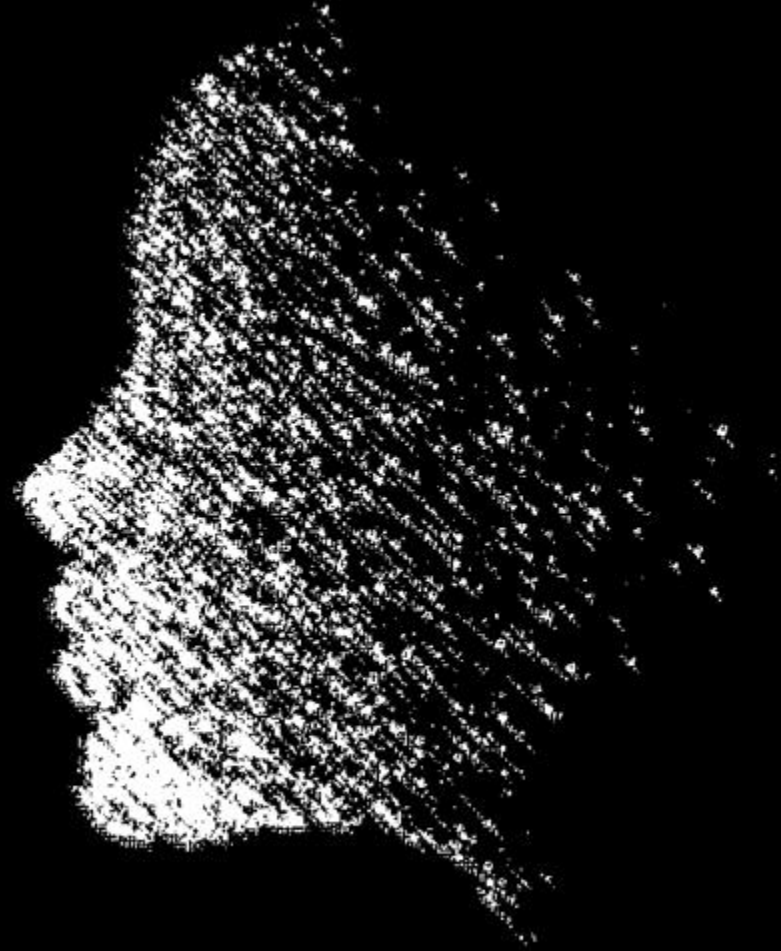


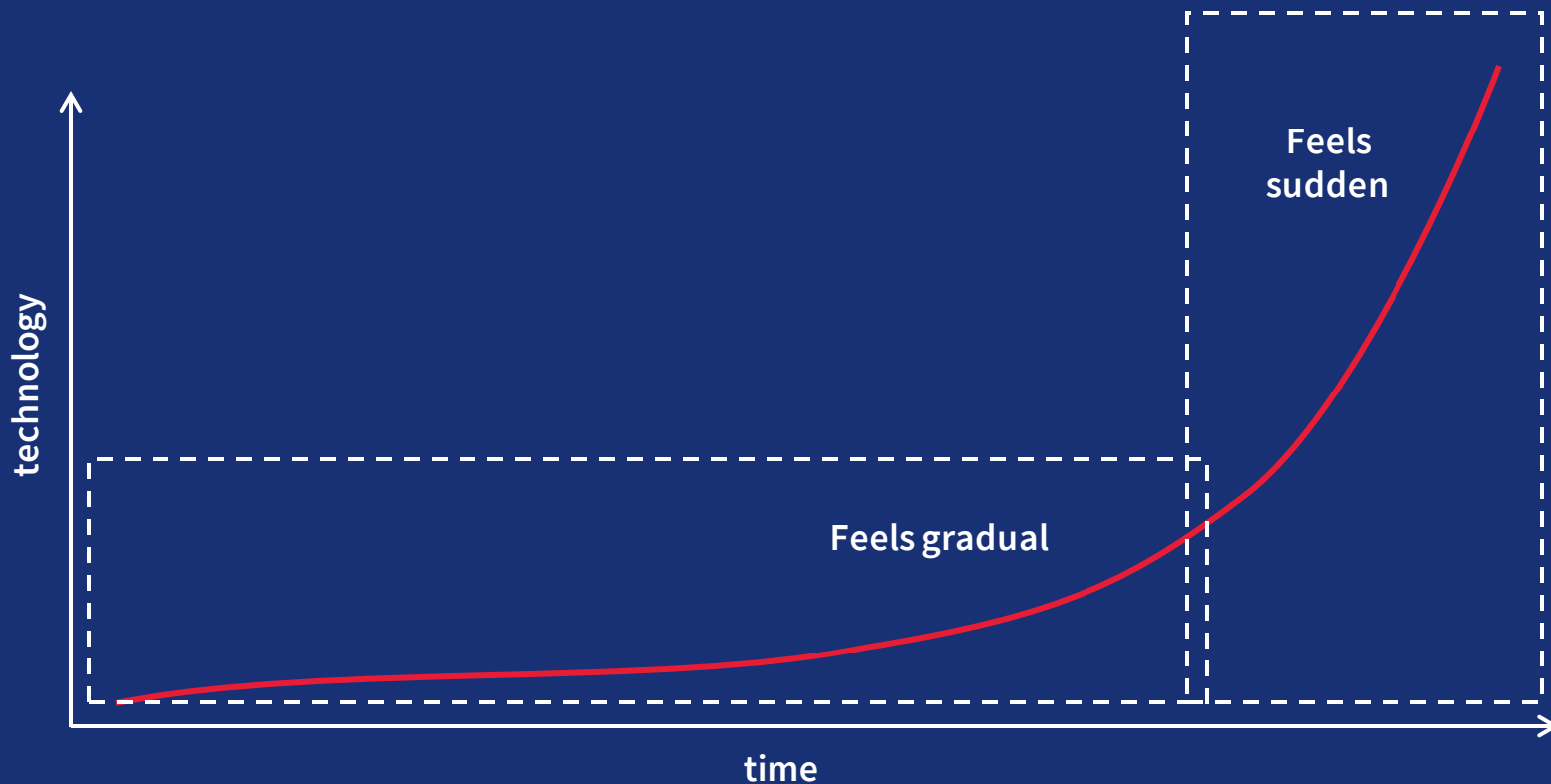
AI & The Service Desk

*Nikhil Manoharan, Principal Consultant,
Abu Dhabi Council for Economic Development*

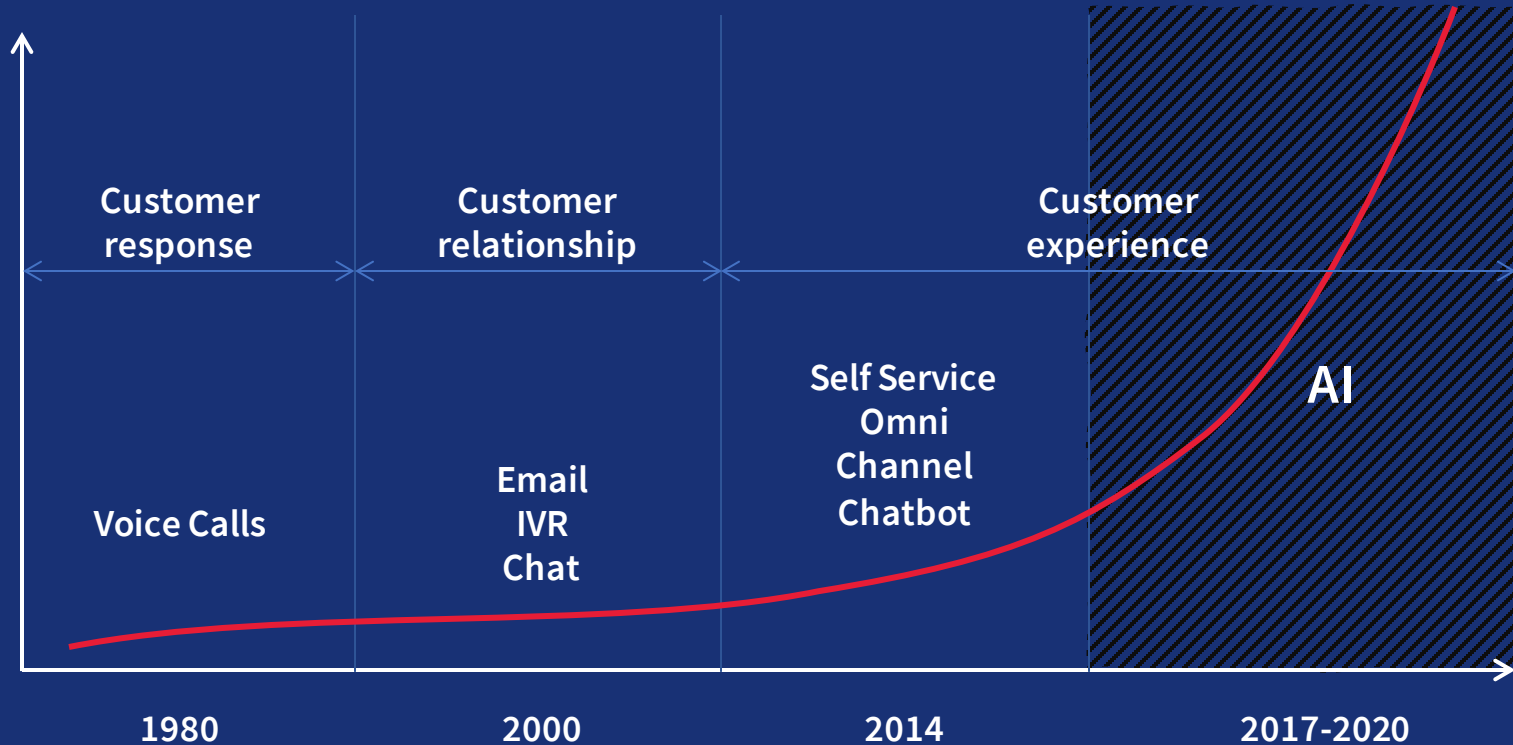


“Humans are bad at predicting technology disruption”

Linear vs Exponential Growth



Evolution of support industry



Demystifying AI

ANI

Artificial Narrow Intelligence

Smart speaker

Self driving car

Web search

AI in farming/factories

AGI

Artificial General Intelligence

Do anything a human can do

Demystifying AI

ANI

Artificial Narrow Intelligence

Smart speaker

Self driving car

Web search

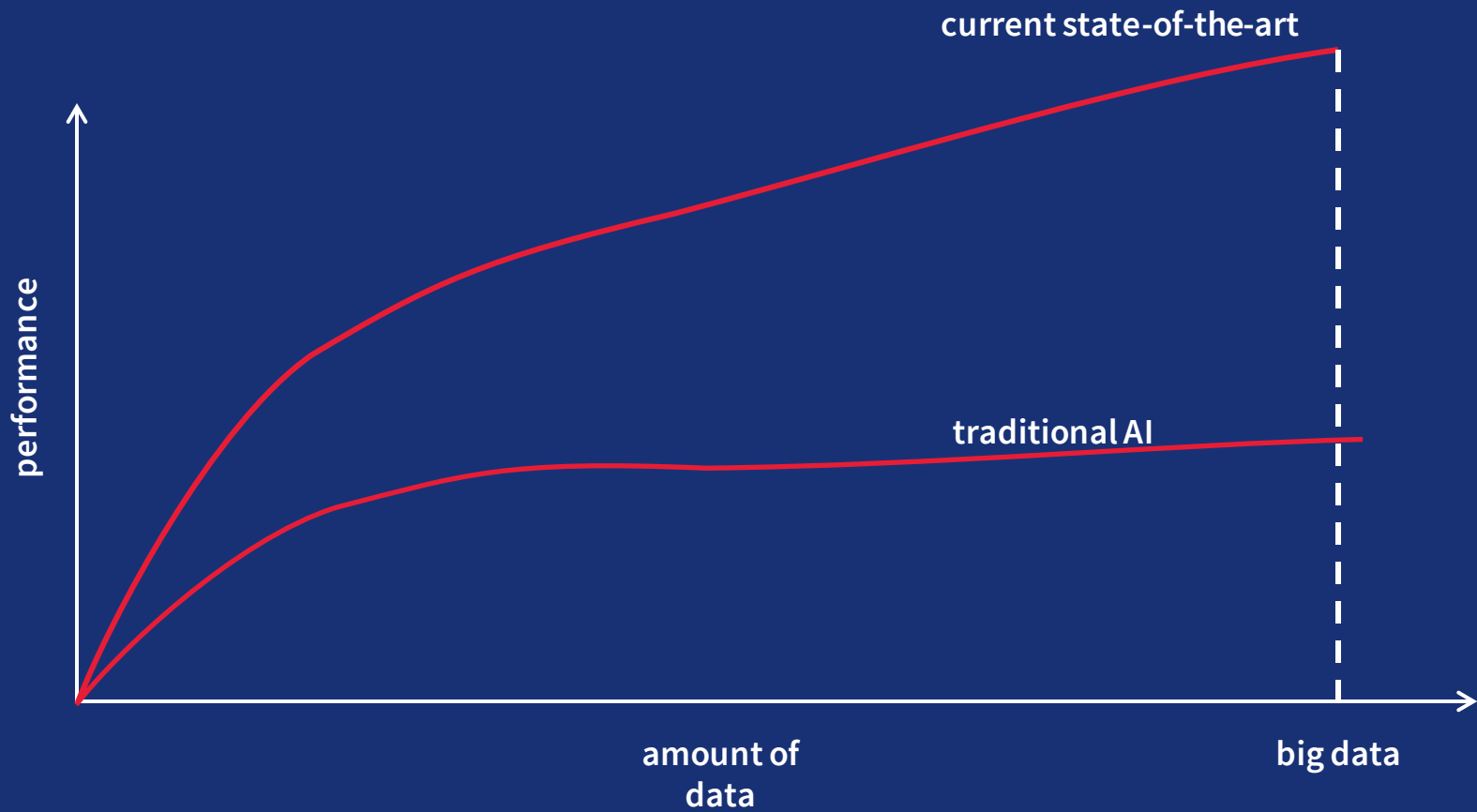
AI in farming/factories

~~AGI~~

~~Artificial General Intelligence~~

~~Do anything a human can do~~

Why the hype now?



Different tools in AI

Common ones

Machine Learning

Data Science

Neural Networks

Then, there's lot of buzzwords

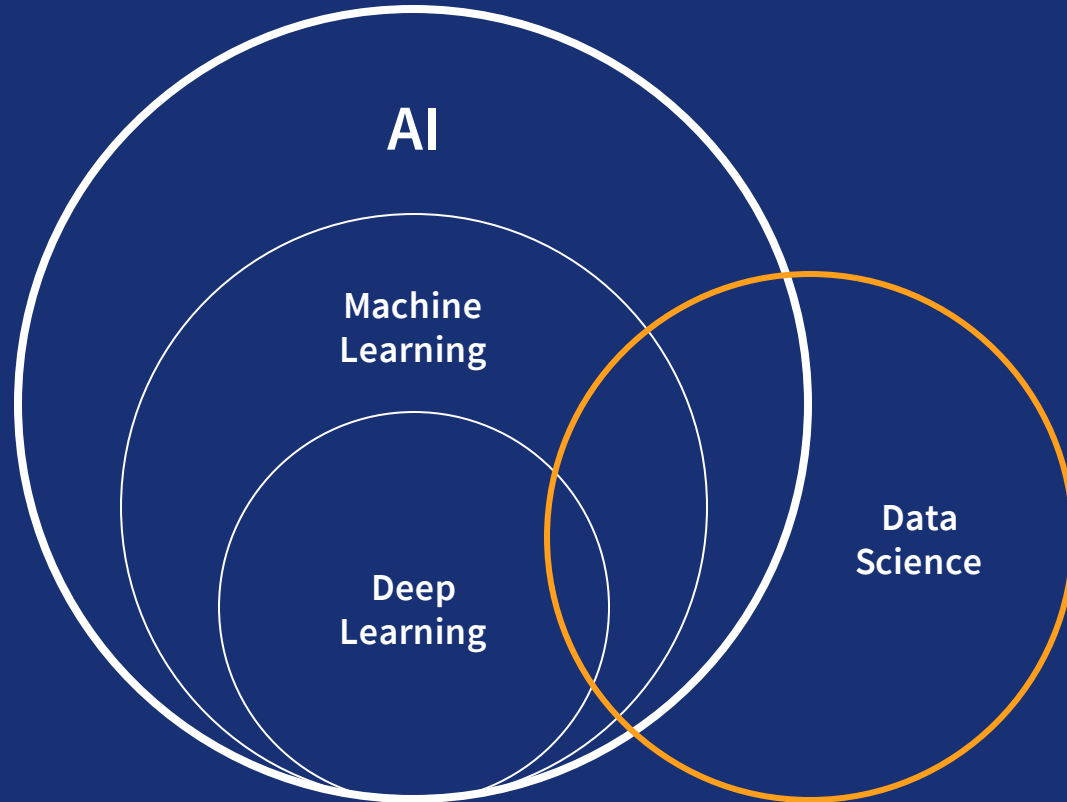
Unsupervised Learning

Reinforcement Learning

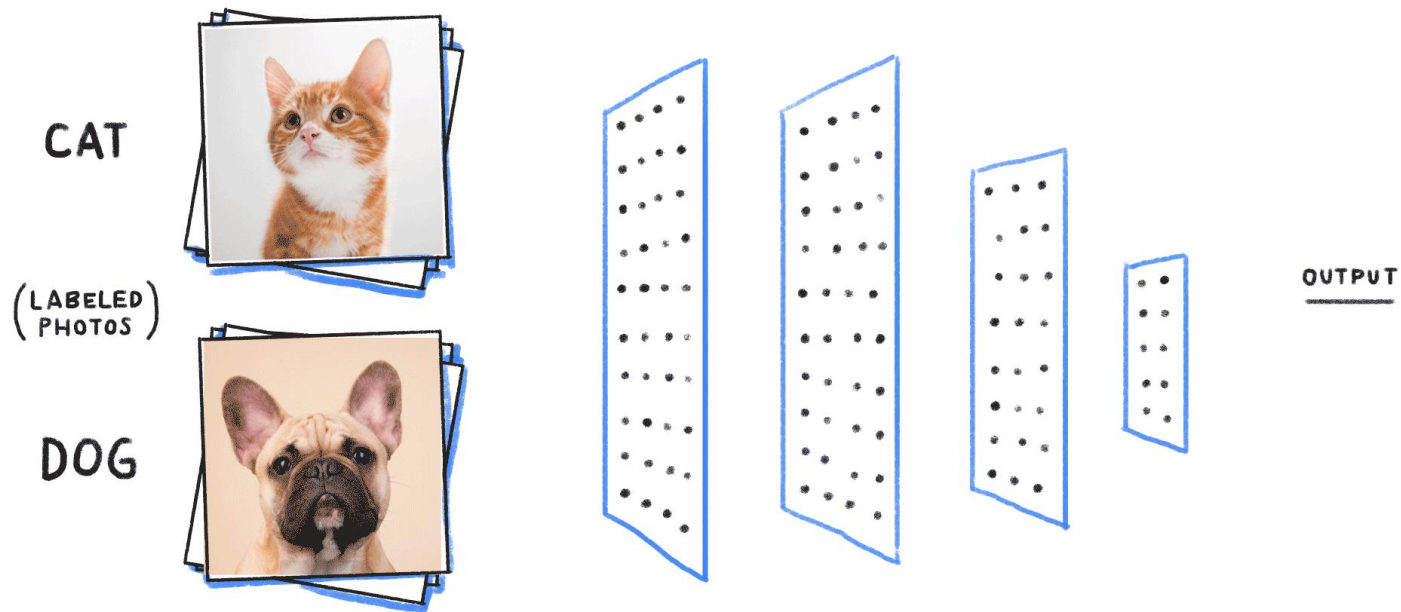
Graphical Models

Knowledge Graphs

How do they all fit together?



Machine Learning



Here's how it works

Email	Spam	Spam filtering
Audio	Text transcript	Speech recognition
English	Chinese	Machine translation
Age of phone	Defect? (1/0)	Visual inspection
Ad user info	Click? (1/0)	Online advertising

Here's how it works

Email	Spam	Spam filtering
Audio	Text transcript	Speech recognition
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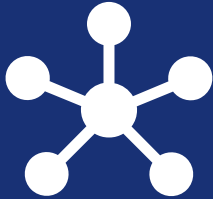
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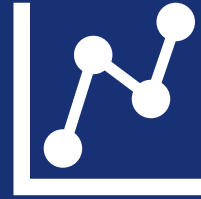
Applications of ML relevant to us



Categorization



NLP



Finding patterns

AI is already around us



Social media



Search, Maps &
more



Self driving cars

People will expect AI in their business software

What have we learned?

AI is about Machine Learning

What have we learned?

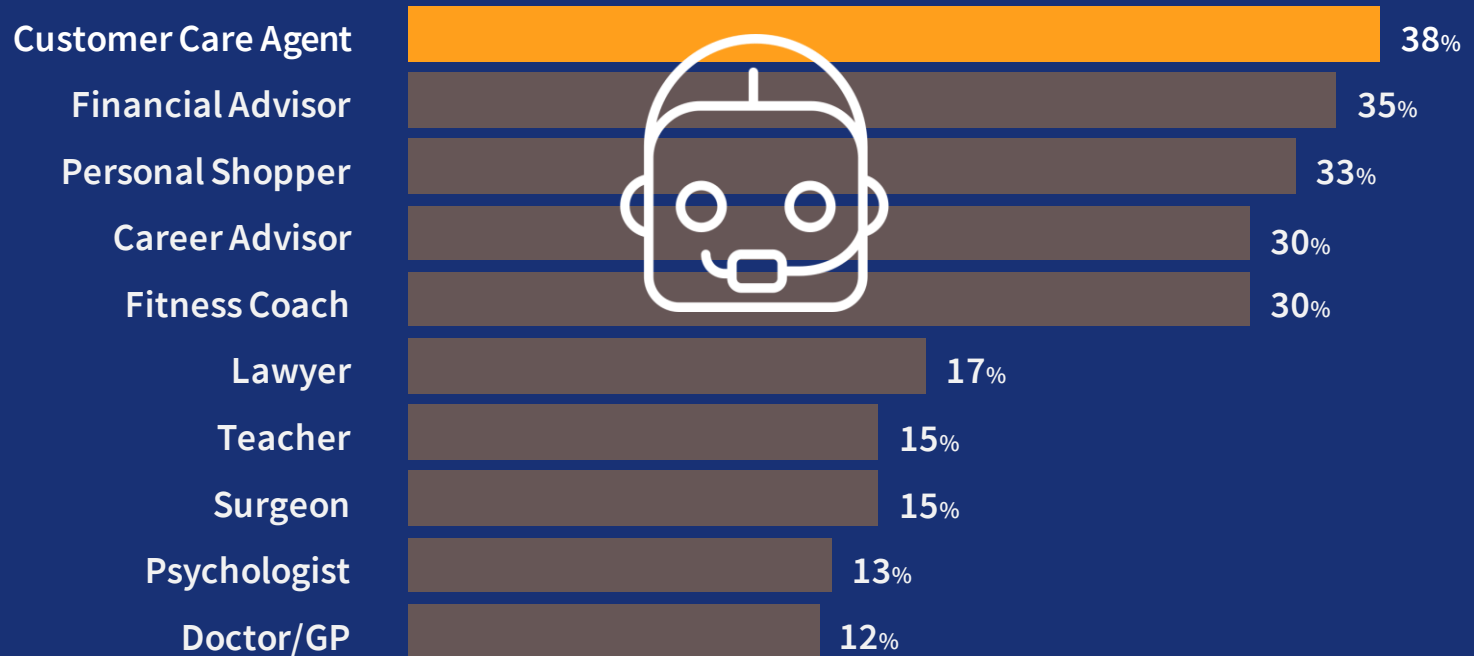
~~AI is about Machine Learning~~

AI is about helping people

AI relies on sufficient examples

Users expect AI in their business software

AI or Human – Whom do you prefer in 2019?



Source: 2019 Gartner study

Q: Assuming that AI and a human could perform equally effectively, which would you choose if given the option?

What does it all mean for Service Desk?



Chatbots

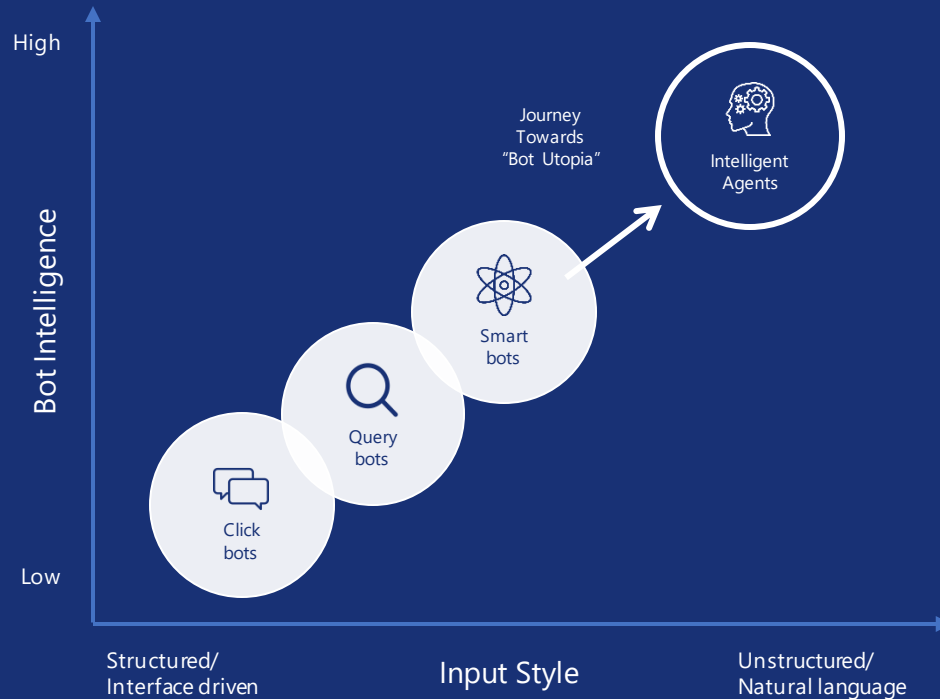
- 👤 Ticket deflection
- 👤 24/7 availability
- 👤 Improved end user experience



Virtual Agents

- 👤 Improved ticket capture
- 👤 Automation
- 👤 Offload SD agents work (Agent Assist)

Conversational AI spectrum



Multi-threaded conversation
Sentiment analysis
Natural Language Understanding
Natural Language Generation

Looking through the lens of these people



Business users

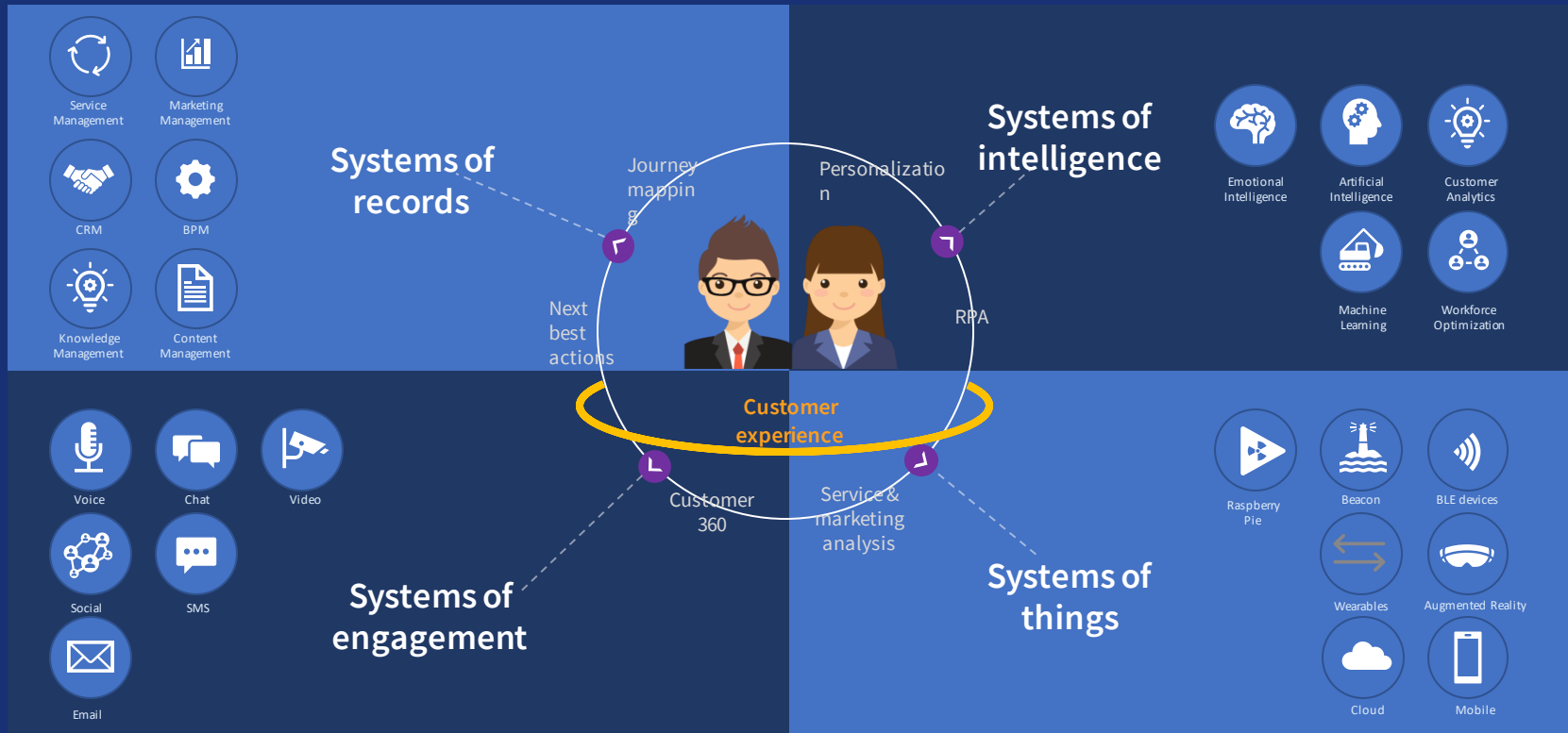


SD agent



SD manager

Synchronizing systems around the customer



AI – your trusted sidekick

Quick glance at Agent Assist and Voice Intelligence tech currently available

References:

“Maven AI” - LivePerson
“Amelia” - IPsoft
“Luma” – Serviceaide
Voice Intelligence – Observe.ai



The AI shadow agent

The screenshot displays a chat interface with a dark theme. At the top left, a user profile icon is labeled "User" with a timestamp of "08:08am" and a dropdown arrow. Below this, a date separator indicates "June 19th 2019". The chat history shows three messages: a user message "Hi" at 08:08am, an agent response "Hello, how may I assist you?" at 08:09am, and a user question "How do I connect to the printer on my floor?" at 08:09am. At the bottom of the chat area, there is a "1h" indicator and a paper plane icon for sending messages.

On the right side of the interface, there is a "Recommended actions" panel. It features a search bar with the query "How do I connect to the printer on my floor?" and a timestamp of "08:09am". Below the search bar, a lightbulb icon is followed by the text "How to connect to a printer?". To the right of this text is a blue button labeled "Use Article". Below the article title, the relevance is noted as "Relevance: High (100%)". A response snippet is provided: "Response: open device manager and use right click to find option Add printer. Select Add a network, wireless or Bluetooth printer option on the screen that pops up. Find the printer in the list of available devices in the network, select it and click next. If the printer you...". To the right of the response are two buttons: "Vote Up" with a green thumbs-up icon and "Vote Down" with a red thumbs-down icon. A "Show More" button with a downward arrow is located at the bottom of this section.

A second, identical recommended action card is shown below the first one, featuring a robot icon and the text "Cookie can assist" next to a green "Join" button. It also shows "Relevance: High (100%)" and "Intent: *Printer configuration*", with "Vote Up" and "Vote Down" buttons.

The AI shadow agent

 User 08:08am 

June 19th 2019

User 08:08am
Hi

Agent 08:09am
Hello, how may I assist you?

User 08:09am
How do I connect to the printer on my floor?



Recommended actions

 "How do I connect to the printer on my floor?" 08:09am



How to connect to a printer?

Use Article

Relevance: High (100%)

Response: open device manager and use right click to find option Add printer. Select Add a network, wireless or Bluetooth printer option on the screen that pops up. Find the printer in the list of available devices in the network, select it and click next. If the printer you

Vote Up 

Vote Down 

Show More 

 "How do I connect to the printer on my floor?" 08:09am



Cookie can assist

Join

08:08am



June 19th 2019

08:08am

08:09am

Can I assist you?

08:09am

How do I connect to the printer on my floor?

1h



Recommended actions



"How do I connect to the printer on my floor?"

08:09am



How to connect to a printer?

Use Article

Relevance: High (100%)

Response: open device manager and use right click to find option Add printer. Select Add a network, wireless or Bluetooth printer option on the screen that pops up. Find the printer in the list of available devices in the network, select it and click next. If the printer you

Vote Up



Vote Down



Show More



"How do I connect to the printer on my floor?"

08:09am



Cookie can assist

Join

Relevance: High (100%)

Intent: "Printer configuration"

Vote Up



Vote Down





User

08:08am



June 19th 2019

User

08:08am

Hi

Agent

08:09am

Hello, how may I assist you?

User

08:09am

How do I connect to the printer on my floor?

1h



Recommended actions



"How do I connect to the printer on my floor?"

08:09am



How to connect to a printer?

Use Article

Relevance: High (100%)

Response: open device manager and use right click to find option Add printer. Select Add a network, wireless or Bluetooth printer option on the screen that pops up. Find the printer in the list of available devices in the network, select it and click next.If the printer you

Vote Up



Vote Down



Show More



"How do I connect to the printer on my floor?"

08:09am



Cookie can assist

Join

Relevance: High (100%)

Intent: "Printer configuration"

Vote Up



Vote Down





User

08:08am



Hi

Agent

08:09am

Hello, how may I assist you?

User

08:09am

How do I connect to the printer on my floor?

Agent

08:10am

Let me send you the self help article.

User

08:10am

Actually, can you guide me step by step?

1h



Recommended actions



"How do I connect to the printer on my floor?"

08:09am



How to connect to a printer?

Use Article

Relevance: High (100%)

Response: open device manager and use right click to find option Add printer. Select Add a network, wireless or Bluetooth printer option on the screen that pops up. Find the printer in the list of available devices in the network, select it and click next.If the printer you

Vote Up



Vote Down



Show More



"How do I connect to the printer on my floor?"

08:09am



Cookie can assist

Join

Relevance: High (100%)

Intent: "Printer configuration"

Vote Up



Vote Down





User

08:08am



User

08:09am

How do I connect to the printer on my floor?

Agent

08:10am

Let me send you the self help article.

User

08:10am

Actually, can you guide me step by step?

Agent

08:11am

Sure, I'm going to have our Virtual Assistant walk you through the process.

1h



Recommended actions



"How do I connect to the printer on my floor?"

08:09am



How to connect to a printer?

Use Article

Relevance: High (100%)

Response: open device manager and use right click to find option Add printer. Select Add a network, wireless or Bluetooth printer option on the screen that pops up. Find the printer in the list of available devices in the network, select it and click next. If the printer you looking for is not in the list...

Vote Up



Vote Down



Show More



"How do I connect to the printer on my floor?"

08:09am



Cookie can assist

Join

Relevance: High (100%)

Intent: "Printer configuration"

Vote Up



Vote Down





User

08:08am



User

08:09am

How do I connect to the printer on my floor?

Agent

08:10am

Let me send you the self help article.

User

08:10am

Actually, can you guide me step by step?

Agent

08:11am

Sure, I'm going to have our Virtual Assistant walk you through the process.

1h



Recommended actions



"How do I connect to the printer on my floor?"

08:09am



How to connect to a printer?

Use Article

Relevance: High (100%)

Response: open device manager and use right click to find option Add printer. Select Add a network, wireless or Bluetooth printer option on the screen that pops up. Find the printer in the list of available devices in the network, select it and click next.If the printer you looking for is not in the list,

Vote Up



Vote Down



Show More



"How do I connect to the printer on my floor?"

08:09am



Cookie can assist

Join

Relevance: High (100%)

Intent: "Printer configuration"

Vote Up



Vote Down





User

08:08am



Agent

08:10am

Let me send you the self help article.

User

08:10am

Actually, can you guide me step by step?

Agent

08:11am

Sure, I'm going to have our Virtual Assistant walk you through the process.

Cookie

08:11am

Cookie has joined the conversation to assist with your needs.

1h



Recommended actions



Cookie is assisting the user.

You can remove the bot from the conversation at any time.

Remove



Recommended actions are paused while a bot is in the conversation.

To make the most of customer calls, we need to change how we empower agents



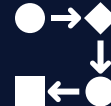
Analysis



Insights



Augmentation



Automation



VIEW

Default Team



Last 30 Days



FILTER

> Call Duration

> Agent

> IVR

> Mood

> Hold Time

> Talk Time

> Ring Group

10,875 of 10,875 Calls

Customer Satisfaction

Call Hold

41.56%

Customer Negative Sentiment

7.8%

Dead Air

5.46%

Empathy

40.57%

Hold Time Violation

13.57%

Supervisor Escalation

0.24%

Process Adherence

Call Closing

67.22%

Call Opening

40.14%

Customer Call Reason

35.72%

Customer Verification

71.25%

Patience & Courtesy

95.01%

Next Steps

36.84%



VIEW

Default Team



Last 30 Days



FILTER

Clear All

> Customer Satisfaction 1 selected X

> Process Adherence

> Compliance

> Call Duration

> Agent

> IVR

> Mood

10,875 of 10,875 Calls

Contact N... Example +971 xxxxxxxx



Call Duration Agent Name Moments Comments Call Time Actions

29:27 min Agent 10 1 5 8 0 Apr 24, 2019 5:19 AM View

16:14 min Agent 10 Positive (1) Negative (5) 0 Neutral (4) Apr 16, 2019 7:20 PM View

17:12 min Agent 14 Empathy Supervisor Escalation Call Hold Patience & Courtesy Customer Verification Apr 22, 2019 8:00 AM View

10:10 min Agent 22 Dead Air Next Steps Negative Sentiment Call Closing Apr 08, 2019 11:12 AM View

01:02:54 hr Agent 3 Hold Time Violation 4 5 9 0 Apr 24, 2019 6:17 PM View

08:08 min Agent 27 2 4 7 0 Apr 14, 2019 12:12 PM View

15:34 min Agent 11 3 3 5 0 Apr 02, 2019 2:36 PM View

12:05 min Agent 8 1 3 8 0 Apr 17, 2019 10:37 AM View

09:00 min Agent 44 3 2 6 0 Apr 21, 2019 5:16 PM View

09:13 min Agent 31 2 2 3 0 Apr 06, 2019 3:19 PM View

Positive (1)

Empathy

Negative (5)

Supervisor Escalation
Call Hold

Neutral (4)

Patience & Courtesy
Customer Verification

Dead Air
Next Steps

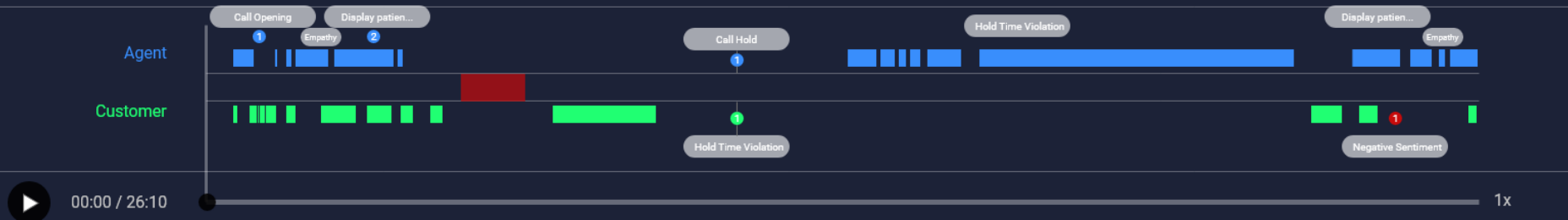
Negative Sentiment
Call Closing

Hold Time Violation



Agent 10 on September 19, 2019 9:12 AM for 26:10 min

Call ID: ABHU98456789321



Moments

- All
- Found**
- Not Found

Customer Satisfaction

- > Customer Negative Sentiment
- > Call Hold
- > Empathy
- > Hold Time Violation
- > Dead Air

Process Adherence

- > Call Opening
- > Customer Verification
- > Call Closing

00:00 min Agent

- Call Opening
- Display Patien...

▶ Play

Thank you for contacting your companies IT Service Desk my name is Agent 10 how many I help you today?

00:05 min Customer

▶ Play

Customer talks

00:07 min Agent

▶ Play

Agent talks

00:09 min Customer

▶ Play

Customer says something

00:18 min Agent

▶ Play

Agent replies

00:24 min Agent

Reference: Observe.ai

▶ Play

Can AI help address some of our challenges?



Mundane chores



Agent productivity



Managing multiple channels



Improving customer experience



Long resolution times



Calls are ringing off the hook

Can AI help address some of our challenges?



Mundane chores



Agent productivity



Managing multiple channels



Improving customer experience

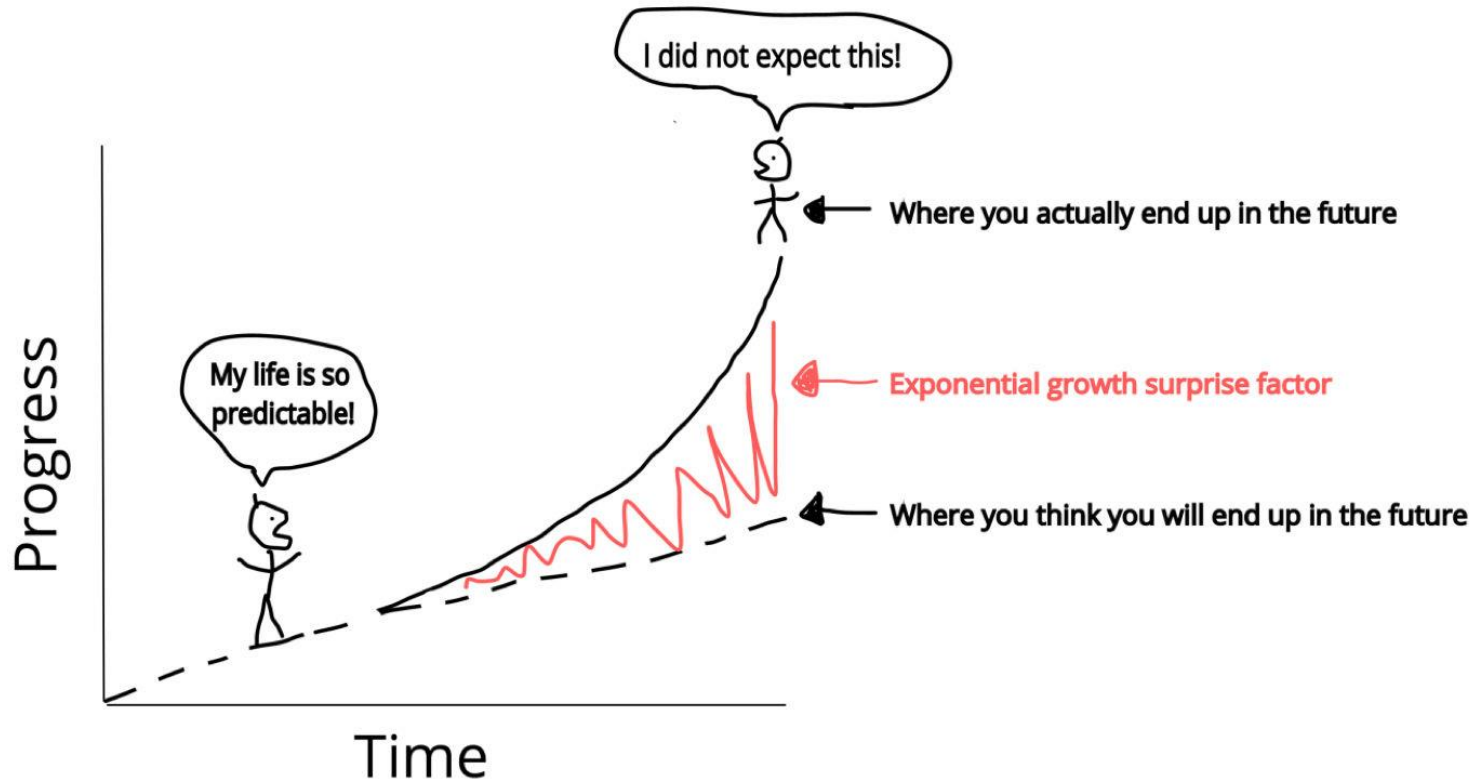


Long resolution times



Calls are ringing off the hook

Linear vs Exponential Growth



QA