

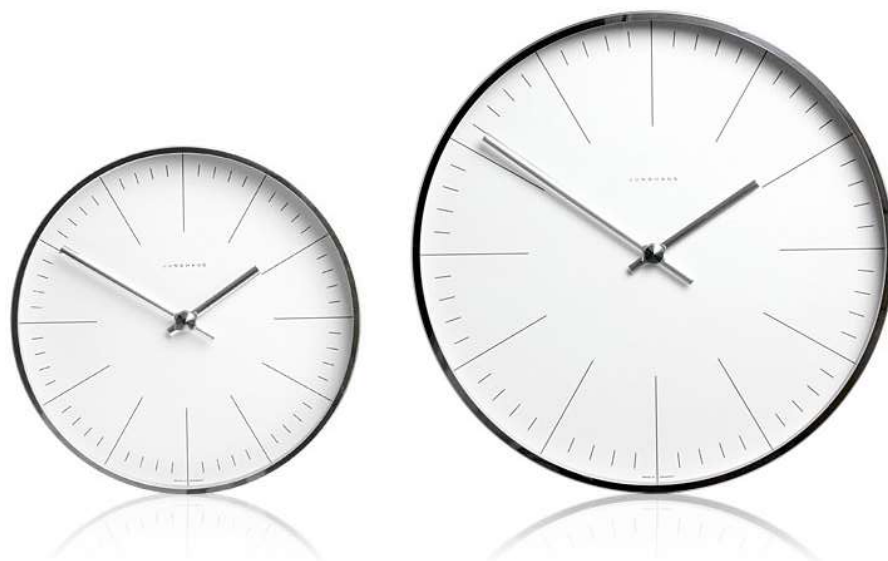
The Art of Possible

Dr.Chawapol Jariyawiroj

Country Manager

Amazon Web Services Thailand and Vietnam





**Real Time
is NOT**

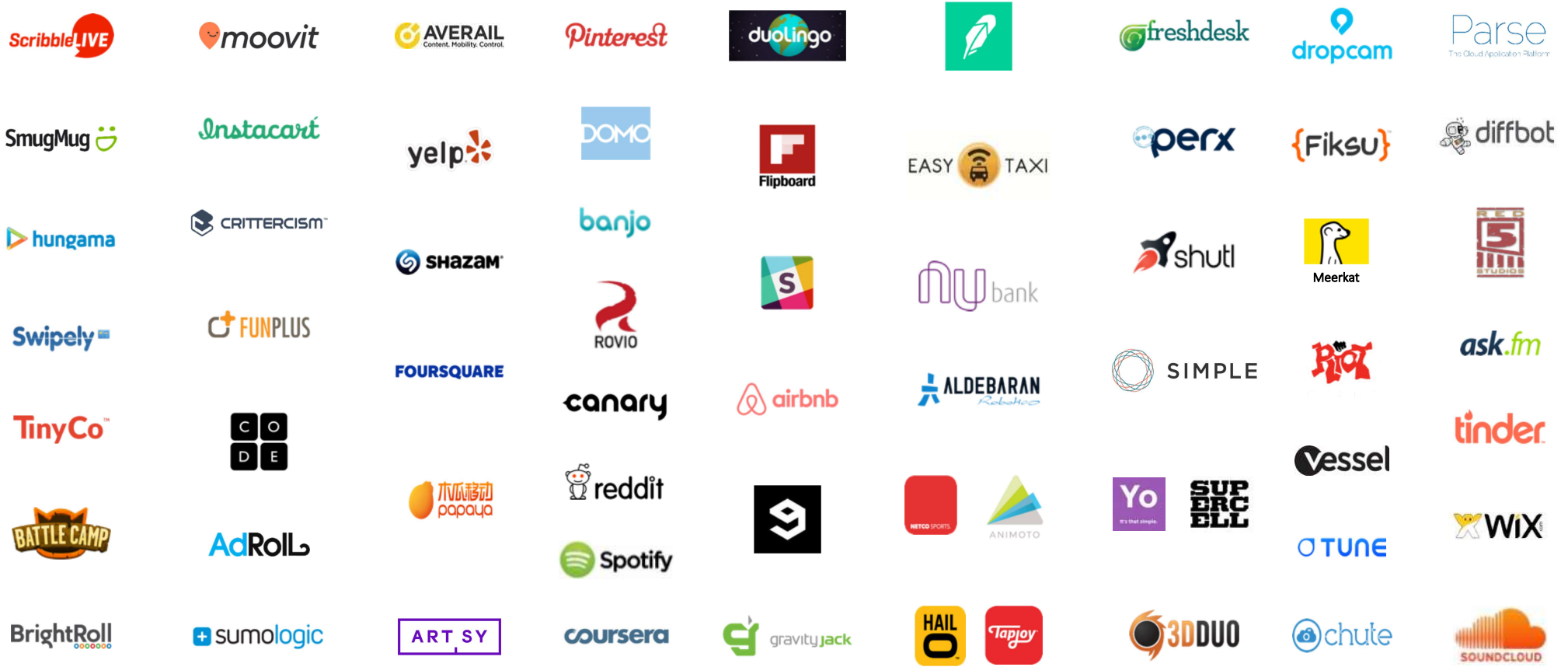


Enough...

A photograph of a winding asphalt road through a dense forest. The road curves through the trees, with yellow and white lane markings. The trees are mostly green, with some showing autumn colors. A semi-transparent white box is overlaid on the center of the image, containing the text "The future is Predictive business".

The future is
Predictive business

What do these companies have in Common??



SPEED AND AGILITY

Infrastructure in minutes
not weeks

ECONOMIES OF SCALE

Lower variable expense
than companies can
achieve themselves

ELASTIC CAPACITY

No need to guess capacity
requirements and over-
provision

VARIABLE EXPENSE

Replace capital
expenditure with variable
expense

FOCUS ON BUSINESS not IT

Not undifferentiated heavy
IT lifting

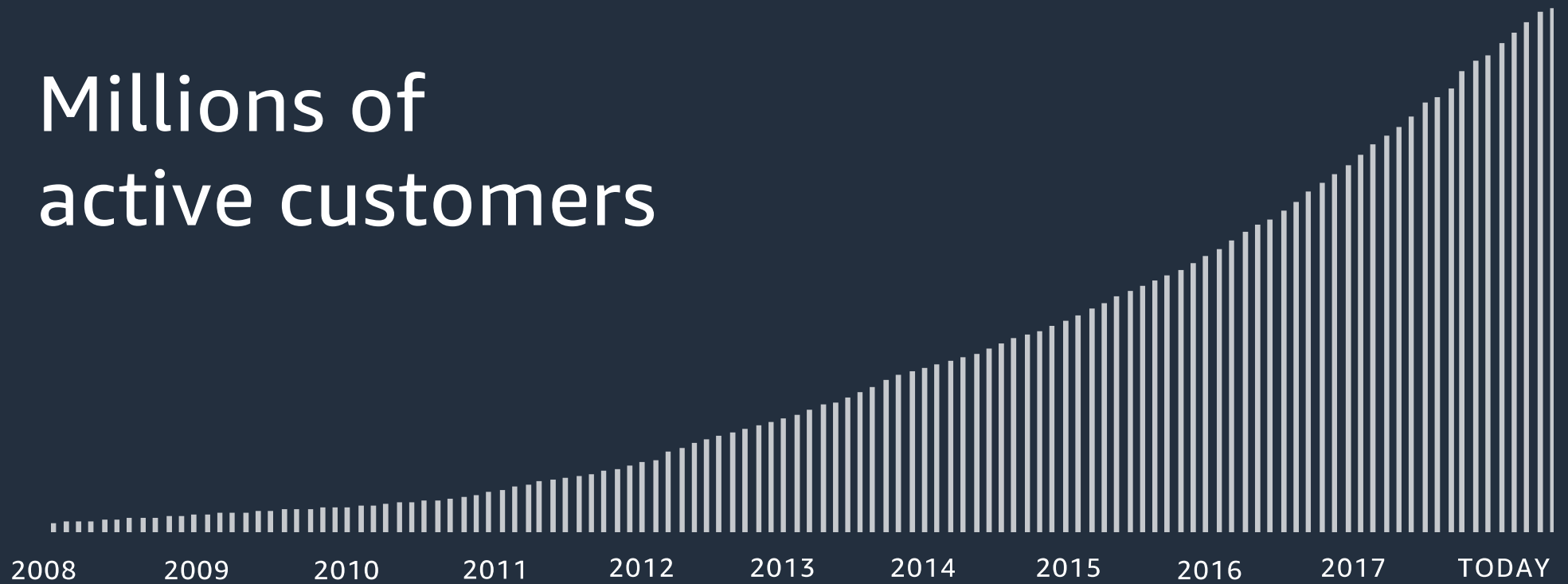
INCREASE INNOVATION

Lower the cost of
experimentation

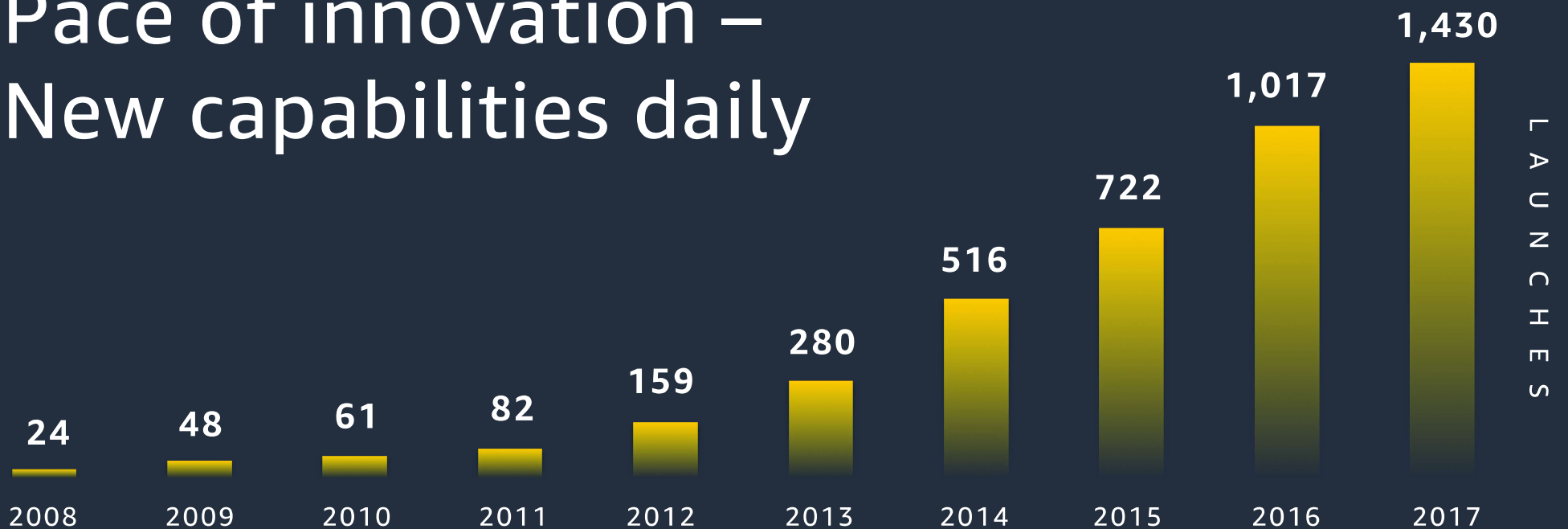
Now the “Traditional” Enterprises are following suit



Millions of active customers



Pace of innovation – New capabilities daily



Most Robust, Fully-Featured Technology Infrastructure Platform

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






TECHNICAL & BUSINESS SUPPORT

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








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
-  Single Integrated Console
-  Identity
-  Sync
-  Mobile Analytics
-  Mobile App Testing
-  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


GAMING

-  3D Game Engine
-  Character Designer
-  Multiplayer Service
-  Cloud Integration
-  Twitch Integration

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, Containers, Cloud functions
-  Storage
Object, Blocks, File, Archivals, Import/Export
-  CDN
-  Databases
Relational, NoSQL, Caching, Migration
-  Networking
VPC, DX, DNS

INFRASTRUCTURE

-  Regions
-  Availability Zones
-  Points of Presence

Industry Use Case Examples

Retail

- Next Best Product
- Dynamic Pricing
- Location Selection

Life Sciences

- Imaging Analytics & Pathology
- Clinical Decision Support
- Outbreak Prediction

Supply Chain & Manufacturing

- Predictive Maintenance
- Pricing Optimization
- Demand / Production Planning

Financial Services

- Anti-money Laundering
- Personalized Banking
- Robo Advisory

Insurance

- Underwriting & Risk Optimization
- Pricing Optimization
- Claim Payment Automation

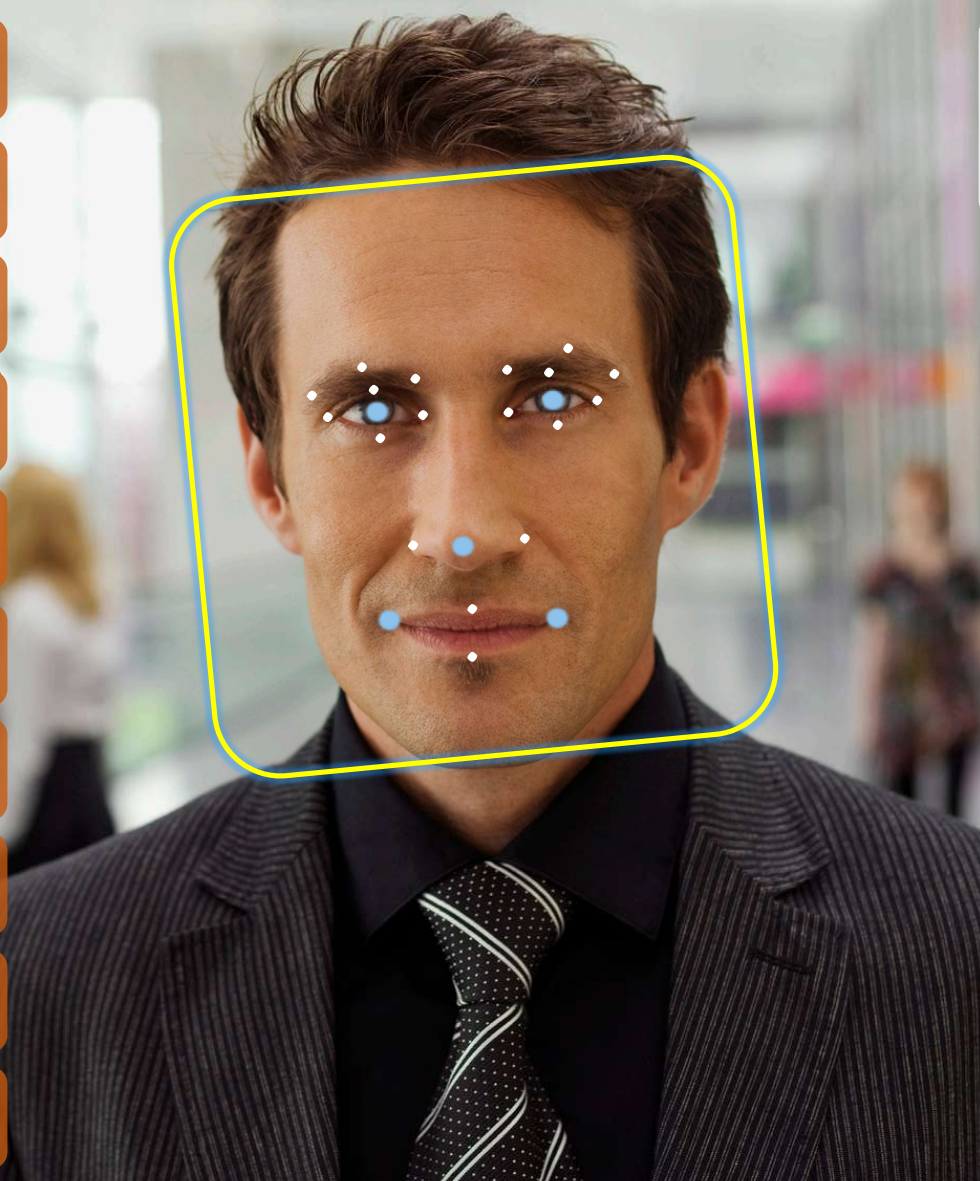
Public Sector

- Public Safety & Citizen Services
- Fraud Prevention
- Disaster Preparation & Recovery



Innovations

Age Range	38-59
Beard: False	84.3%
Emotion: Happy	86.5%
Eyeglasses: False	99.6%
Eyes Open: True	99.9%
Gender: Male	99.9%
Mouth Open: False	86.2%
Mustache: False	98.4%
Smile: True	95.9%
Sunglasses: False	99.8%

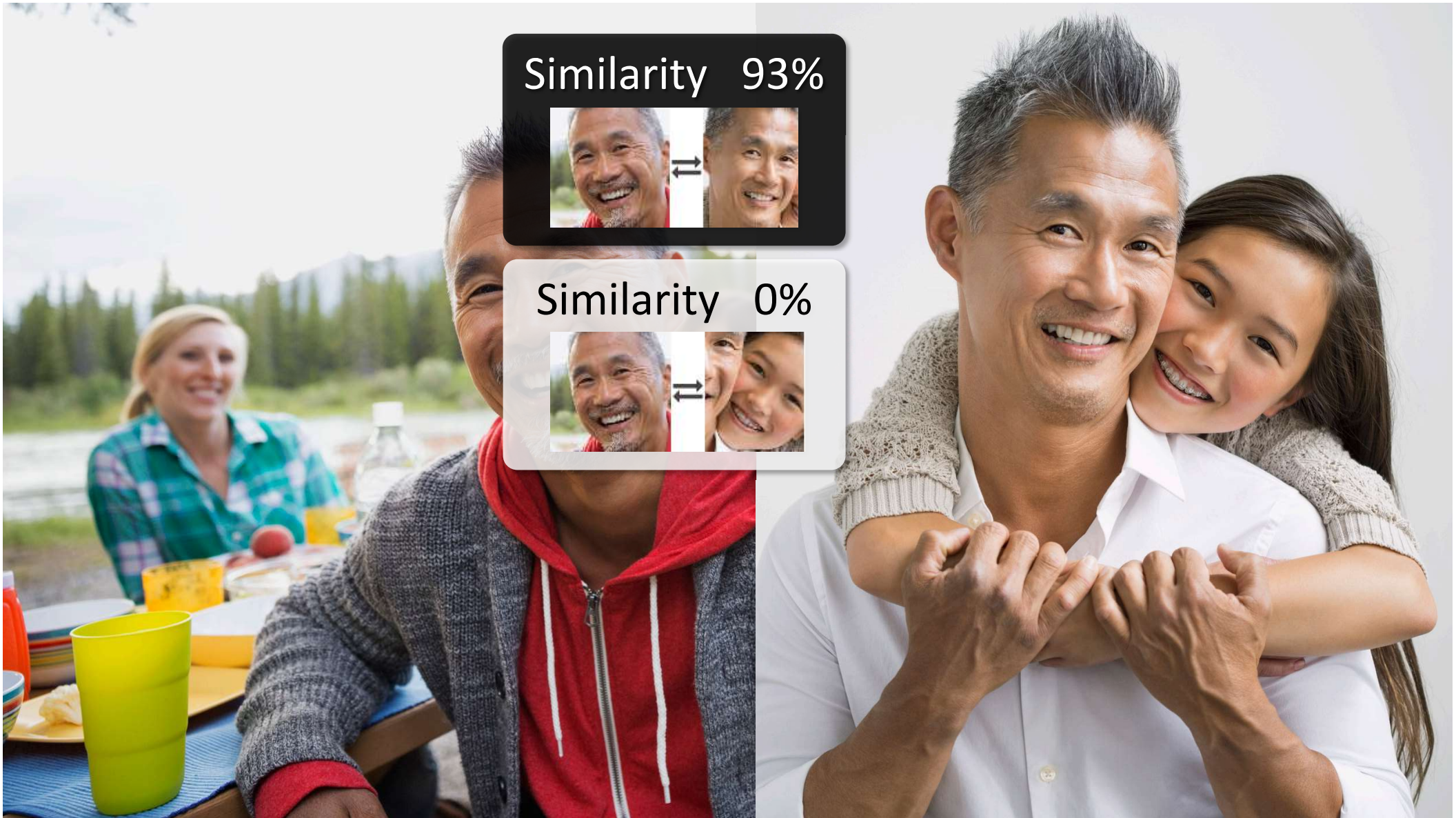


Quality	
Brightness	52.5%
Sharpness	99.9%
Bounding box	
Height: 0.36716..	
Left:	0.40222..
Top:	0.23582..
Width: 0.27222..	
Landmarks	
EyeLeft	
EyeRight	
Nose	
MouthLeft	
MouthRight	
LeftPupil	
RightPupil	
LeftEyeBrowLeft	
LeftEyeBrowRight	
LeftEyeBrowUp	
:	

Similarity 93%



Similarity 0%



Pinterest Lens



Image recognition finds items and describes them



Grow your own Strawberries
Gardener
Christina Lin



Chocolate Strawberry Waffle Ball
Adam Barton Delights

Pinterest Visual Search

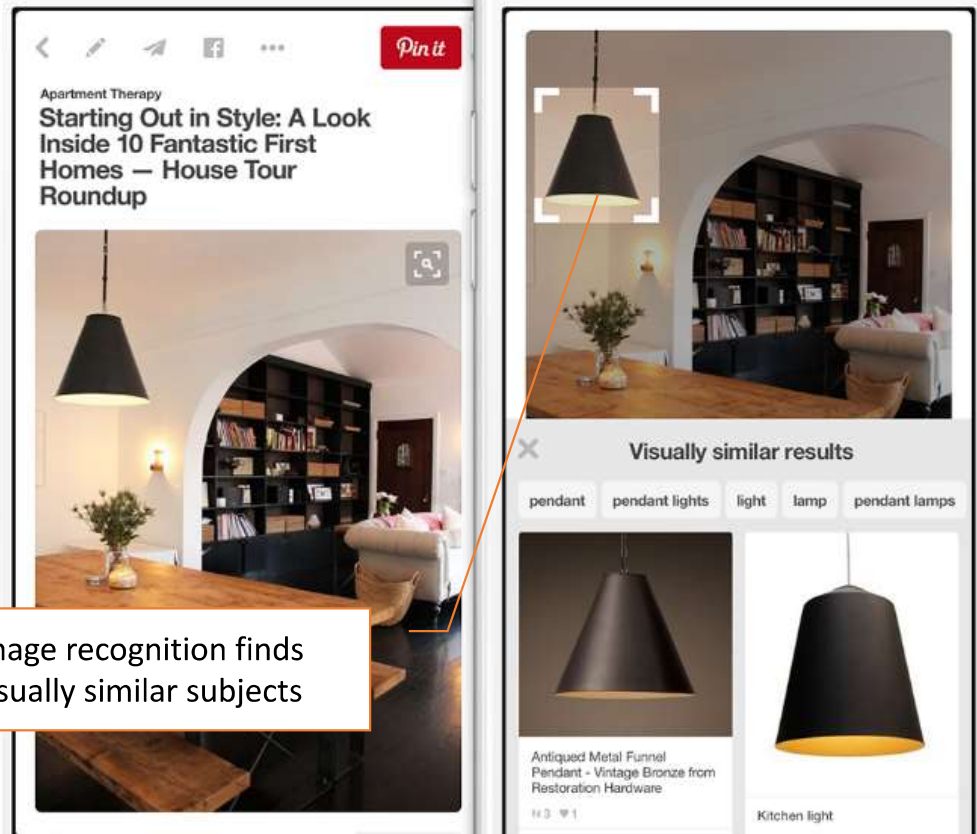


Image recognition finds visually similar subjects

Breakthrough fine grained image recognition algorithms are designed for retail.



IR algorithms are constantly learning as more and more images are recognized, exponentially increasing the granularity of their capabilities

Our algorithms overcome:

- Near identical products
- Reflective packaging
- Partially obstructed SKUs
- Poor photo angles

Image Recognition provides a more **accurate, consistent and reliable** way to understand how consumer goods are performing in the marketplace, in **real time**.

With state-of-the-art Image Recognition, we turn shelf images into real-time analytics

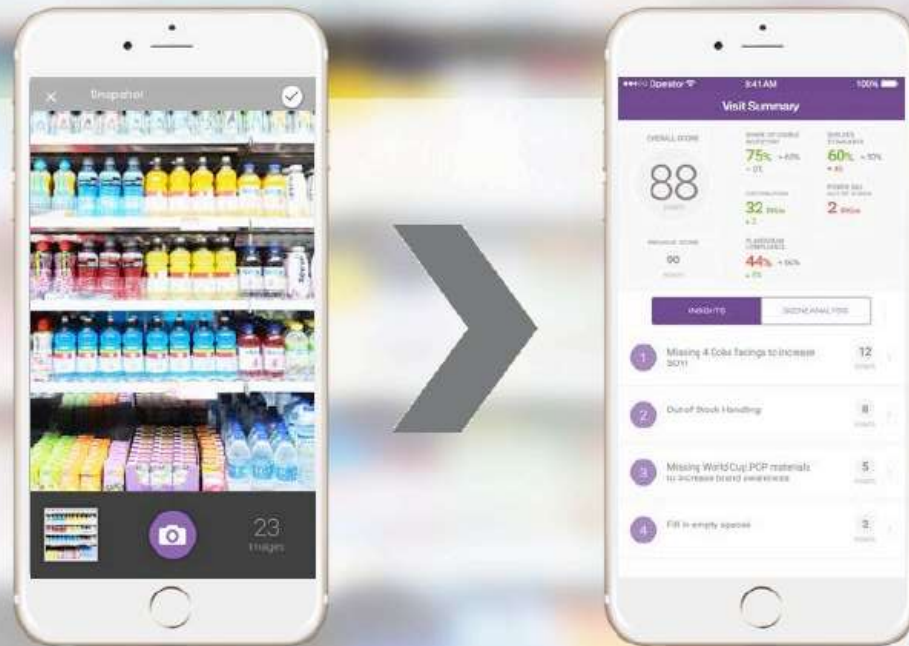


Image Recognition provides Actionable Real-Time Mobile Reports In-Store.


- › Distribution
- › Out-of-stock
- › Share of shelf
- › Shelf standards
- › POS material presence
- › Planogram compliance
- › Pricing
- › Promotions
- › and more...




Star Wars: Episode V - The Empire Strikes Back



2:01:29/2:04:19 **HD**

View All X-Ray 

Options 



grammarly

duolingo

Site language: English Login

Learn a language for free. Forever.

Get started

Portuguese Dutch Czech Welsh Danish Greek Esperanto

The best new way to learn a language.

Learning with Duolingo is fun and addictive. Earn points for correct answers, race against the clock, and level up. Our bite-sized lessons are effective, and we have [proof that it works](#).

[See how we do it](#)

Gamification poured into every lesson.

- Read, Listen, Speak**
Each lesson includes a variety of speaking, listening, translation, and multiple choice challenges.
- In-Lesson Grading**
Instantly see which answers you get correct. When you miss a challenge, we'll quickly show you how to improve.
- Streak Count**
Duolingo motivates you to stay on track by recording how many days in a row you spend learning a language.
- Hearts**
Hearts keep your lessons alive! You lose them when you answer incorrectly. When you're out of hearts, start over and try again.

Learn anytime, anywhere.

Make your breaks and commutes more productive with our iPhone and Android apps. Download them and see why Apple and Google gave us their highest accolades.

IOS
Android
Windows Phone

duolingo

Site language: English Login

I want to learn...

Spanish 20.6M active learners	French 12.0M active learners	German 6.91M active learners	Italian 4.89M active learners
Japanese 8.9M active learners	English 4.79M active learners	Korean 2.88M active learners	Russian 2.67M active learners
Chinese 2.39M active learners	Portuguese 2.23M active learners	Turkish 1.32M active learners	Dutch 1.31M active learners
Hebrew active learners	Danish active learners	Esperanto active learners	Klingon active learners
Czech 227K active learners	Hindi 63.3K active learners	Indonesian 15.4K active learners	

What sound does this make?

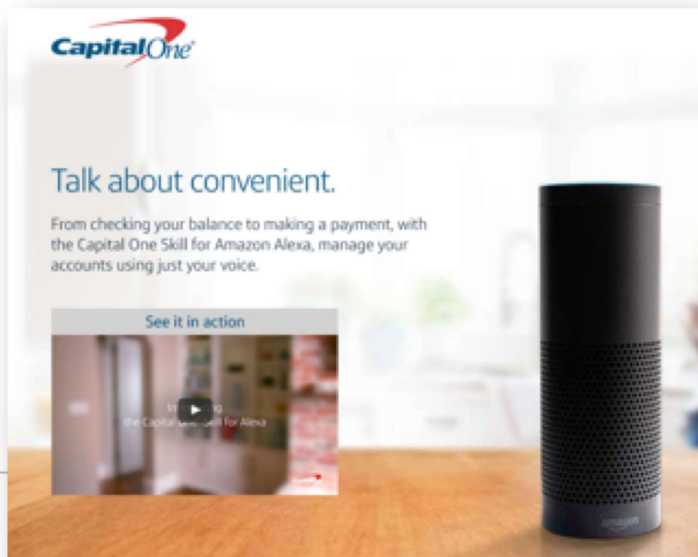
ni
 ki
 chi

You are correct

[REPORT](#) [Continue](#)

Voice services are personalizing financial services

“Alexa, ask Capital One when my auto loan is due.”



“Alexa, ask Fidelity to get me a market update.”






Natural language interfaces for
automated customer service

Your very own support helpdesk on the cloud

Intuitive UI, robust ticketing, advanced gamification and much more

LET'S GET STARTED

A decorative horizontal line with a dashed pattern, featuring several icons: a telephone handset with a speech bubble containing "!?#", a person's head, a document with a checkmark, a smiley face with a heart, and another telephone handset with a speech bubble containing "!?#".

Freshbots combine Automatic Speech Recognition (ASR) and Natural Language Understanding (NLU) capabilities

Freshbots manage workflows via voice. Customer support agents can use the voice interface to change the status on a ticket, update a case etc.

Use-Case: C-SPAN



Background

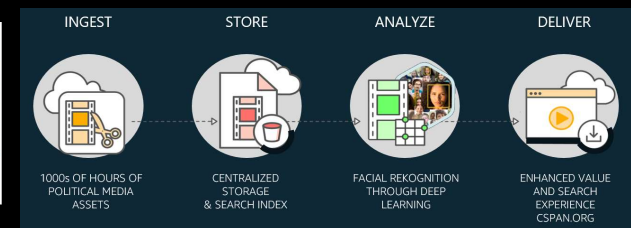
- Over 200,000 hours of content
- Only half of content is manually tagged
- How can we enrich our metadata in AWS?
- How can we unleash the value of content we already own once in AWS?

Challenge

- Large scale video library
- High accuracy required
- Limited budget
- Ability to extract from video
- Keep up with daily increase in content

Results

- Solution developed within three weeks
- Live video frame based analysis
- Established, searchable baseline archive
- All content is now tagged and indexed
- Over 99,000 faces indexed and searchable
- Saved ~9,000 hours a year in manual curation costs



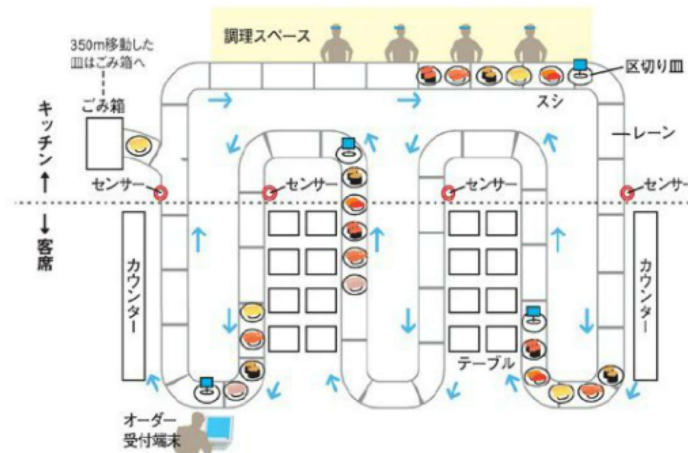
Shot score: 0.7252568 Face Match: [Chuck Schumer](#) 96.08%

Net Year Month Day Hour Min Sec



Shot score: 0.7252568 Face Match: [Chuck Schumer](#) 96.08%

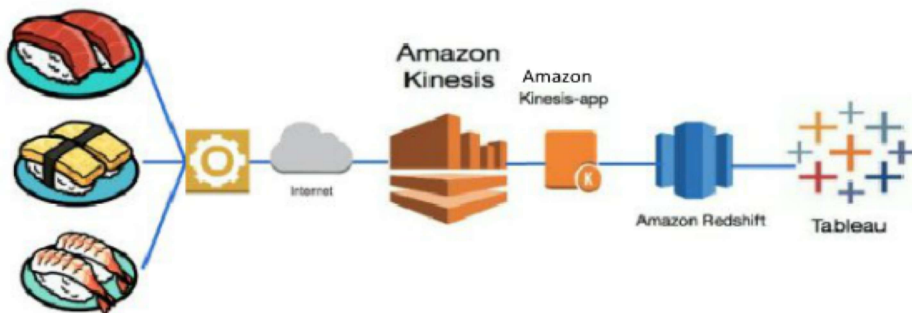
Sushiro – Real-time streaming from IoT & analysis



380 stores stream live data from Sushi plates

Inventory information combined with consumption information near real-time

Forecast demand by store, minimize food waste, and improve efficiencies





Uncovering images that resonate with customers

Managing over 18 million images from nearly 300,000 hotels to find photos that resonate with customers

Reduced ranking time from one week to one day



Crowd-sourced ratings from over 100,000 hotel training images, fine-tuned ratings using TensorFlow on AWS

The screenshot shows the Expedia website interface. At the top, there's a navigation bar with 'Home', 'Bundle Deals', 'Hotels' (highlighted), 'Cars', 'Flights', 'Cruises', 'Things to Do', 'Discover', and 'Vacations'. Below this is a 'Sort By' dropdown menu with options: 'Distance from CBD', 'Price', 'Guest Rating', 'Holiday Rentals', and 'Recommendations'. The main content area displays two hotel listings:

- Radisson Hotel & Suites Sydney**: 4.5 stars, +VIP. Location: Sydney Central Business District. Phone: 1800 728 619. Expedia Rate. 26 people booked this property in the last 48 hours. Booked in the last 10 hours.
- QT Sydney**: 5 stars, +VIP. Location: Sydney Central Business District. Phone: 1800 728 619. Expedia Rate. Free Cancellation. 12 people booked this property in the last 48 hours. Booked in the last 2 hours.

Each listing includes a heart icon for favorites and a grid icon for more photos. An orange line from the text box above points to the 'Distance from CBD' filter option.



[Change Selections](#)

Home / Get Recommendations

Recommendations for You

Need a little shopping inspiration? Take a look at recommendations for favorite brands, bestsellers, new items and more.

Bestsellers



Madewell 'Whisper' Cotton V-Neck Tee

KRW 24,149.58

★★★★☆ (80)



Longchamp 'Large Le Pliage' Tote

KRW 179,573.80

★★★★☆ (883)



Converse Chuck Taylor® 'Shoreline' Sneaker (Women)

KRW 61,860.08

★★★★☆ (376)



Vince Camuto 'Lavette' Perforated Peep Toe Bootie (Women)

KRW 148,550.88

★★★★☆ (13)



Eliza J Embellished Tiered Chiffon Halter Gown

KRW 245,211.12

★★★★☆ (152)

FINRA relies on AWS to monitor markets

*“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

- FINRA needed an infrastructure that could process the regulatory reports submitted by broker-dealers and exchanges across the US equity markets
- It needed a platform that could accommodate analysis and storage of approximately 35 billion market events every day
- FINRA chose AWS to gain the ability to create a flexible platform using dynamic clusters (Hadoop, Hive, and HBase), Amazon EMR, and Amazon S3 while meeting its stringent security requirements
- The solution increased agility, speed, and cost savings and generated an estimated savings of \$20m annually



The Financial Industry Regulatory Authority, (FINRA) is a not-for-profit self-regulatory organization (SRO) authorized by federal law to help protect investors and ensure the fair and honest operation of financial markets. Under the supervision of the Securities and Exchange Commission (SEC), FINRA regulates the activities of U.S. broker-dealers and performs market regulation.



Saves 400+ online merchants
about \$1 million weekly

Machine learning analyzes financial
transactions and predicts fraudulent
activity before it happens

On a given day, 100 fraud schemes appear, with 100
variations each. Machine learning models are built
for these specialized situations

REDFIN Hot Homes

REDFIN Mercer Island Call: 1-877-973-3346 david

Save Search

Mercer Island Real Estate Showing 1 homes, sorting by recommended

HOT HOME

Hot Home: There's an 80% chance this home will sell in the next 11 days – go tour it soon.

HOA	None	Status	Active
\$/Sq. Ft.	\$302	On Redfin	3 days
Year Built	1959		
Lot Size	8,576 Sq. Ft.		

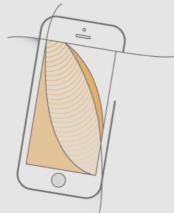
\$900,000 5 Beds 2.5 Baths 2,980 Sq. Ft.

9716 Mercerwood Dr

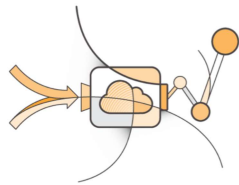
There's an 80% chance this home will sell in the next 11 days – go tour it soon.



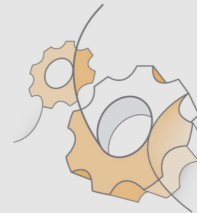
Modernization



Go mobile



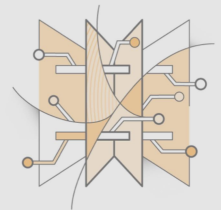
Data platform



Automation

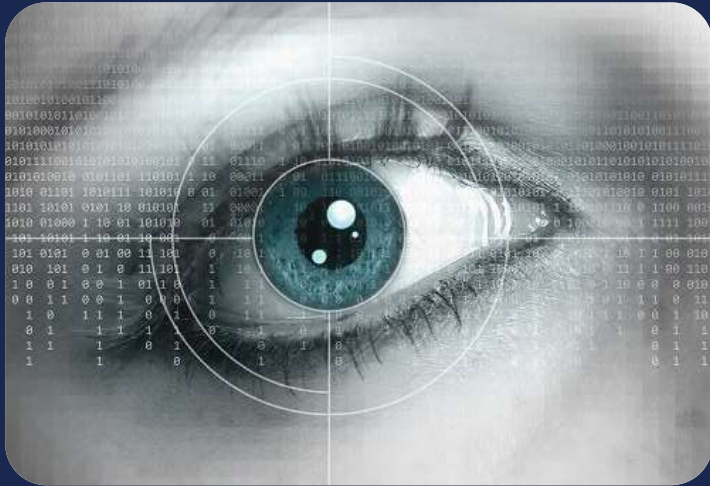


Engagement



IOT

Stanford University- Deep Learning



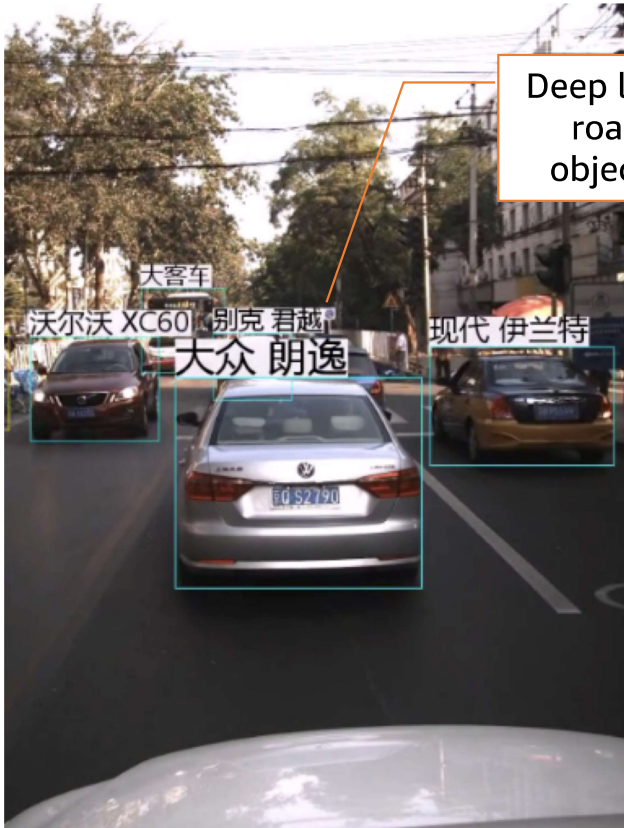
- Early detection of diabetic complications
- Leading cause of blindness in adults
- Catch it early enough; prevented 90% of time

“Before AWS, we couldn’t even attempt these projects....AWS makes research liberating.”

Jason Su
Stanford University Student

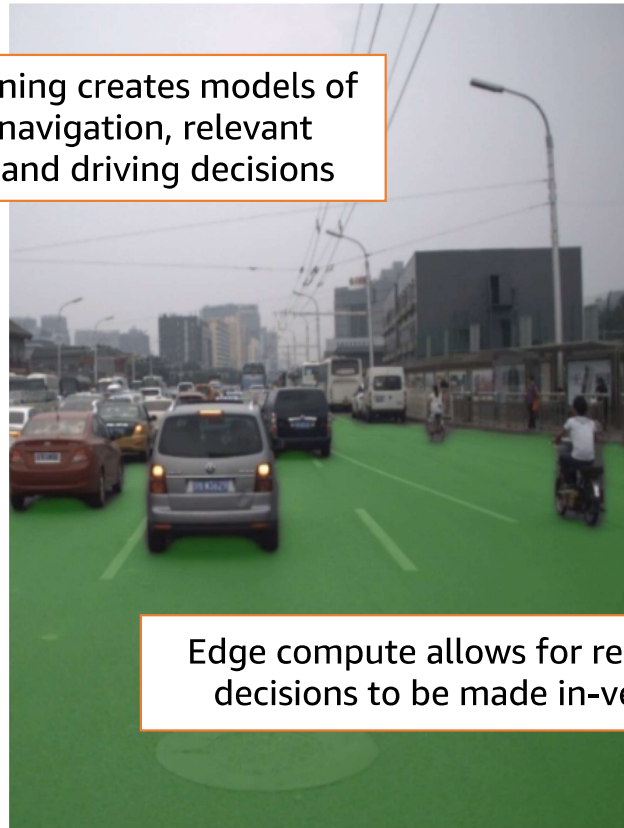


Stanford
University



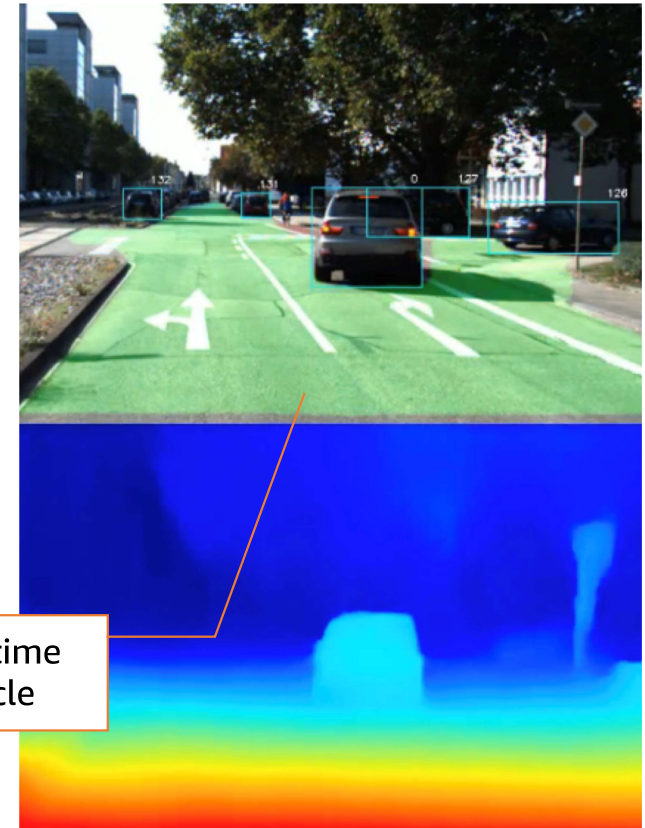
Deep learning creates models of roads, navigation, relevant objects, and driving decisions

Object identification and recognition



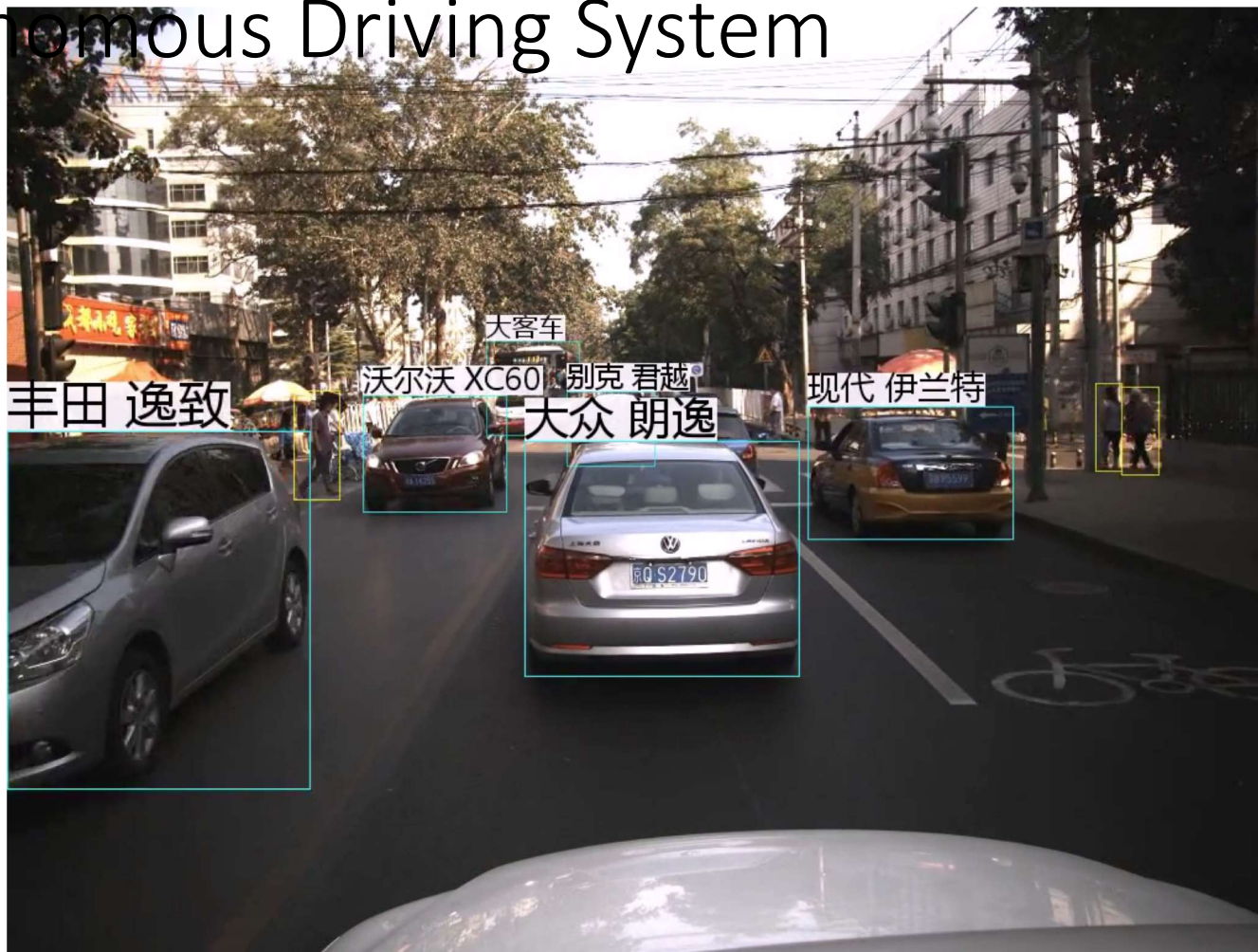
Edge compute allows for real-time decisions to be made in-vehicle

Real Time, Per Pixel Object Segmentation



Centimeter-accurate positioning

Autonomous Driving System





Retiring Technical Debts

“BP on track to cut 45% of hosting spend”

BP to go all-in on public cloud to cut datacentre upkeep costs



Caroline Donnelly
Datacentre Editor
30 Nov 2016 9:15

Oil giant BP uses first day of AWS Re:Invent to outline how it is cushioning itself against falling oil prices by using cloud to cut costs

Innovate
Freely

Machines dictating

BP turns its back on hybrid cloud

By Paris Cowan
Dec 1 2016
6:30AM

Says private cloud looks, smells too much like on-premise.

BP's global IT division has completed a u-turn on its hybrid cloud strategy, deciding to bite the bullet and move all its workloads into the public cloud.

The oil and gas giant started to tinker around the edges of cloud computing back in 2013, when it moved bp.com to public cloud hosting.

At the time, according to BP's director of shared services architecture Paul Schuster, the data centre modernisation strategy at the highly regulated corporation involved the sort of hybrid cloud model popular with risk-sensitive organisations.



THIS ARTICLE COVERS

BP is in the process of moving datacentres and into the public

2 Comments



RELATED ARTICLES

Only room for a few



Realized a 52% Cost Reduction in 18 Months

Business Agility	Operational Resilience	Cost Avoidance	Workforce Productivity	Operational Costs
<ul style="list-style-type: none"> • 77% faster to deliver business applications • Rapid experimentation • Reduced technical debt • Streamlined M&A activity 	<ul style="list-style-type: none"> • 98% reduction in P1/P0's • Improved security posture • 15 cloud services created • Improved performance 	<ul style="list-style-type: none"> • 52% average TCO savings • 80% cloud first adoption 	<ul style="list-style-type: none"> • 15 automated bots developed • 8 cloud migration parties • Shift to self-service culture • DevOps in Practice 	<ul style="list-style-type: none"> • 35% reduction in compute assets (792) • 50 applications decommissioned • \$14M YOY Savings

\$14.2M Investment

+

18 Months

+

Progress Focus

=

311 Apps in Cloud

&

\$14M YOY Savings

SAP on AWS Customers

Business Drivers

Impacts

Technology refresh

Enable agility and scalability, reduce project backlog



Data centre exit

Reduce infrastructure costs, focus on Opex vs Capex



Business continuity

Improve disaster recovery and fail over procedures



Change in business model

Implement new SAP solutions, Analytics side-car



Enable business growth strategy

Geo expansion, organisational change



Change in business direction

Enable restructure, M&A, divestiture



Innovation

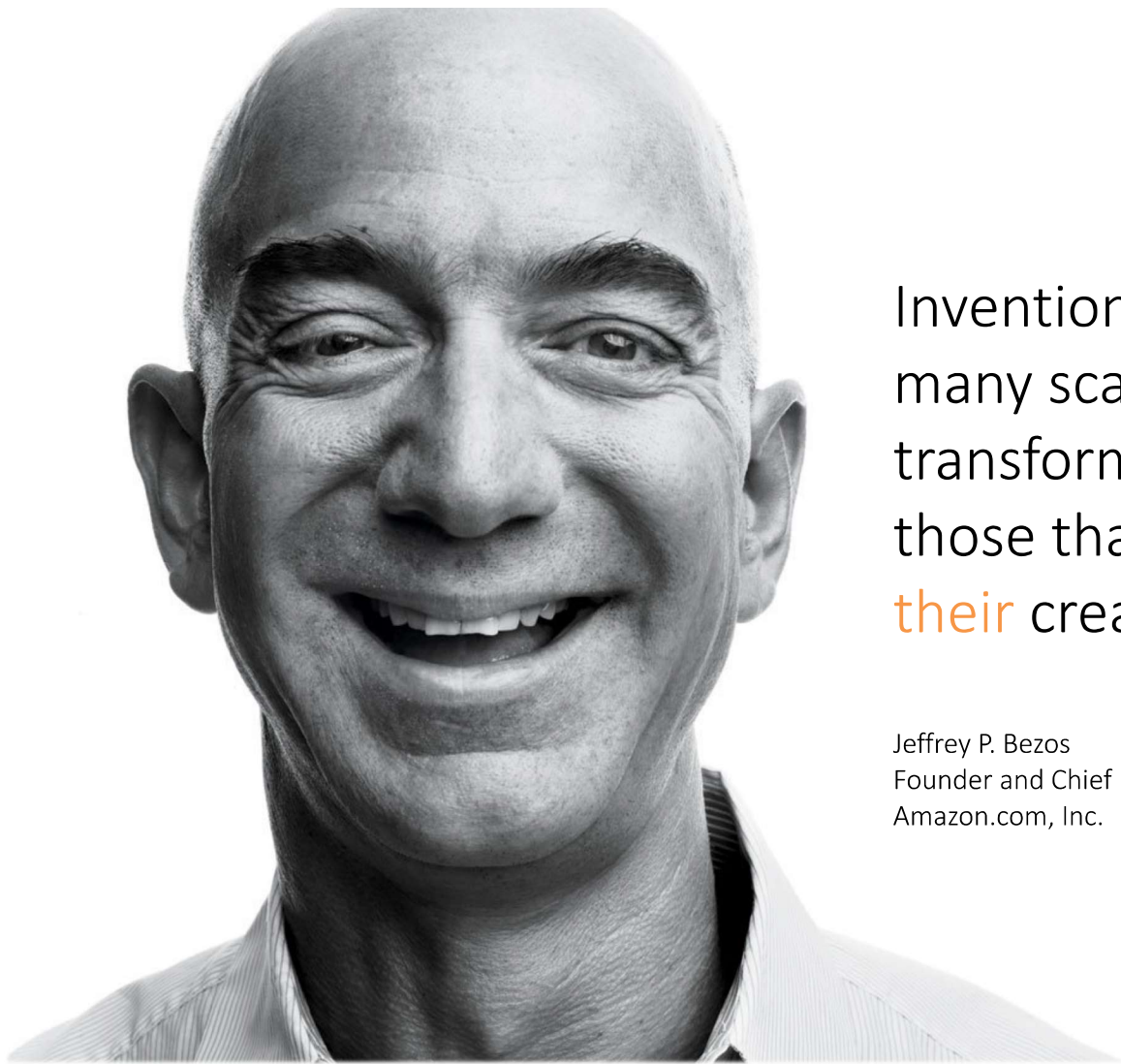
Fast track innovation, digital transformation, IoT, AI, ML



SAP S/4 HANA

Enable digital transformation and innovation





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.**

Jeffrey P. Bezos
Founder and Chief Executive Officer
Amazon.com, Inc.

amazon

THANK YOU

amazon