



Amazon Connect



How AI enables the contact center to improve customer experience and drive operational efficiencies

Chris Bergin

Principal BDM

Amazon Connect

**...to be earth's most
customer centric company**

Over 70,000 Customer Service Associates In Amazon Customer Service



Millions
of customers



Dozens
of languages



32
countries

**We needed the right contact
center technology to deliver on our promise**

So we built it





Amazon Connect

Easy to use, cloud-based contact center solution that scales to support businesses of any size

With tools that grow with your needs!



Skills-based routing
[Automatic Call
Distribution (ACD)]



Call
recording

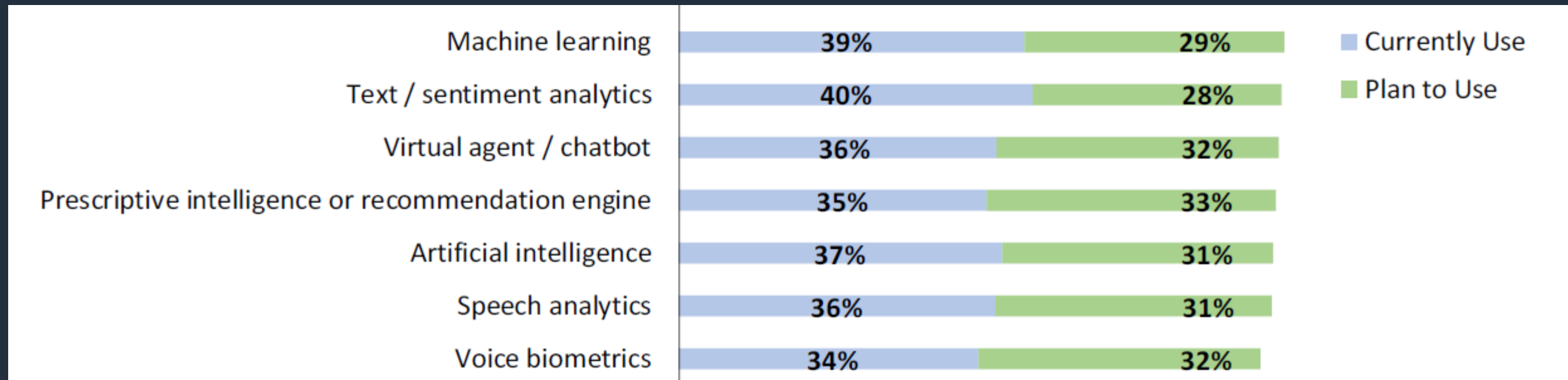


Real time and
historical-analytics



High-quality
voice capability

Few Contact Centers Are Using AI / ML Technologies



Source: Aberdeen, Contact Center Optimization Survey, May 2019

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Traditional Challenges



Cumbersome
tools



Difficult
integrations



Heavy professional
services



Hardware, telephony
integration, space



Security, scalability,
reliability

41%

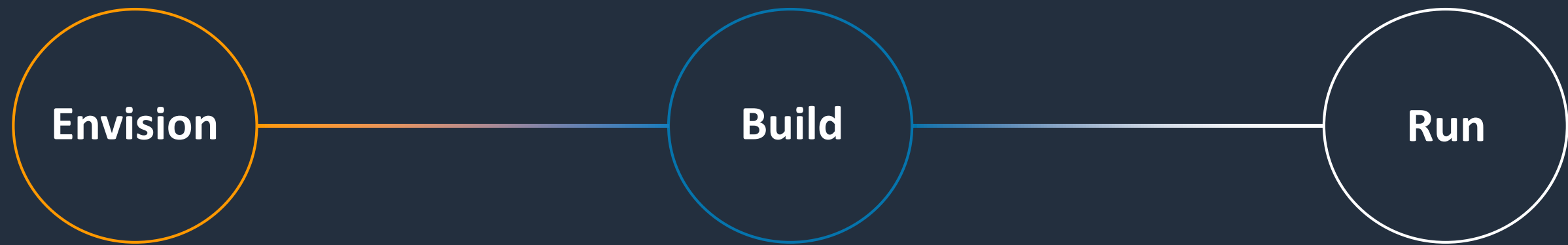
of companies surveyed, using on-premises contact centers, lack the budget needed to deploy new technologies

Source: Aberdeen, Contact Center Optimization Survey, May 2019

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Contact Center Agility



Contact Center Agility



"If our legacy contact center was a railroad, Amazon Connect is a rocket ship. It helps us go further, faster in serving customers and living up to our promises. In a legacy environment, our developers were spending too much time on basic tasks. With Amazon Connect, they spend 90 percent of their time on tasks that improve the experience of end users."

Kerry Bowley, Product Manager - Rackspace

Enablers of Agility

Contact Flows to create customer experiences



Open platform, easy integrations

Self-service configuration



100% cloud-based



AWS services & partners

Pay Only For The Value Delivered To Your Customers



Customer
Connected Minute



Pay as
you go



No hassle
telephony



No required
commitments



Automatic
Scaling



No hardware or
space required

Access to Innovation with AWS services

Development



AWS
Lambda



Amazon
API Gateway



AWS Step
Functions

Storage



Amazon
S3



Amazon
Glacier

Database



Amazon
RDS



Amazon
DynamoDB



Amazon
Redshift

AI



Amazon
Lex



Amazon
Polly



Amazon
Transcribe



Amazon
Comprehend



Analytics



Amazon
Athena



Amazon
Kinesis



Amazon
Glue



Amazon
QuickSight

Messaging



Amazon
Pinpoint



Amazon Simple
Notification Service



Amazon Simple
Email Service

Security



AWS Identity and
Access Management



AWS
Directory Service

Management



Amazon
CloudWatch



AWS
CloudFormation



AWS
CloudTrail

Amazon Polly

- Uses advanced deep learning technologies to synthesize speech that sounds like a human voice
- Provides dozens of languages and a wide selection of natural-sounding male and female voices.
- Supports lexicons and SSML tags which enable you to control aspects of speech, such as pronunciation, volume, pitch, speed rate, etc.

Amazon Lex

- Text and speech language understanding
- Powered by the same NLU technology used by Alexa
- Efficient and intuitive tools to build conversations
- Scales automatically
- Enterprise ready: scalable, versioning, and alias support
- Continuous learning: monitor and improve your bot

Amazon Lex

- Create your chatbot in Amazon Lex
- Create a name and alias for your chatbot
- Test your chatbot behavior in the Lex app
- Invoke your chatbot in Amazon Connect Contact Flow

Amazon Lex

© RideService Latest ▾ Build Publish ?

Editor Settings Channels Monitoring

Intents +

- bookRide
- changeRide
- Done
- getSMS
- rideStatus**
- talkToAgent

Slot types +

No slots created

Error Handling

rideStatus 2 ▾

▼ **Sample utterances** ⓘ

- id like to check my ride status
- confirm a trip
- trip status
- check my ride

▼ **Lambda initialization and validation** ⓘ

Initialization and validation code hook

LexRideServiceValidate ▾

▼ **Slots** ⓘ

1.	▼	<input checked="" type="checkbox"/>	tripID	AMAZON.FOUR_DIGIT_...	Built-in ▾	What is your trip ID?
2.	^	<input type="checkbox"/>	tripDate	AMAZON.DATE	Built-in ▾	What is the trip Date?

▶ **Confirmation prompt** ⓘ

▼ **Fulfillment** ⓘ

AWS Lambda function Return parameters to client

Save Intent [Detach intent](#)

Test Bot ▾



Amazon Lex in Amazon Connect

Create contact flow

My Flow | Very Simple Flow

Interact

- Play prompt: Plays audio.
- Get customer input**: Branches based on customer intent.
- Store customer input: Stores numerical input to contact attribute.
- Hold customer or agent: Places a customer or agent on or off hold.

Set

- Branch
- Integrate
- Terminate / Transfer

Get customer input configuration:

- RideService
- rideStatus
- bookRide
- Default
- Error

Get customer input

Configure the branches that a customer can choose based on their intent.

Plays an interruptible audio prompt and branches based on DTMF or Amazon Lex intents.

- Select from the prompt library
- Text to speech (Ad hoc)**
[Learn more about Amazon Connect's TTS capabilities](#)
- Enter text**
- Enter dynamically

Interpret as: Text

DTMF | **Amazon Lex**

Configure the branches that a customer can choose based on their intent.

Lex bot

Name	Alias
RideService	prod

Session attributes

Cancel Save

Amazon Lex in Amazon Connect

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Interpret as

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DTMF Amazon Lex

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Customer Experience Example



PERSONAL

Contact flows adapt on a per customer basis

DYNAMIC

Answer customer questions before they are even asked

NATURAL

Amazon Lex Chatbots use the same technology that powers Alexa

Amazon Transcribe

Amazon Transcribe is a fully managed and continuously trained automatic speech recognition service powered by deep learning models.



Developers can use Amazon Transcribe to easily add speech-to-text capabilities to their applications.

Amazon Transcribe

Features



Punctuation and
Capitalization



Word-level Time
Stamps



Word-level
Confidence Scores



Custom
Vocabularies



Speaker Identification



Channel Identification



Streaming
Transcription

Language Support

US English

US Spanish

British English

Australian English

Canadian French

Brazilian Portuguese

Italian

Amazon Comprehend

Amazon Comprehend is a natural language processing service that uses machine learning to find insights and relationships in text.



Amazon Comprehend

Natural Language Processing



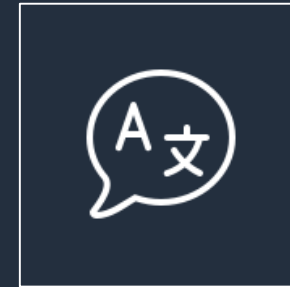
Sentiment



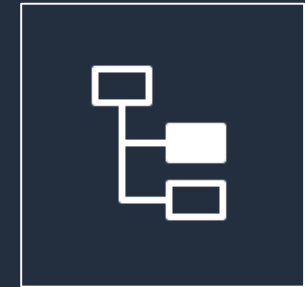
Entities



Key phrases



Languages



Topic modeling

Customer & Agent Experience Example



Can I get a first class upgrade for my inconvenience?

Context

Sentiment = negative
Key words = inconvenience upgrade



Nikki Wolf



Yes, that flight is available departing at 9:00 AM out of San Francisco, arriving in Seattle at 11:45 AM.

I can book you in seat 12C, it's an aisle. Would you like me to do that?

One moment while I connect you with a customer service associate

Hi Nikki, my name is Allen, I'm sorry for your inconvenience. I'm checking to see what we can do to make your flight to Seattle, tomorrow, more comfortable.

Next Steps

Visit us at booth XXX– you'll interact with a live demo

Try a customer experience on your own:

Call # (702) 904–9033, say “check my ride status”, then respond with any four digit number, and respond “yes” to speak with an agent.

Complete the info requested on the link that is txt messaged to you at the end.

Thank you!

