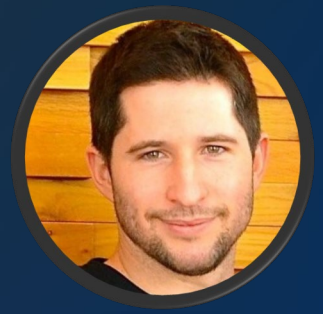
Carbyne delivers cloud native 9-1-1 call management using AWS AI services



Alex Dizengof

Founder & CTO
Carbyne

Aartika Sardana Chandras

Sr. Product Marketing Manager
AWS AI/ML Solutions

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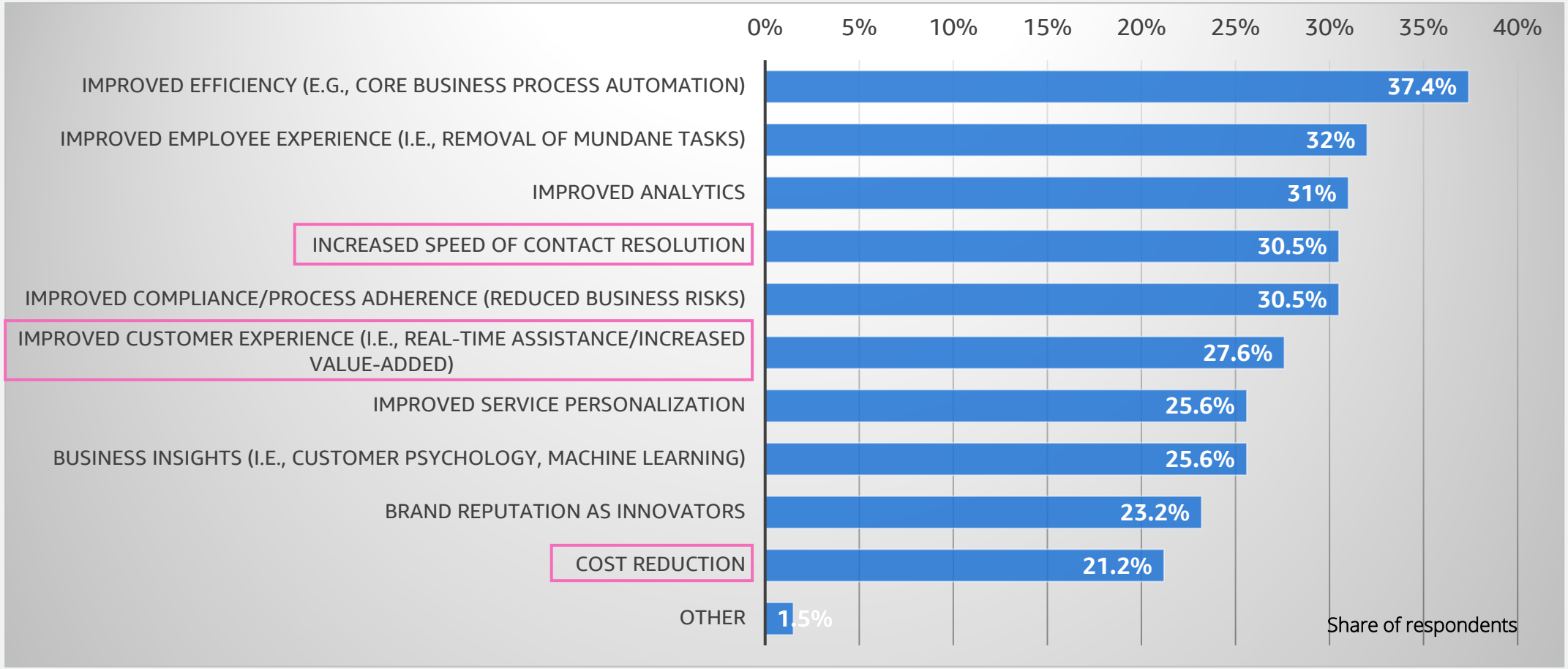
85% companies saw improvement in CX by using AI

AI CAN BE USED TO SOLVE CRITICAL CONTACT CENTER CHALLENGES



Source: Statista, "Main benefits"; ID 1197148, May & June, 2021; 203 professionals: bit.ly/3Cono4a

3 Statista, "Advantages of using," bit.ly/3Rc8PF3

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AWS Contact Center Intelligence (CCI) Solutions

ADD AI/ML TO ANY ON-PREMISES OR CLOUD CONTACT CENTER

CCI solutions use a combination of AWS AI services that address 3 main use cases for any contact center – with no ML expertise required.

Supported Contact Center Platforms

AVAYA

CISCO

GENESYS

talkdesk

8x8

… and many more!

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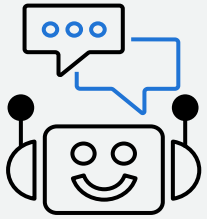
AWS CCI solutions use cases

ADDRESSING 3 PRIMARY JOBS WITH AI AND AUTOMATION



Self-service virtual agents

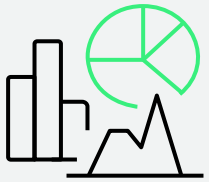
Use of automatic speech recognition and NLU:

- 24/7/365 access to answers
- Offload repetitive queries to virtual agents, reduce employee frustration
- Reduce call transfers with intelligent routing

Real-time call analytics & agent assist

Use real-time transcription, NLP and translation:

- Automate real-time note-taking, audio translation, and summarization tasks.
- Provide turn-by-turn translations, insights and sentiment analysis
- Resolve calls faster with intelligent search and next best answer prompts



Post-call analytics

Use offline audio streaming transcription and NLP:

- Identify actionable business insights to drive revenue
- Analyze 100% conversations to assess agent performance and compliance
- Improve employee retention, reduce operational costs

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Serving contact center customers across industries

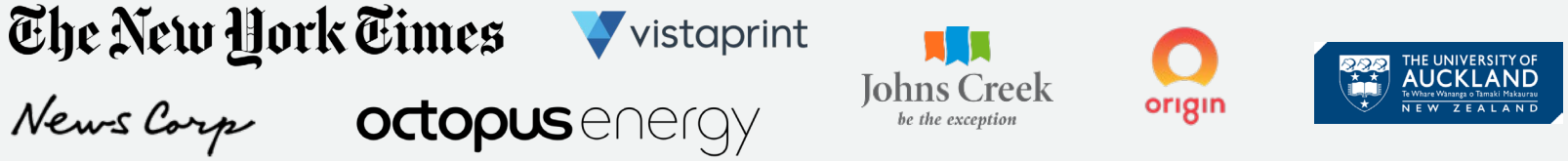
Banking, Finance & Insurance

Healthcare

Retail & Hospitality

Technology & Professional services

And many more industries



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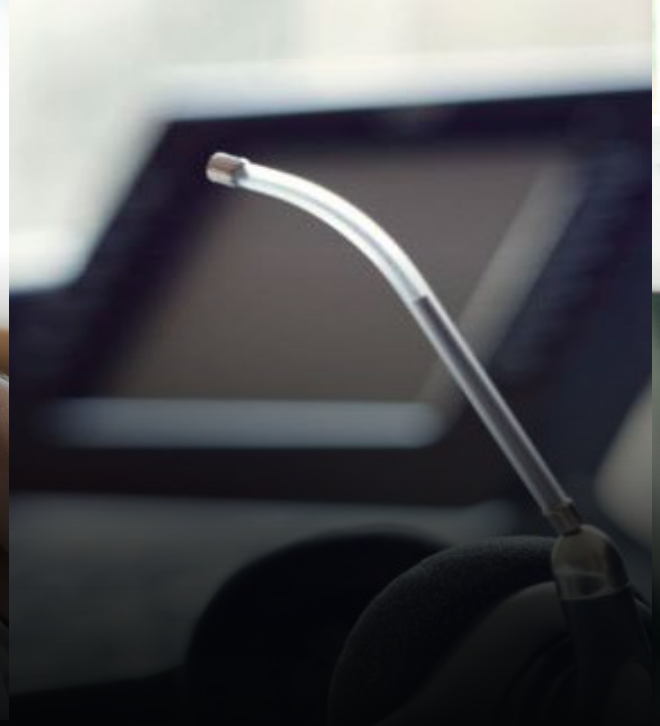
90% reduction in time to check account balances with self-service bots

WaFd Bank



Call reductions and efficiency gains saved ~ $800,000 in operating expenses while improving user experience

STATE AUTO Insurance Companies

Reduced average call times by 9–15 seconds

Magellan HEALTH℠

Expanded customer sentiment visibility from 12% to 100%

WIX

Powering AWS Contact Center Intelligence Solutions

AWS LANGUAGE AI SERVICES

Conversational AI	Text to speech	Speech to text	Natural language processing	Intelligent search	Machine translation
Amazon Lex	**Amazon Polly**	**Amazon Transcribe**	**Amazon Comprehend**	**Amazon Kendra**	**Amazon Translate**

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Amazon Transcribe: Key Features

Punctuation, Capitalization

Speaker labelling/channel identification

Word-level time stamps

Word-level confidence scores

Language ID

Custom vocabulary

Custom Language Models (CLM)

Alternative Transcriptions

Vocabulary Filtering

PCI/PII content redaction

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Amazon Translate: Key features

Broad language coverage

5500 X<>Y translation combinations
Language identification

Low latency

< 150ms/sentence on average
< 80ms/conversational/short form

Data security

Data ownership
Encryption
Access Management

Broad regional coverage

Available in the following 17 AWS regions

Customizable translation

Customize translation output with Custom Terminologies and Active Custom Translation

Document batch translation

Translates large set of docx, pptx, xlsx, XML, HTML, and text documents with one API call

Broad domain coverage

Trained on 11 domains

Pay per use

Simple API calls and you pay for what you use

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Carbyne

Live audio transcription and translation with Amazon Transcribe and Amazon Translate

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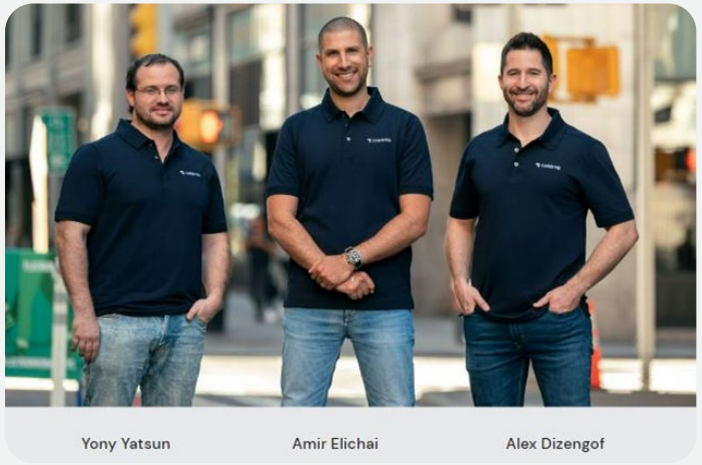
ABOUT US

Founded in 2014 by:

- **Amir Elichai** - CEO and Founder
- **Alex Dizengof** - CTO and co-Founder
- **Yony Yatsun** - R&D Team Leader and co-Founder



Yony Yatsun Amir Elichai Alex Dizengof

Story:
Amir got robbed on a beach in Tel Aviv. Following a frustrating experience, when the police couldn't find his accurate location, Amir thought to himself - "How does Uber know my location but the police don't?" The idea for Carbyne was born.

2014-2018 — **Development** - Building the product market fit

2019 — **Market penetration** - Early adopters and technology leaders embrace Carbyne's technology.

2019 - Present — **Product market fit** - Massive distribution across the Globe including U.S., Israel, Ukraine, Mexico and more.

CARBYNE TODAY:

Raised over **$128M**

Over **180 employees** around the world, supporting customers including U.S., LATAM, Israel, Ukraine and more.

Over **150M** people served

Serving **100+ customers** with over **$250k savings** per average customer.

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Challenges in Emergency Dispatch: Language Barriers

40M
Annual
Language Line Calls

67M
Americans don't speak
English at home

61%
Of non-native English
speakers speak Spanish

60M+
Foreign visitors to the
US annually

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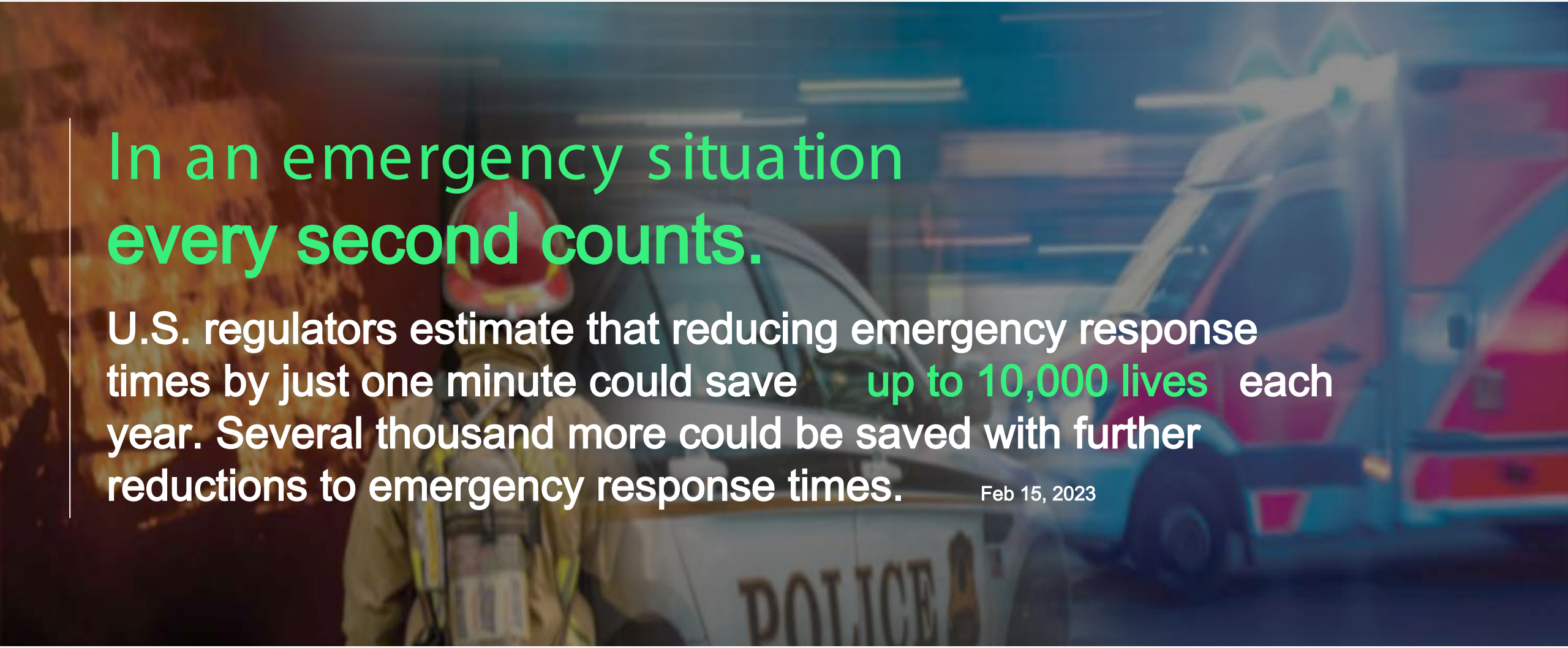
Introducing Carbyne Live Audio Translation



In an emergency situation every second counts.

U.S. regulators estimate that reducing emergency response times by just one minute could save up to 10,000 lives each year. Several thousand more could be saved with further reductions to emergency response times. Feb 15, 2023

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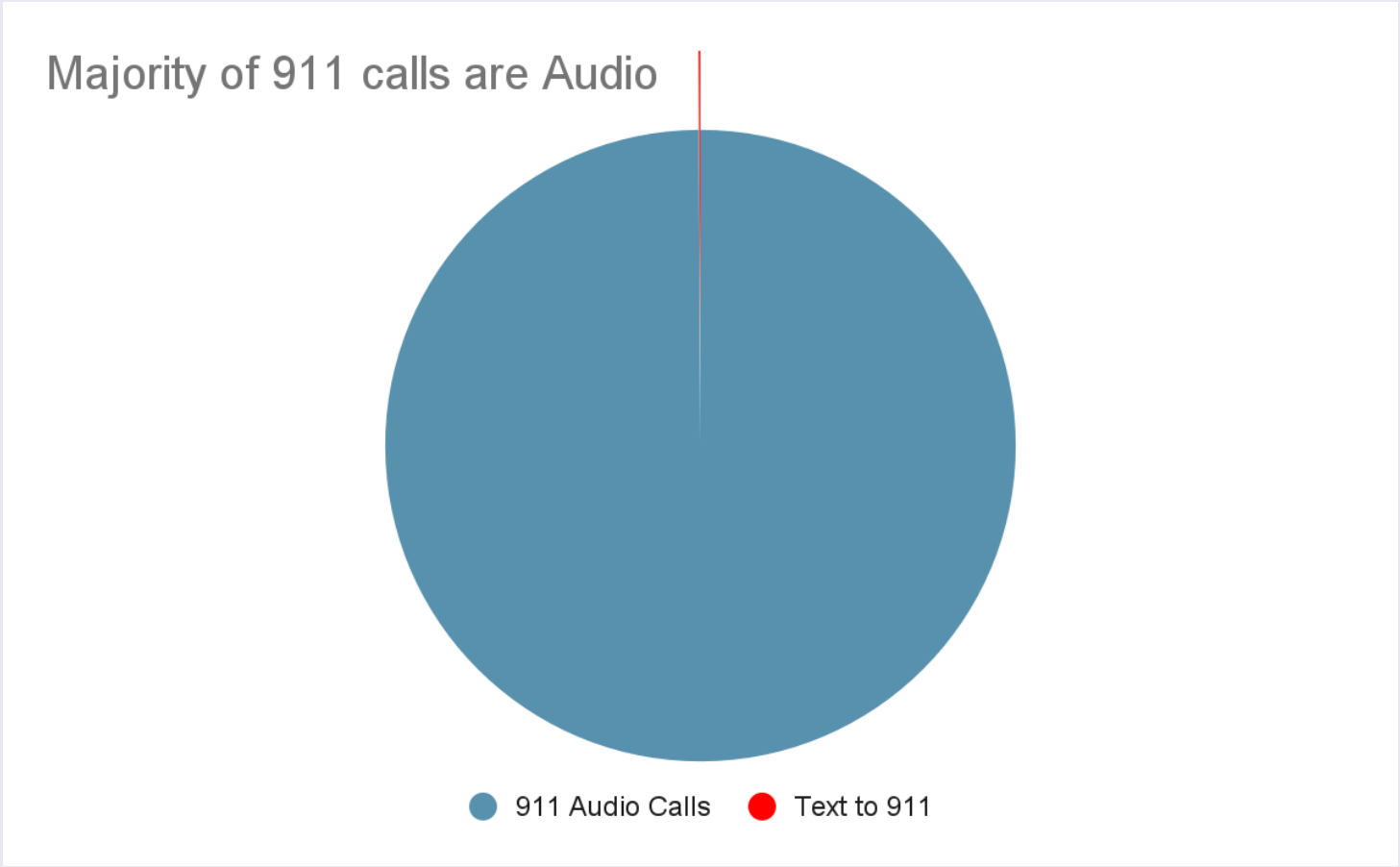
Alternatives Mainly Focus on Text Translation (0.1% Volume)



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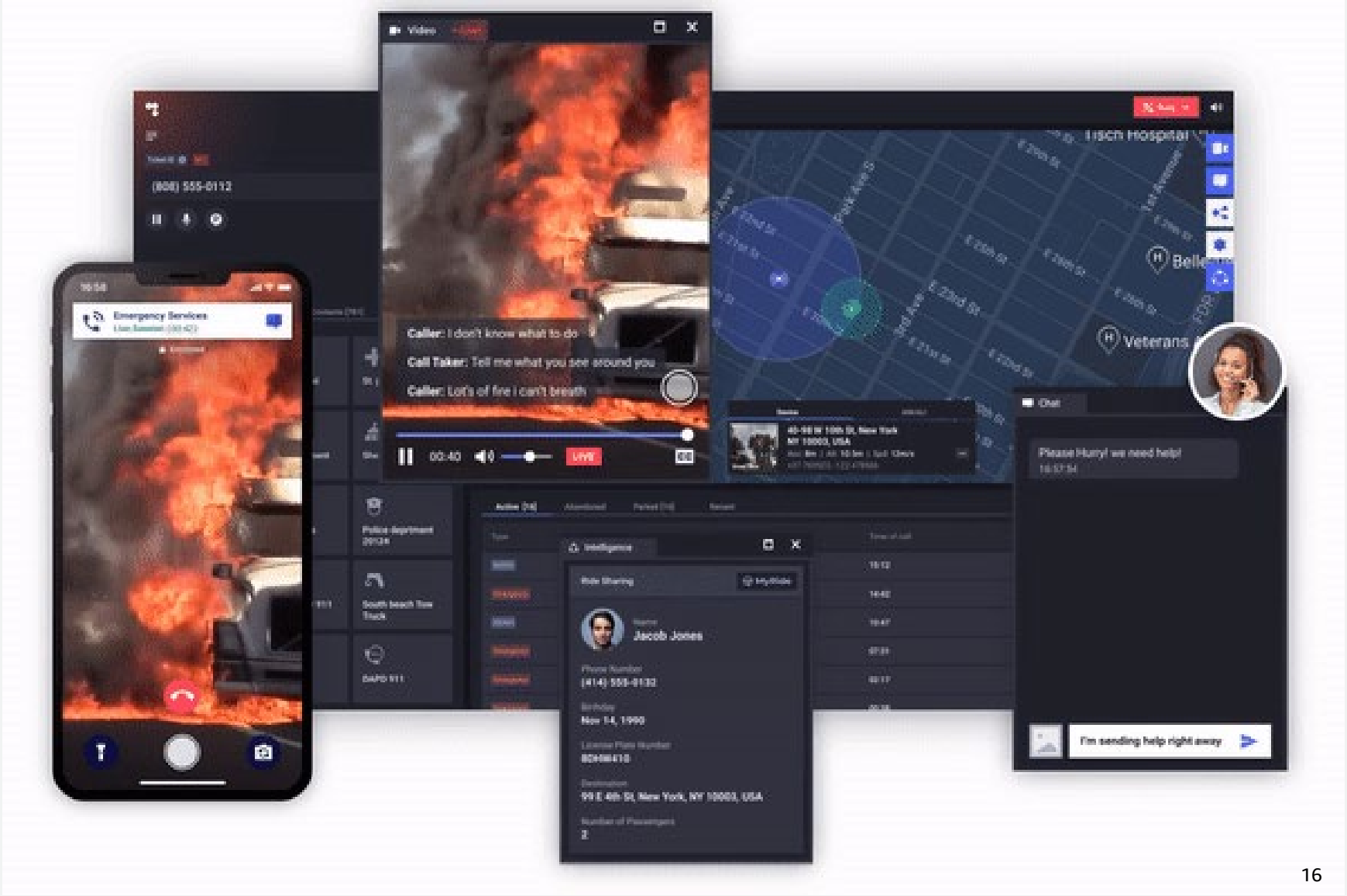
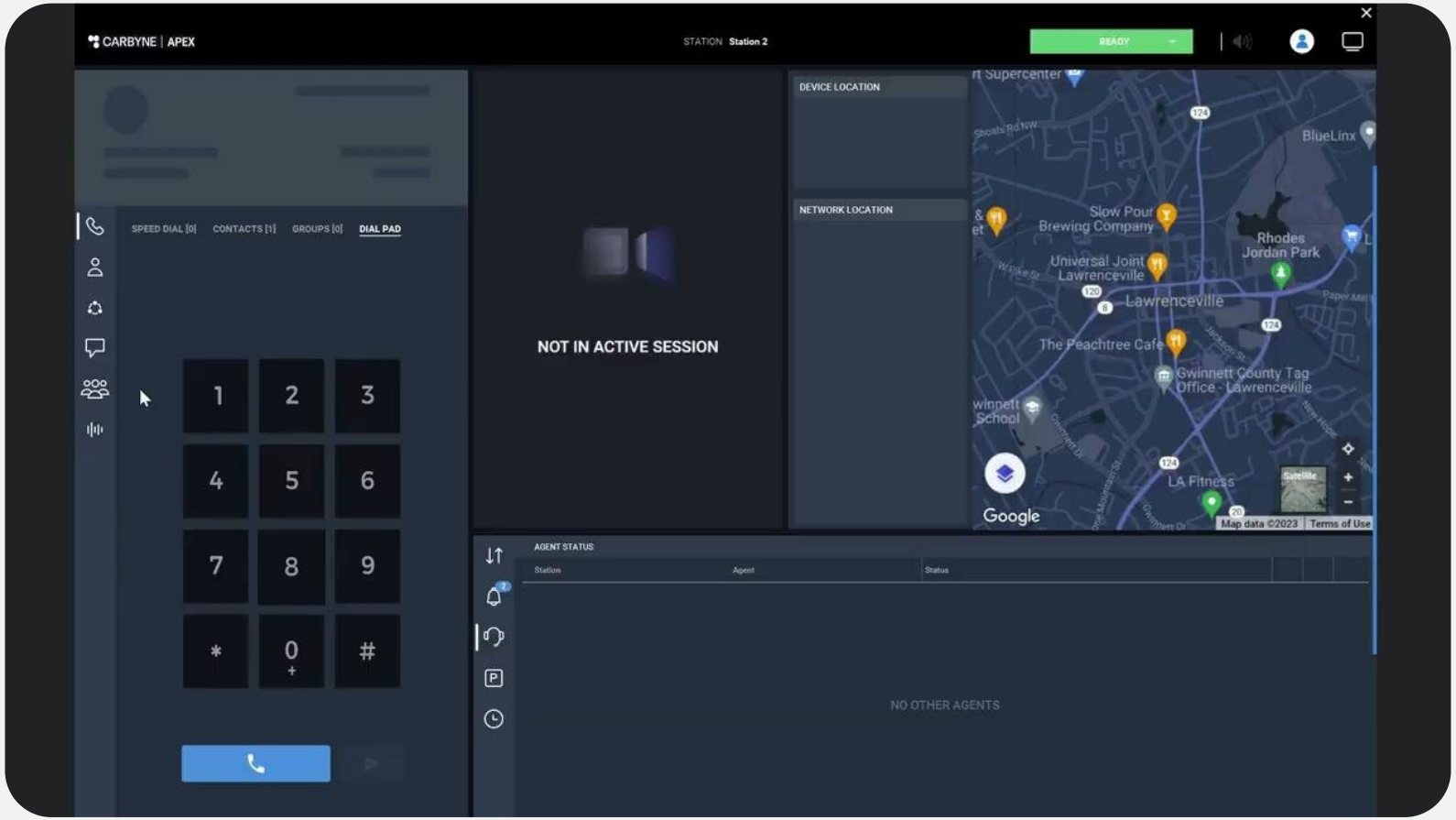
Carbyne APEX

includes Live Audio Transcription, Translation…

and a Whole Lot More!



How Carbyne Live Audio Translation Works



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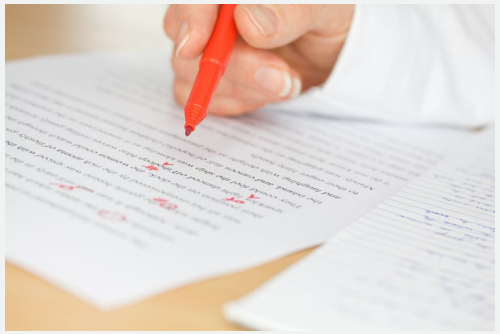
Why AWS – Amazon Transcribe & Amazon Translate



High accuracy transcriptions

Real-time translation

Integration with existing systems

Excellent team collaboration

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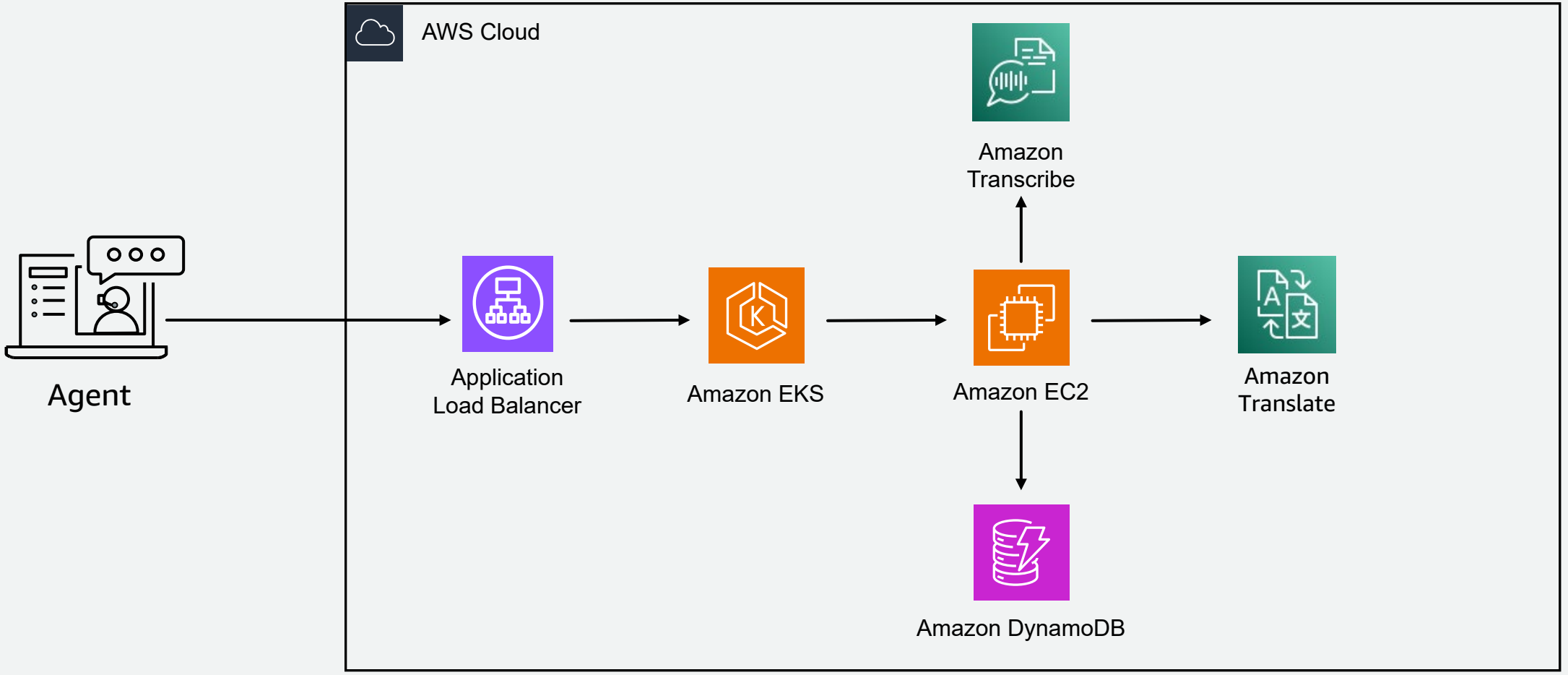
Carbyne Live Audio Translation using AWS AI Services



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Carbyne – Business outcomes achieved with AWS

- **Easy integration** into any call handling system
- Handle **240+ Mn calls** annually

Build a robust workflow

- Provide emergency responders with **more critical information faster**
- Support **diverse** caller base

Improve User Experience

- Average **savings of $60K/year** per customer
- **Reduce** translation time and transcription **errors**
- **Expand** the **number of cases** agents can support

Improve Operational Efficiency

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Vision: Roadmap for AWS-Carbyne Partnership

2-way natural language, multi-lingual conversations using AI

Support more languages: Grow support from 14 to 70 languages

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Next Steps

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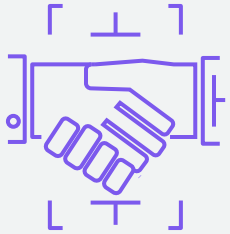
AWS Contact Center Intelligence (CCI) Solutions

HOW TO GET STARTED

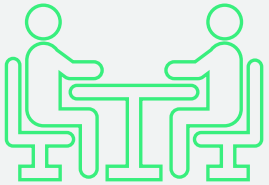
DISCOVERY WORKSHOP to PROOF OF CONCEPT

- Identify the use case
- Determine KPIs
- Do a workshop/ Immersion day
- Start a POC



WHO CAN HELP

- Work with AWS experts
- AWS ProServe



AWS CCI PARTNERS

- Contact center platforms
- Consulting partners
- Independent software vendors (ISV)

AWS Contact Center Intelligence Solutions
go.aws/cci

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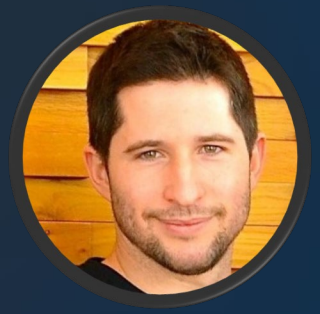
Thank You



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SCAN ME

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Learn more at
www.carbyne.com/translation

aws

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