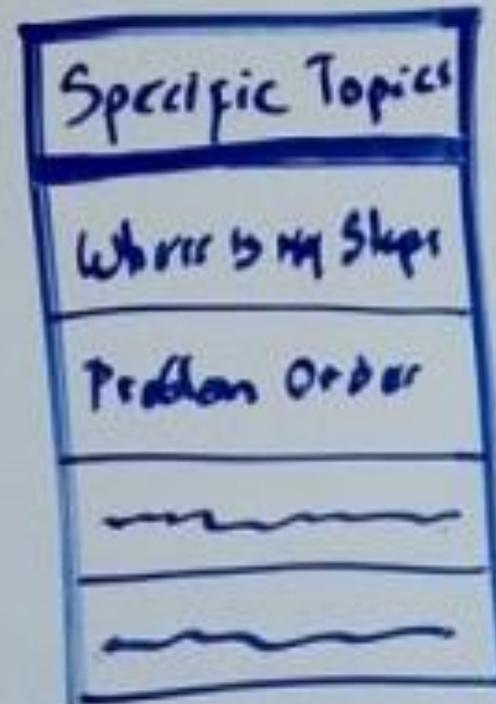
Match fidelity to maturity of your idea

Don't be afraid to be provocative



Customer Service

Search



Orders

Kindle

Digital Content

We read, discuss,  
debate, and ask  
questions

...of diaper sizing. By signing up for a single subscription, Amazon Family customers will have the  
knowing that Amazon will send them the right sized diaper at the right time.

Custom Benef

~~Babies need an average of about 3,800 disposable diapers across seven sizes in three years, and remain  
between a few weeks to several months. A baby might need just one box of size 1 diapers but need as  
boxes of size 4 diapers. To complicate matters, weight – and not age – is the best predictor of a baby's~~

With Amazon's Subscribe & Save program, customers previously created diaper subscriptions in a spe  
was replenished until the customer decided it was time to move up a size. This meant that parents need  
change in diaper size and either cancel their existing subscription to create a new one, or go to the Mar  
Subscriptions page to update the existing diaper subscription with the new size. This caused endless fr  
parents, added to the stress of having a new baby, and the experience ran counter to the concept of a su  
should run smoothly with minimal touch points.

Not a good Name for this

With the introduction of the new auto-sizing feature, customers who subscribe to diapers will be asked  
child's weight, in addition to the existing child info. They will then be able to set up a single subscrip  
them through the various sizes at the right time. Customers will be notified before the next box of diap  
that it has automatically sized up – if it's too soon, there will be a simple one-click process to keep the

Could a customer really say this?

"I love using Subscribe & Save. But for my older child, I have had to return boxes that were one size t  
actually increased my work load," says Mara Steiner, who has used Subscribe & Save for her baby ne  
years. "As I expect my second child, I am very excited at the thought of having the right size diapers s  
each month. New parents have enough to do without having to keep calculating which size of diapers  
buying for their baby."

~~"We want parents to always have the right sized diaper for their child at the right time," said Greg, dir  
& Save. "This single subscription experience for diapers will ensure that customers can depend upon  
do the work for them, and never have to worry about changing size as their children grow."~~

Amazon's Subscribe & Save ships thousands of items to their customers on a regular basis  
additional discounts. With the diaper subscription service, the program has simplified the ex  
new parents.

To learn more about Subscribe & Save's diaper subscriptions auto-sizing, go to [www.amazon.com/diaper-subscription](http://www.amazon.com/diaper-subscription)

What about mobile?



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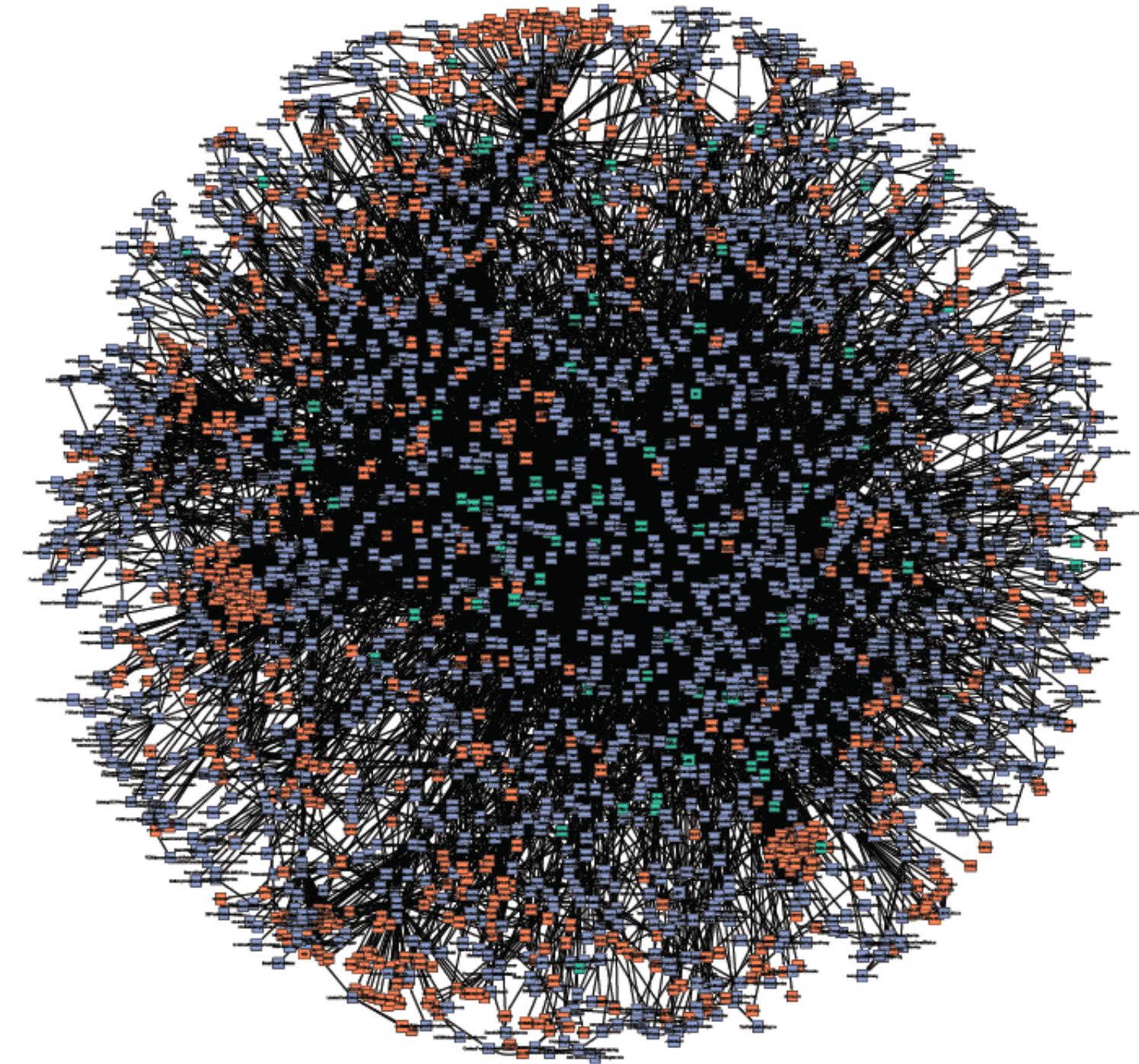
Encoded behaviors that facilitate innovative thinking

## **Architecture**

Structure that supports rapid growth and change

## **Organization**

Small, empowered teams that own what they create



## A shift to microservices

- Single-purpose
- Connect only through hardened APIs
- Largely “black boxes” to each other
- Business logic and data accessible only through APIs



## Self-service platforms without gatekeepers

Creating powerful self-service platforms that enable builders to use the right tool for the right job

# The broadest and deepest platform

## TECHNICAL & BUSINESS SUPPORT

- STORAGE
- TRAINING & CERTIFICATION
- PARTNER ECOSYSTEMS
- SECURITY & BILLING REPORTS
- PROFESSIONAL SERVICES
- SOLUTIONS MANAGEMENT
- OPTIMIZATION GUIDANCE
- ACCOUNT MANAGEMENT
- PERSONALIZED DASHBOARD

## MARKETPLACE

- BUSINESS APPS
- SECURITY
- STORAGE
- BUSINESS INTELLIGENCE
- NETWORKING
- DATABASES
- DEVOPS TOOLS

## ANALYTICS

- DATA WAREHOUSE
- DATA PIPELINES
- ETL
- BUSINESS INTELLIGENCE
- INTERACTIVE SQL QUERIES
- DATA LAKES
- HADOOP/SPARK
- STREAMING DATA COLLECTION
- ELASTICSEARCH
- STREAMING DATA ANALYSIS

## DEV OPS

- ONE-CLICK APP DEVELOPMENT
- APPLICATION LIFECYCLE MANAGEMENT
- PATCHING
- RESOURCE TEMPLATES
- DEVOPS RESOURCE MANAGEMENT
- AUTHORIZING
- BUILD & TEST
- TRIGGERS
- PIPELINE ORCHESTRATION
- CONTAINERS
- ANALYZE & DEBUG

## APP SERVICES

- QUEUING & NOTIFICATIONS
- EMAIL
- WORKFLOW
- TRANSCODING
- SEARCH

## MOBILE SERVICES

- API GATEWAY
- SYNC
- TARGETED PUSH NOTIFICATIONS
- SINGLE INTEGRATED CONSOLE
- MOBILE ANALYTICS
- DEVELOPMENT FRAMEWORK
- IDENTITY
- MOBILE APP TESTING
- PERSONALIZED ENGAGEMENT

## SATELLITE

- SATELLITE OPERATIONS

## ROBOTICS

- CLOUD ROBOTICS

## AR/VR

- AR/VR EXPERIENCES

## IOT

- RULES ENGINE
- DEVICE GATEWAY
- MANAGEMENT & SECURITY
- DEVICE SHADOWS
- REGISTRY
- MICROCONTROLLER OPERATING SYSTEM
- DEVICE SDKS
- LOCAL COMPUTE

## MACHINE LEARNING

- MULTIPLE FRAMEWORKS
- HOSTED NOTEBOOKS
- MODEL TRAINING
- TOPIC MODELING
- VIDEO AND IMAGE ANALYTICS
- TEXT AND DATA EXTRACTION
- TEXT TO SPEECH
- PERSONALIZATION & RECOMMENDATION
- FORECASTING
- HARDWARE ACCELERATION
- PRE-BUILT ALGORITHMS
- AUTOMATIC MODEL TUNING
- MODEL HOSTING
- FACE ANALYTICS
- ENTITY EXTRACTION
- SPEECH TRANSCRIPTION
- TRANSLATION
- CHATBOTS
- ML MARKETPLACE
- MODEL OPTIMIZATION
- ML AT THE EDGE
- FACE RECOGNITION
- IMAGE LABELING
- SENTIMENT ANALYSIS
- NATURAL LANGUAGE PROCESSING
- DATA LABELING

## BLOCKCHAIN

- BLOCKCHAIN TEMPLATES
- MANAGED BLOCKCHAIN
- LEDGER DATABASE

## ENTERPRISE APPS

- VIRTUAL DESKTOPS
- CONTACT CENTER
- APP STREAMING
- SHARING & COLLABORATION
- ONLINE MEETINGS
- COMMUNICATIONS
- CORPORATE EMAIL
- VOICE ENABLED WORKPLACE
- MOBILE ACCESS

## MANAGEMENT TOOLS

- COST MANAGEMENT
- RESOURCE TEMPLATES
- GOVERNANCE
- MANAGE RESOURCES
- MONITORING
- SERVICE CATALOGUE
- PROVISIONING
- SERVER MANAGEMENT
- CONFIGURATION TRACKING

## SECURITY & COMPLIANCE

- IDENTITY MANAGEMENT
- MONITORING & LOGS
- KEY MANAGEMENT & STORAGE
- WEB APPLICATION FIREWALL
- CONFIGURATION COMPLIANCE
- ACCOUNT GROUPING
- RESOURCE & USAGE AUDITING
- ACCESS CONTROL
- ASSESSMENT & REPORTING
- DDOS PROTECTION

## MIGRATION

- SCHEMA CONVERSION
- EXABYTE-SCALE DATA MIGRATION
- DATABASE MIGRATION
- APPLICATION MIGRATION
- SERVER MIGRATION

## CORE SERVICES

- COMPUTE
- DATABASES
- CDN
- STORAGE
- NETWORKING

## INFRASTRUCTURE

- REGIONS
- GLOBAL NETWORK BACKBONE
- CUSTOM HARDWARE
- AVAILABILITY ZONES
- POWER INFRASTRUCTURE
- DATA CENTER INFRASTRUCTURE
- POINTS OF PRESENCE

( THOUSANDS  
OF TEAMS )

X

( MICROSERVICE  
ARCHITECTURE )

X

( CONTINUOUS  
DELIVERY )

X

( MULTIPLE  
ENVIRONMENTS )

=

194  
MILLION  
DEPLOYMENTS  
A  
YEAR

# How do we organize for innovation?

## **Culture**

Customer obsession, hire builders, let them build, support them with a belief system

## **Mechanisms**

Encoded behaviors that facilitate innovative thinking

## **Architecture**

Structure that supports rapid growth and change

## **Organization**

Small, empowered teams that own what they create



**Amazon hires  
builders and  
lets them build**

# Two-pizza teams are fast and agile, fostering ownership and autonomy



Small, decentralized  
teams are nimble



Own and run  
what you build





**Experiment early  
and frequently**



To our shareowners (2015)

This year, Amazon became the fastest company ever to reach \$100 billion annual sales. Also this year, Amazon Web Services is reaching \$10 billion in annual sales.

One area where I think we are especially distinctive is failure. I believe we are the best place in the world to fail (we have plenty of practice!), and **failure and invention are inseparable twins. To invent you have to experiment, and if you know in advance that it's going to work, it's not an experiment.** Most large organizations embrace the idea of invention, but are not willing to suffer the string of failed experiments necessary to get there. Outsized returns often come from betting against conventional wisdom, and conventional wisdom is usually right. Given a ten percent chance of a 100 times payoff, you should take that bet every time. But you're still going to be wrong nine times out of ten. We all know that if you swing for the fences, you're going to strike out a lot, but you're also going to hit some home runs. The difference between baseball and business, however, is that baseball has a truncated outcome distribution. When you swing, no matter how well you connect with the ball, the most runs you can get is four. In business, every once in a while, when you step up to the plate, you can score 1,000 runs. This long-tailed distribution of returns is why it's important to be bold. Big winners pay for so many experiments.

# Learn from failures



Fire phone



Auctions,  
zShops,  
Marketplace

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Invention comes in many forms and at many scales. The most radical and transformative of inventions are often those that empower **others** to unleash **their** creativity—**to pursue their dreams.**”

**Jeff Bezos**

Founder and Chief Executive Officer  
Amazon.com, Inc.

# AWS Training and Certification for the enterprise

Resources to help your organization build cloud skills and achieve business objectives



Cost savings  
(TCO)



Staff  
productivity

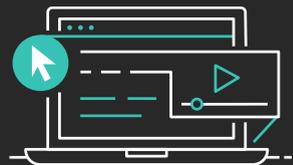


Operational  
resilience



Business  
agility

Comprehensive skill development plan for broad cloud fluency



Digital training



Classroom training



AWS Certification



Enterprise resources

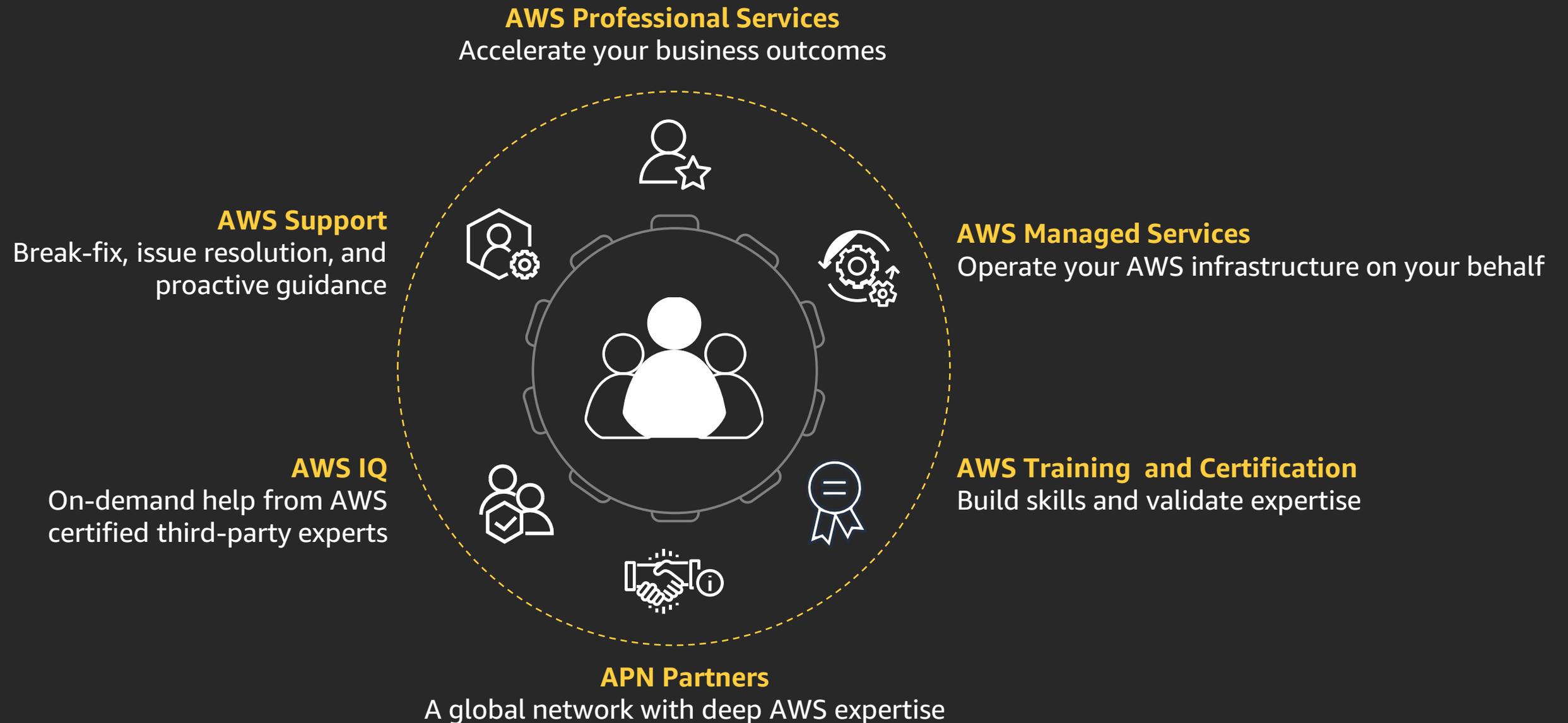


Talent pipeline

Visit [aws.amazon.com/training/enterprise](https://aws.amazon.com/training/enterprise)

# AWS customer enablement

## Migrate and build faster in the cloud



# Thank you!



Please complete the session survey in the mobile app.