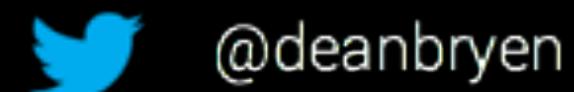


CREATING VOICE EXPERIENCES WITH AMAZON ALEXA

DEAN BRYEN
EVANGELIST, ALEXA AND ECHO



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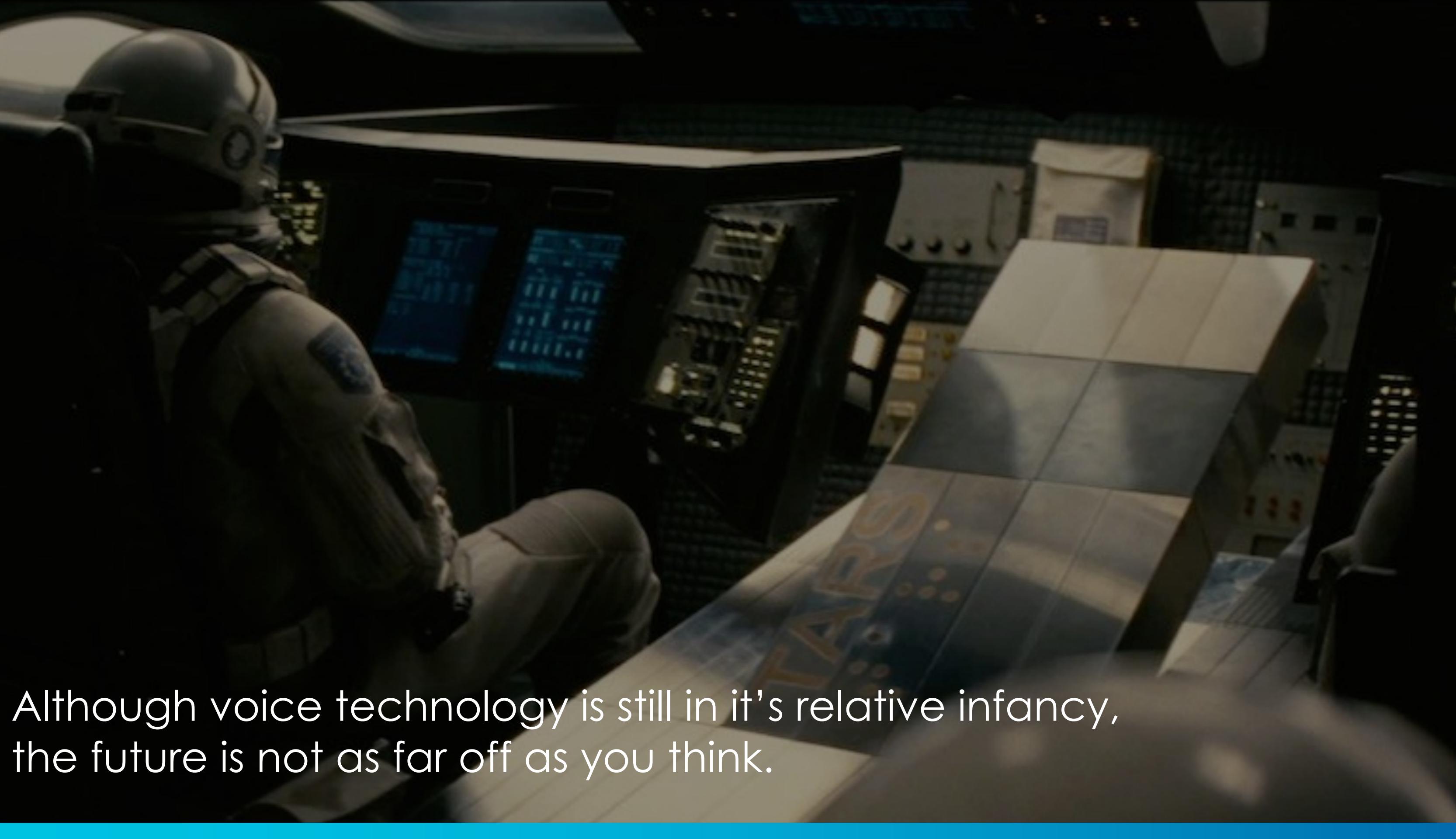


VOICE WILL BE EVERYWHERE

“
The age of touch could soon come to an end. From smartphones and smartwatches, to home devices, to in-car infotainment systems, *touch is no longer the primary user interface.*

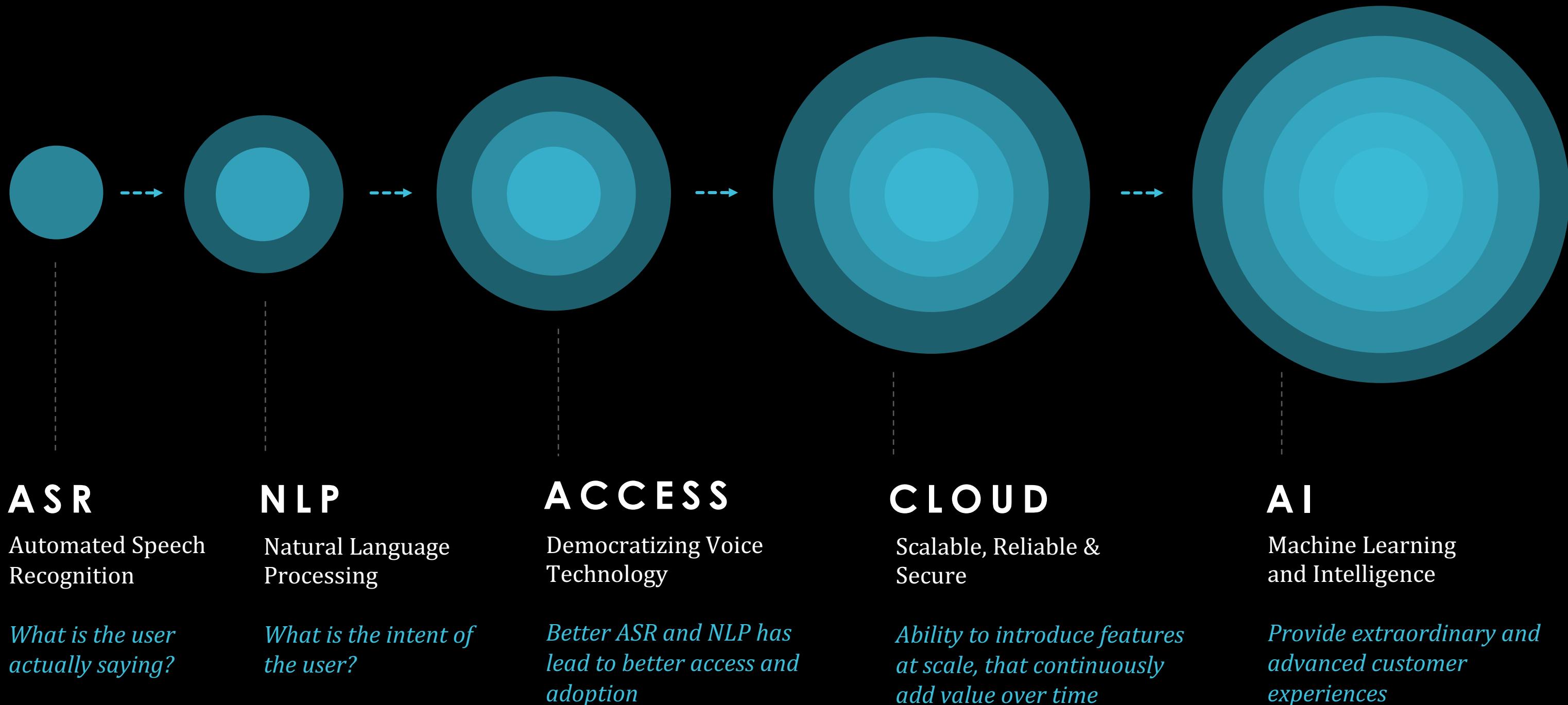
”

Source: Design News



Although voice technology is still in it's relative infancy,
the future is not as far off as you think.

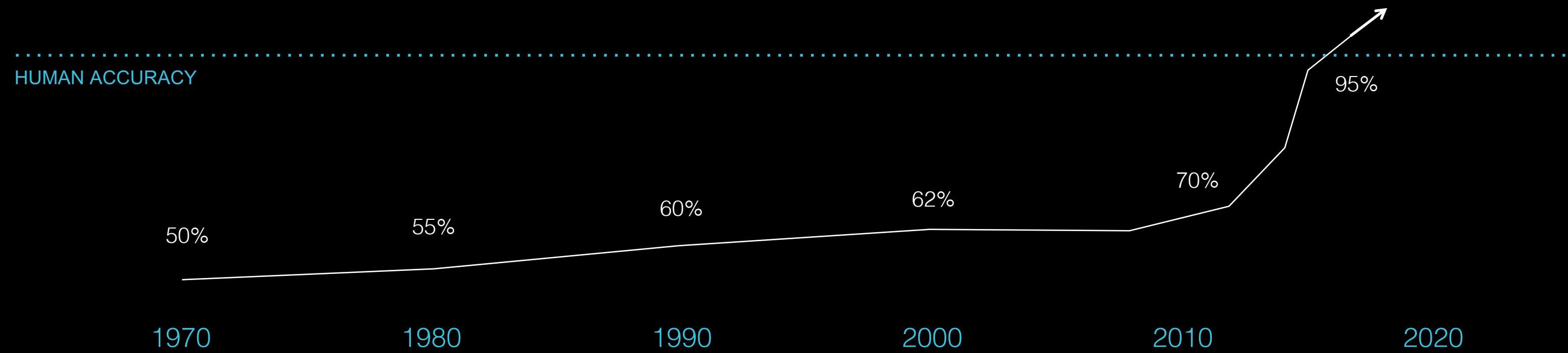
RAPID ADVANCEMENT



MACHINE ASR ACCURACY

ASR accuracy has dramatically increased in the last 4-5 years.

This inflection point has created **sustained momentum** in consumer adoption of voice technology



Source: MindMeld

“

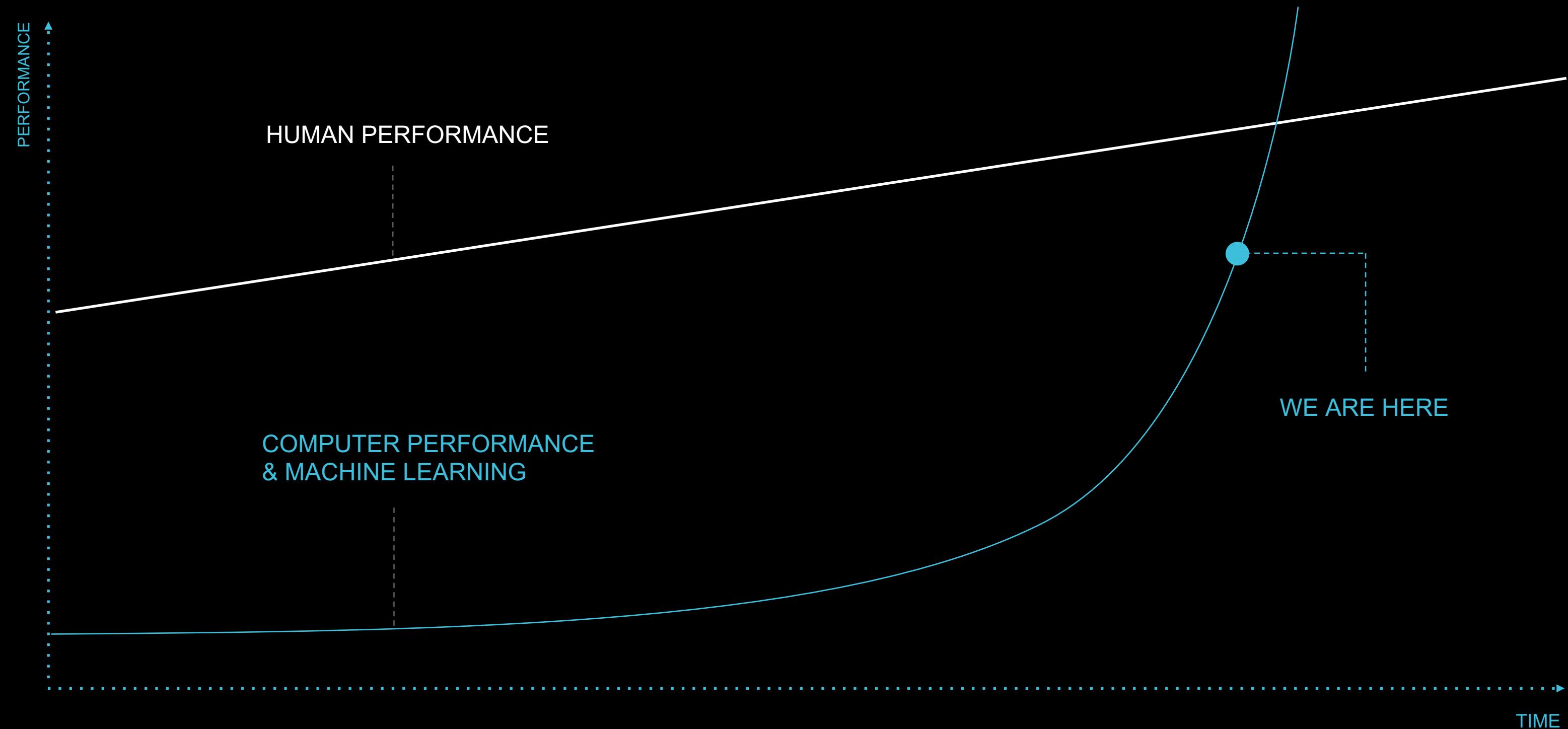
As speech recognition accuracy goes from 95% to 99%, all of us in the room will go from barely using it today to using it all the time. Most people underestimate the difference between 95% and 99% accuracy.

99% is a game changer.

”

Andrew Ng, Chief Scientist at Baidu

MACHINE LEARNING & INTELLIGENCE



“

Soon it will seem almost quaint there was a time we looked at voice assistants as virtual friends who lived in our pockets and answered our questions.

”

Source: The Drum News – How Voice Tech Will Change Our Lives Forever

INTERFACE EVOLUTION EVENTS

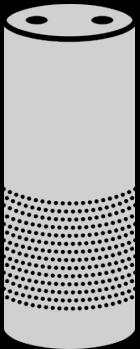
It took generations and several major technological advancements for touchscreens, GUI and VUI to [achieve critical adoption](#).



Following non-commercial GUI milestones, the advances of the early 80s and 90s (Windows 95, Apple's OS, the Internet) changed trajectory of the GUI

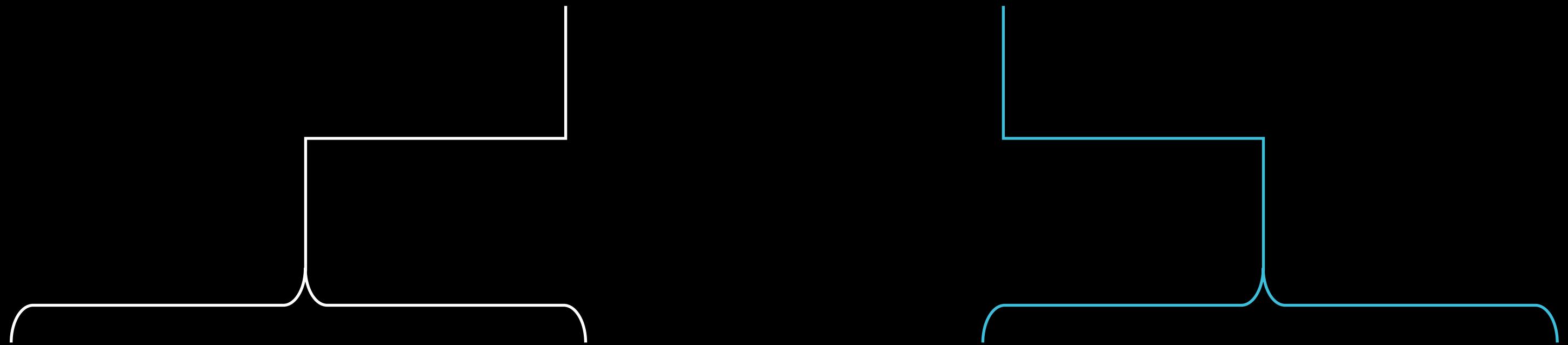


It wasn't until the Palm Pilot of the late '90s and smartphones of the mid-2000s that allowed Touch to emerge as a key interaction modality



Human-To-Human VUI was brought in with the dawn of the telephone, but Human-To-Machine VUIs have just recently become viable

TOUCH vs. VOICE

- 
- Can handle more info
 - More familiar
 - Harder to get lost
 - Provides flexibility
- Faster
 - Less cumbersome
 - Universal
 - Removes noise

VOICE AS A KEY MODALITY

Where it's going is limited by one's imagination but voice WILL play a key role in how we control our homes, our outdoor spaces and access information...Why?

ACCESS

Across billions of devices between phones, watches cars, Alexa-powered devices such as the Amazon Echo, Echo Dot, Amazon Tap, Amazon Fire TV, is making access to voice ubiquitous.

ACCURACY

Advances in the ability to understand user intention is changing the game in adoption as interactions become faster and more reliable

EFFICIENCY

Ease of use will make it a powerful choice for quick access to anything inside and outside our environment

SECURITY

Voice is a highly unique signature, as advances in biometrics are integrated with voice, our individuality will become a key to further personalization and security.

DEVELOPING FOR VOICE

THE ALEXA SERVICE

Supported by two powerful SDKs



ALEXA SKILLS KIT

←-----→
Create Great Content:
ASK is how you connect
to your consumer



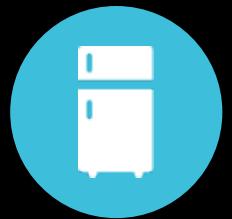
Lives In The Cloud
Automated Speech
Recognition (ASR)
Natural Language
Understanding (NLU)
Always Learning

ALEXA VOICE SERVICE

←-----→
Unparalleled Distribution:
AVS allows your content
to be everywhere

amazon echo

fireTV



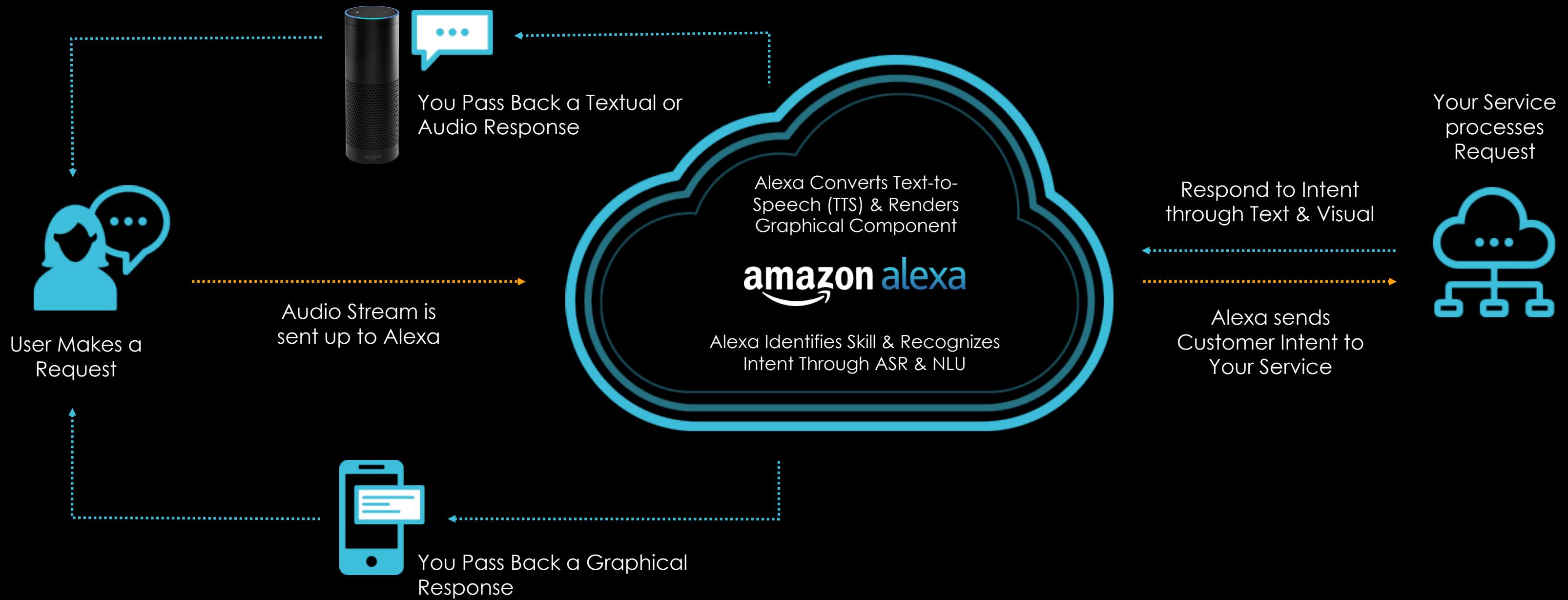
ALEXA SKILLS KIT

EUROPEAN ALEXA SKILLS PARTNERS

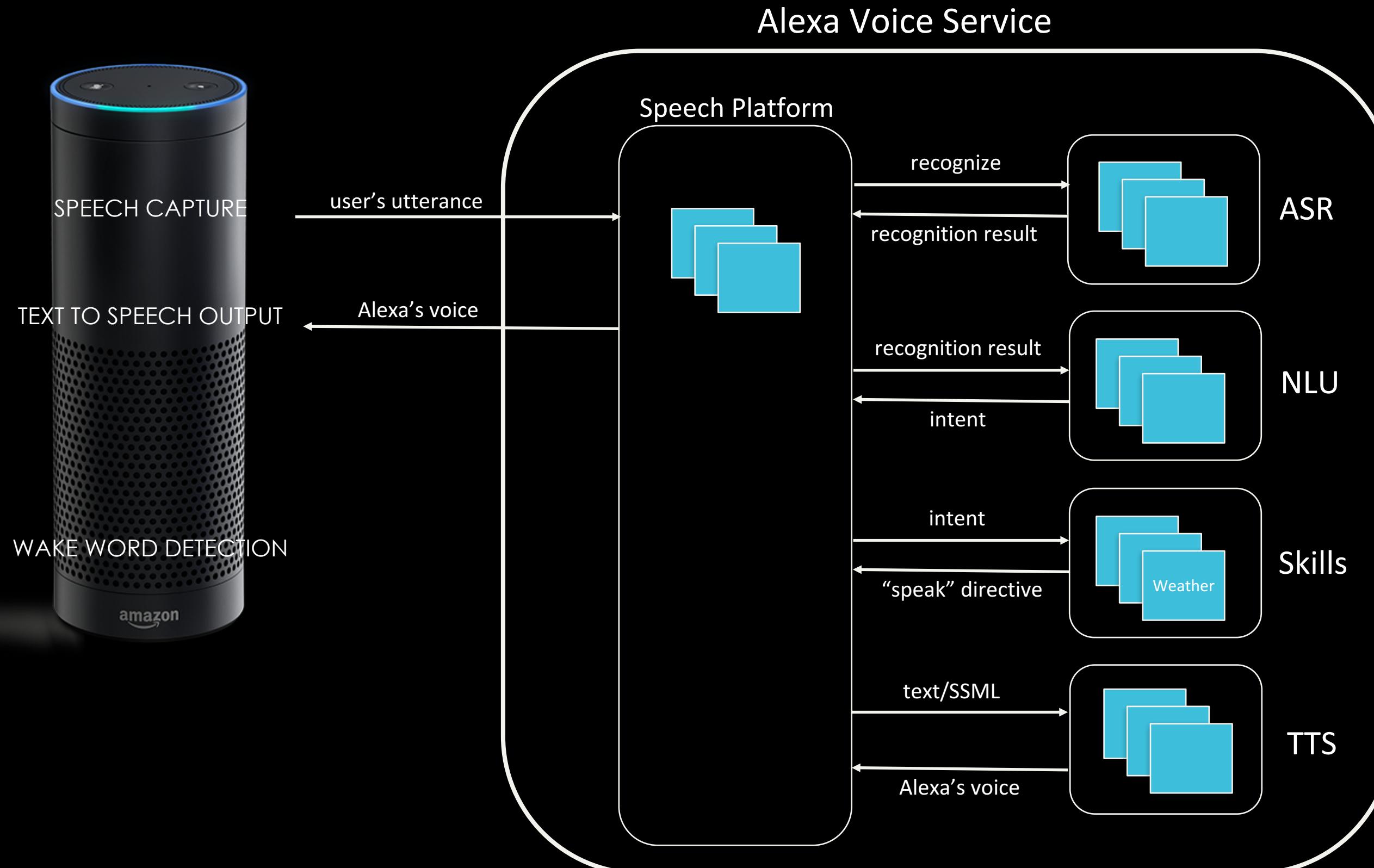


ALEXA SKILLS KIT ARCHITECTURE

A closer look at how the Alexa Skills Kit processes a request and returns an appropriate response



Alexa, what's the weather?



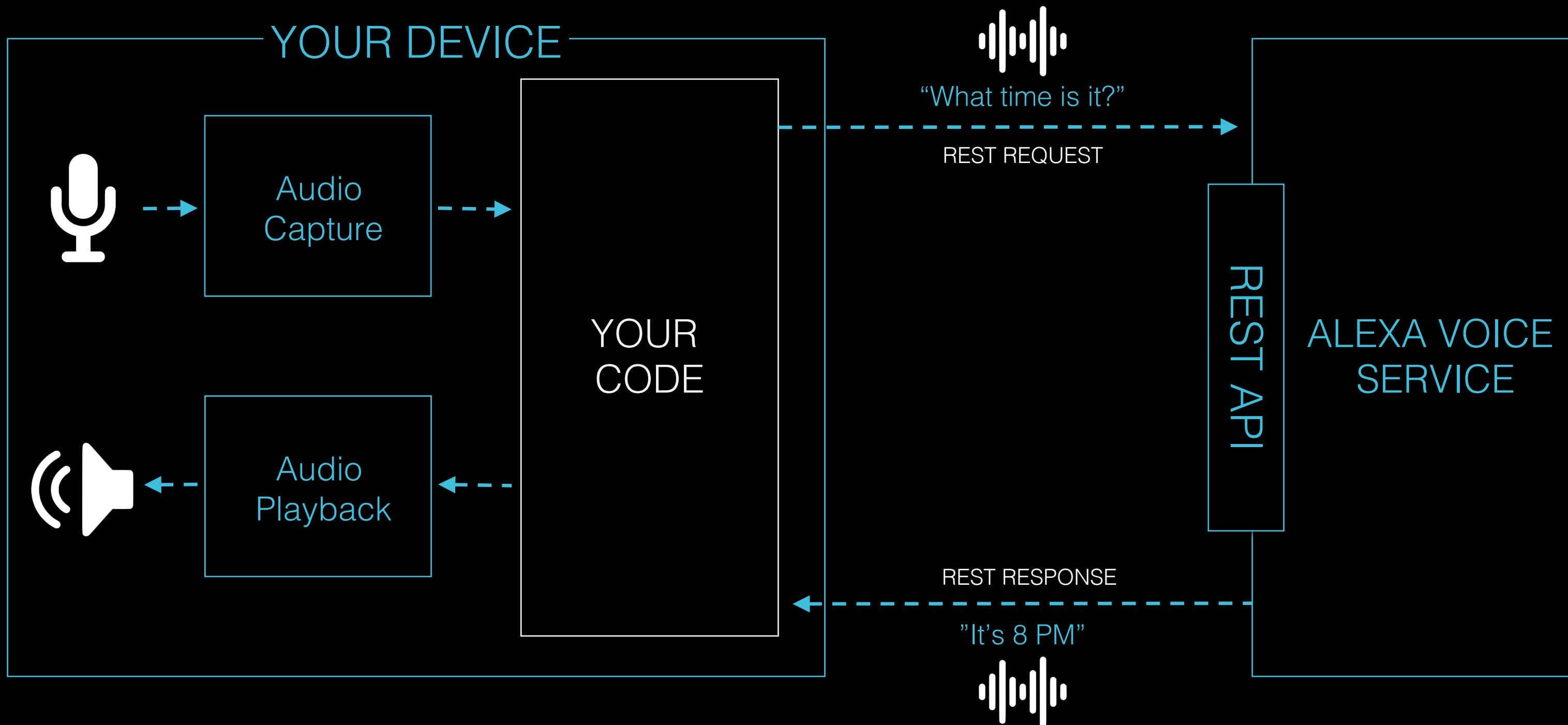
ALEXA
VOICE SERVICE

ALEXA FOR MANY KINDS OF DEVICES



ALEXA VOICE SERVICE ARCHITECTURE

A closer look at how the Alexa Voice Service streams and receives audio from the AVS API



WHAT
NEXT?

SOME USEFUL RESOURCES

<http://developer.amazon.com/ask>

<http://developer.amazon.com/blog>

<http://developer.amazon.com/alexa-fund>

<http://bit.ly/alexadevchat>

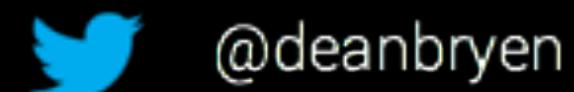
<http://bit.ly/alexaforums>

<http://bit.ly/alexacerthelp>

<http://bit.ly/alexadevevents>

THANK YOU QUESTIONS?

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