



Intelligent assistants in practice

Examples of deployed systems and their impact

William Meisel
President, TMA Associates

Intelligent Assistants (Digital Assistants)

Interaction by voice or text
"Natural Language"



CALL CENTER
SERVICES



Ask Verizon

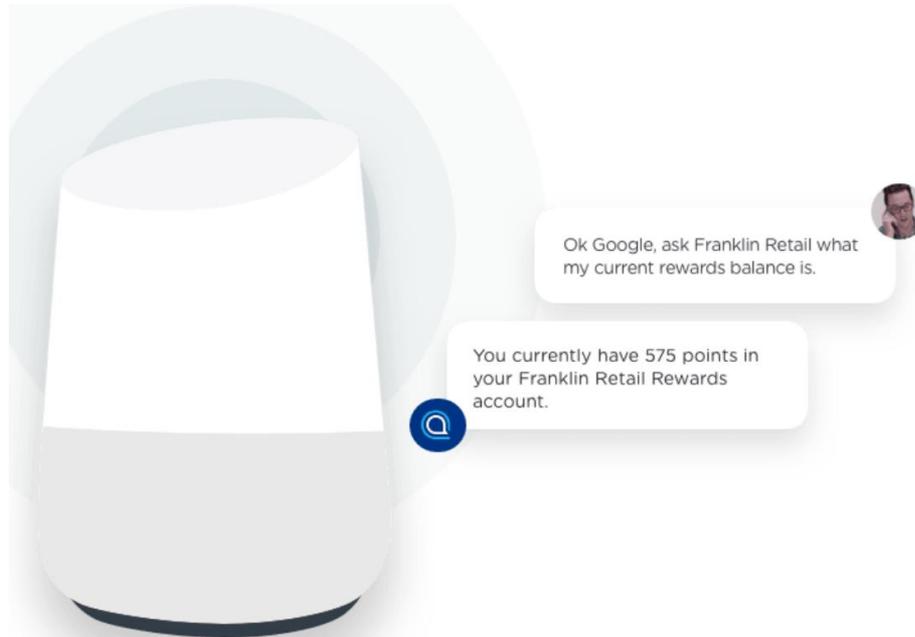
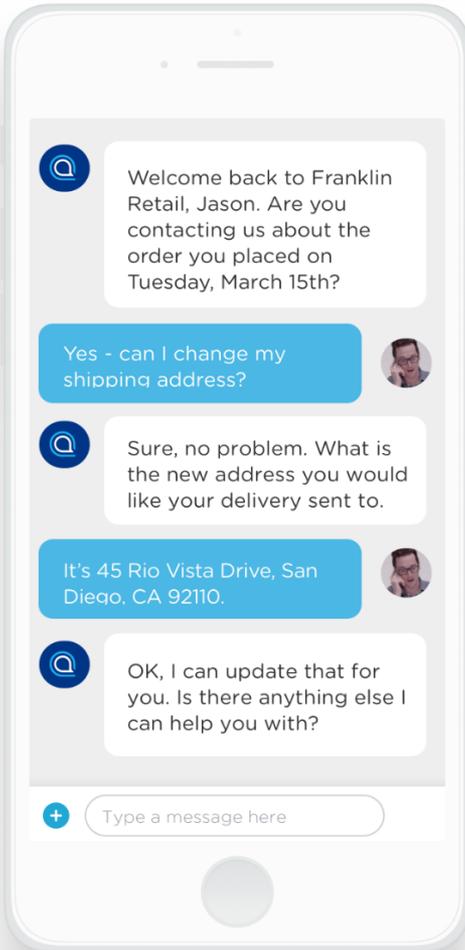
For instant answers type your question here...

Ask Verizon >

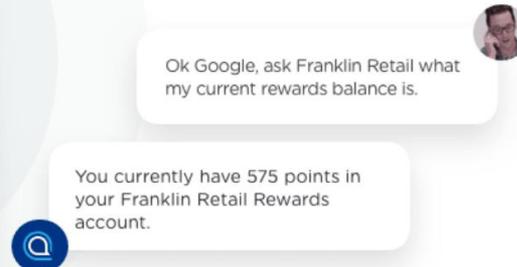
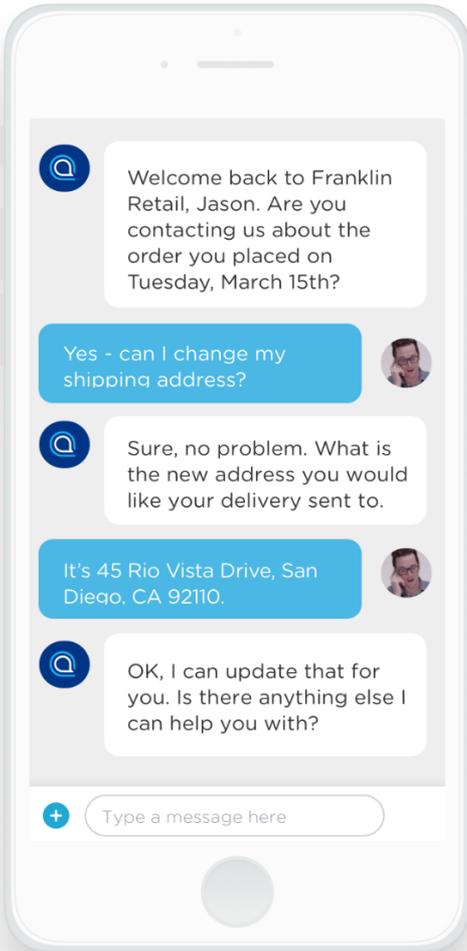
Reaching the user

- + Single-channel
 - + Mobile phone digital assistants, home speakers, Facebook Messenger, automobiles
- + Direct
 - + Web site
 - + App for smartphone
 - + Customer service line
- + Multi-channel
 - + Build basic Natural Language Processing once

One core development, multiple channels



One core development, multiple channels



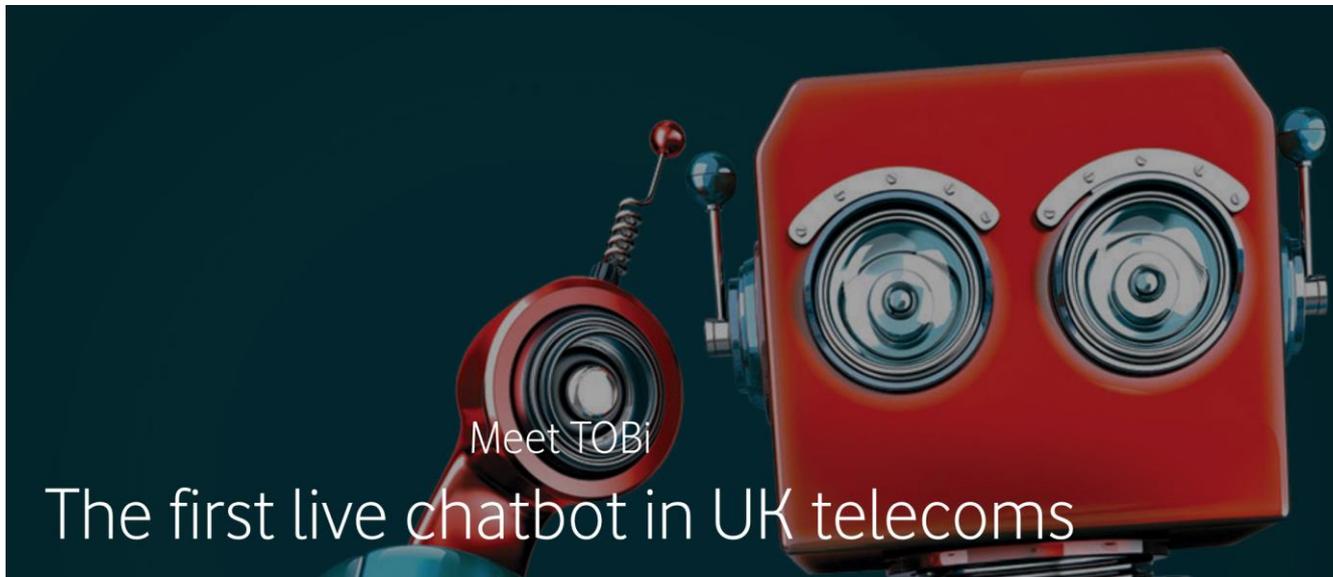
The user

- + Customer
- + Employee



Vodafone Group chatbot

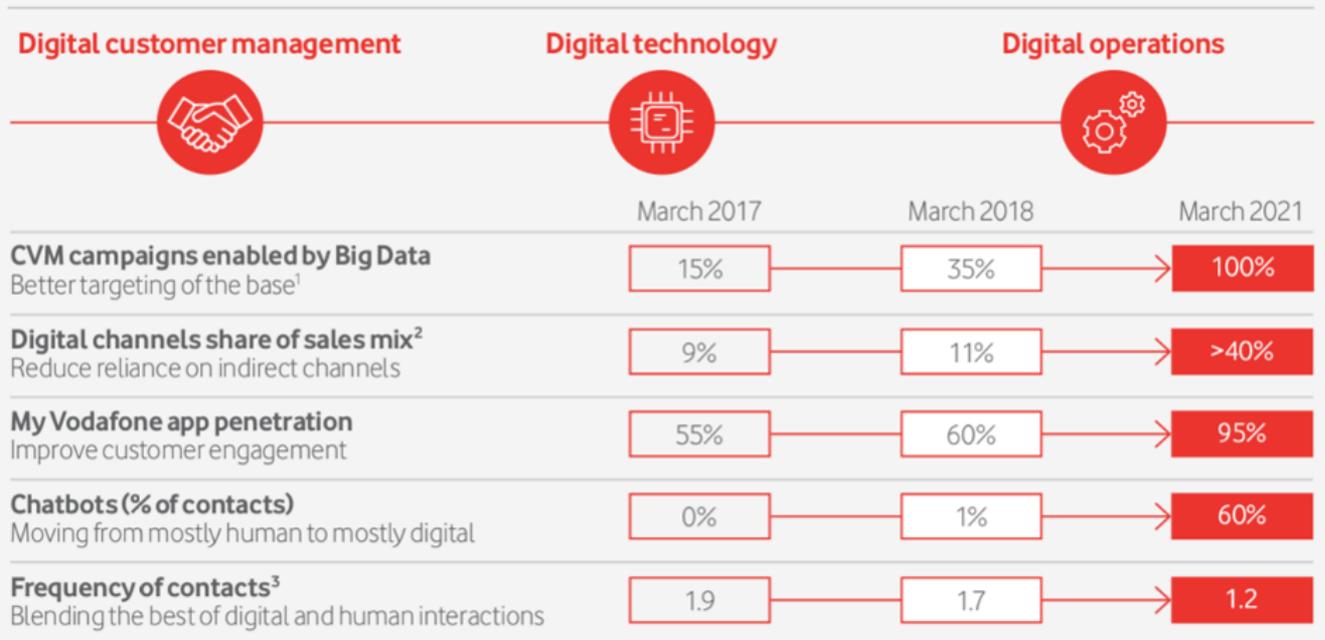
- + TOBi, a chatbot able to complete a customer transaction from start to end
- + Based on IBM Watson technology



Vodafone

+ From 2018 annual report

Our goal: to lead the industry in the transition to digital



Notes:

1 Average of EU4 (Germany, Italy, UK and Spain).

2 Mobile and Fixed acquisitions and upgrades.

3 FOC requiring human intervention per year.



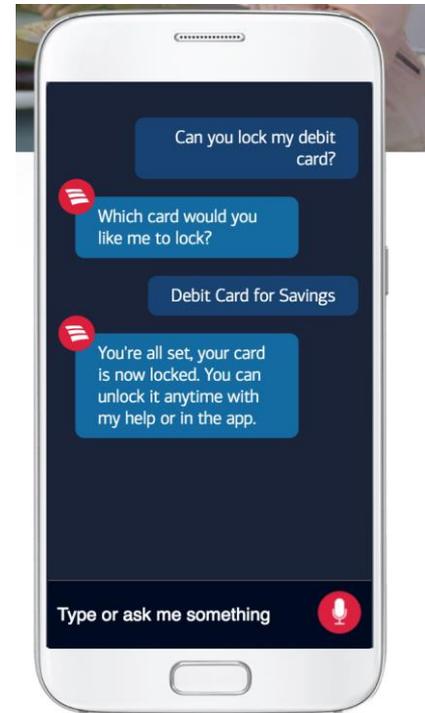
Dirty Lemon

- + Healthy drinks
- + Text-to-order
- + Co-founder Zak Normandin:
 - + “While other brands are exploring the further development of e-commerce, we think c-commerce, which is conversational commerce, is the future.”



Bank of America mobile app

- + Virtual assistant Erica
 - + Interaction in natural language using voice or text
 - + Search for transactions, view bills, get credit scores and account balances
- + Available to its 25 million mobile clients since May
 - + More than one million users within two months of completing its phased rollout

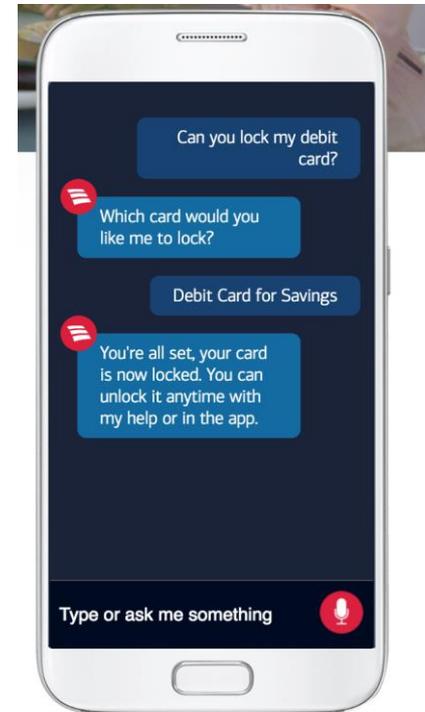


A direct connection: Bank of America mobile app

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Planned enhancements:

Shopping suggestions, digital wallet, Advantage Rewards



AVG Technologies

- + Security software (e.g., anti-virus)
- + Used **NoHold** SICURA platform
 - + Web-based self-service solutions that support natural-language interaction
 - + Includes speech recognition and speech synthesis (text-to-speech) with multiple language support



"The use of noHold technology for both sales and support has resulted in a cleaner, enhanced customer journey and is a revenue generator. We are pleased with the Customer Satisfaction rating the virtual assistant sustains."

Garry Schultz
VP of Customer Care

Admissions Assistant for higher education

- + Pearson North America
 - + On behalf of more than 15 universities
- + Engage prospective students at scale
- + Based on Conversica AI Sales Assistant
 - + Two-way email and SMS-text conversations

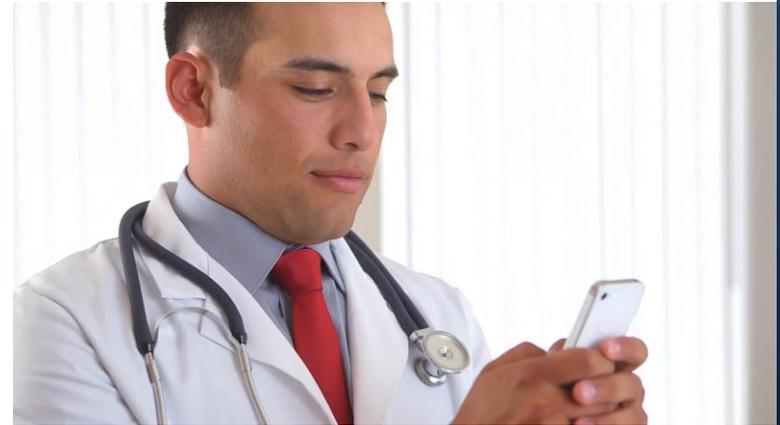
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26% increase in engagement rate
35% increase in conversion rate

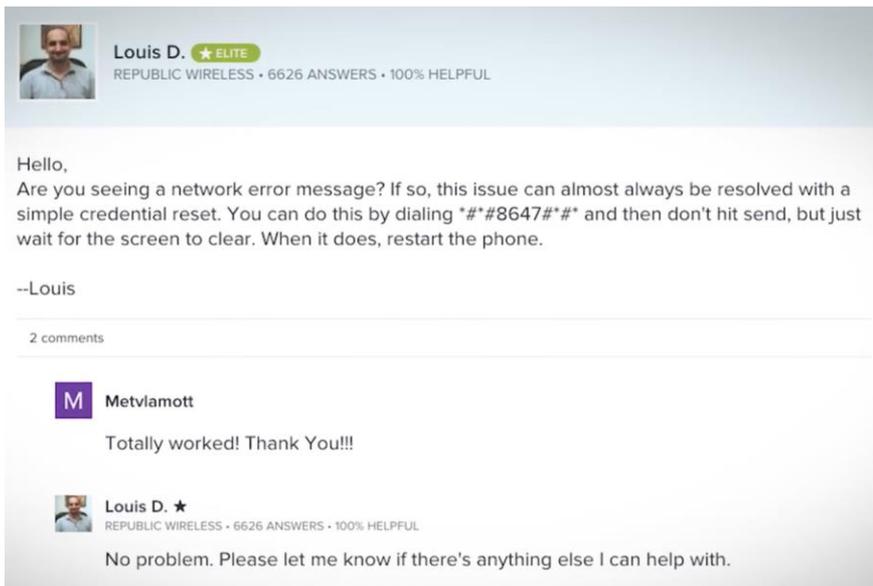
Virtual assistant for healthcare providers

- + Primary care physicians spend more than half of their workday at a computer screen performing data entry and other tasks with EHRs
- + Nuance Communications' Dragon Medical Virtual Assistant



Republic Wireless

- + **Directly** platform used for technical support
 - + Directly “experts” work where and when they want
 - + Paid by problem solved
- + Generates “answers” for technical questions that can be used in NLP systems



The screenshot shows a support chat interface. At the top, a profile for 'Louis D.' is displayed with a star icon and the text '★ ELITE', 'REPUBLIC WIRELESS', '6626 ANSWERS', and '100% HELPFUL'. The chat text reads: 'Hello, Are you seeing a network error message? If so, this issue can almost always be resolved with a simple credential reset. You can do this by dialing *##8647##* and then don't hit send, but just wait for the screen to clear. When it does, restart the phone. --Louis'. Below this, it says '2 comments'. The first comment is from 'Metvlamott' with a purple 'M' icon, saying 'Totally worked! Thank You!!!'. The second comment is from 'Louis D. ★' with a star icon, saying 'No problem. Please let me know if there's anything else I can help with.'

directly

Vail Resort's digital assistant



snow conditions, lift line wait times, parking, and where to snag a late night cocktail, a family-friendly meal or a more fashionable ski jacket.

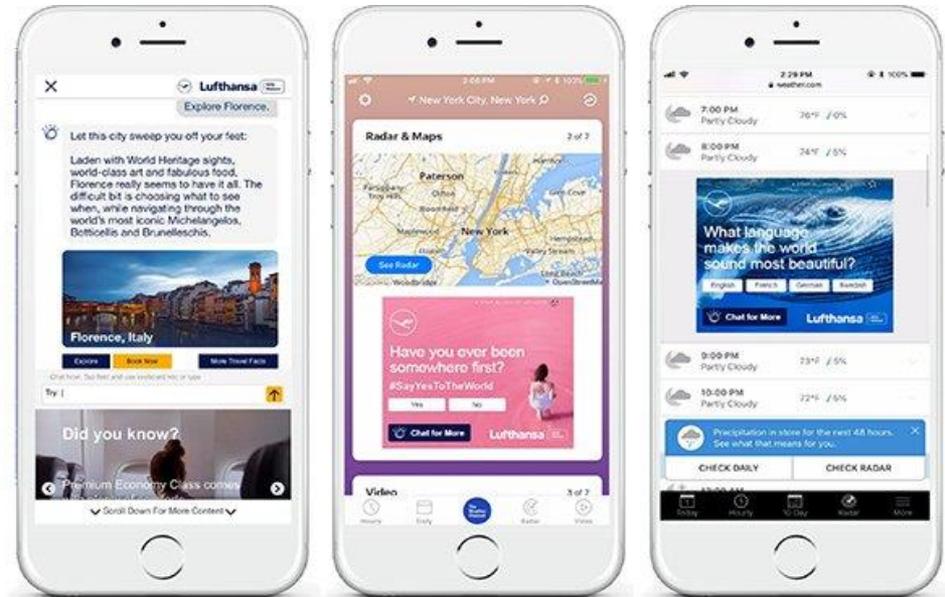
Order groceries for pickup from Kroger

- + Voice interaction through iOS, Android, and Google Assistant devices
- + Fred Meyer, Fry's Food and Drug, QFC, King Soopers, City Market, and Ralphs



Lufthansa: Conversational ads

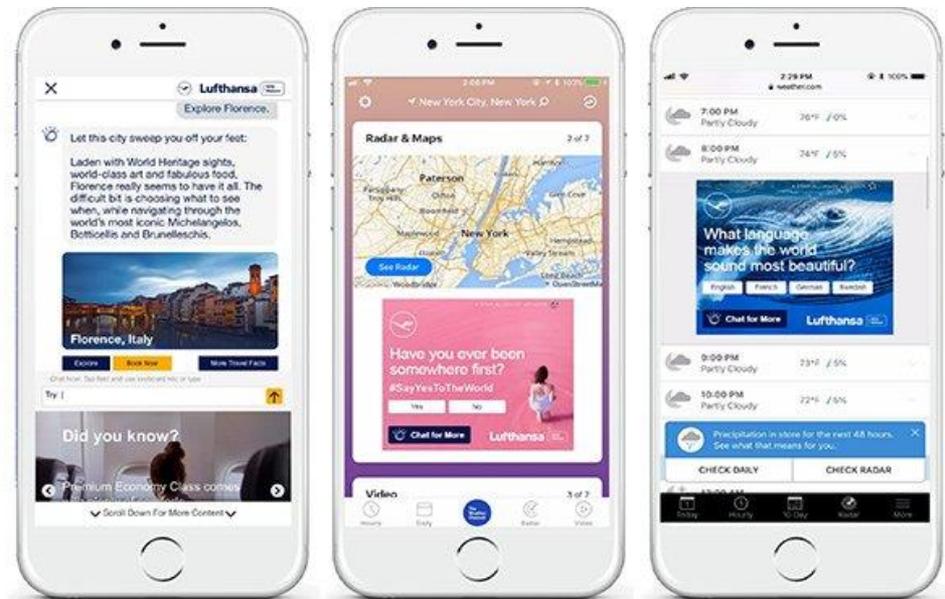
- + General airline questions
- + Travel content across 15 European destinations
- + "Where in the world would you pause time?"



Based on IBM Watson natural language processing

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Truly ENGAGE prospects

LEGO conversational advertising

- + LEGO
 - + After they've answered a few questions, customers are guided to the best matching LEGO gifts
- + Based on IBM Watson technology
 - + IBM Watson Ads



Life insurer Blue's chatbot ad

- + Chatbot "Blue Guru" tripled engagement compared to traditional banner ads
 - + On average, users interacted with Blue Guru at least three times
- + Within 24 hours from the cognitive ad launch
 - + 1,200 email addresses were collected
 - + 2,500 new followers were added across several social media platforms

Hong Kong's first digital life insurer

Simple, flexible insurance with zero commission

Autodesk chatbot sells software on the web site

- + Computer-Aided Design (CAD) software
- + Chatbot based on machine learning and Google technology
- + Results compared to previous automated info solution
 - + Three times the chat engagement
 - + 109% more time spent on a page

Swedish Ferry company Stena Line

- Chatbot "Stena"
- UK market in English
- Departure times and prices and FAQs
 - "Can I bring a pet on board?"
 - "How do I change a booking?"
 - "What time do I need to check in?"



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 - "What time do I need to check in?"
- Stena asks for confirmation it provided accurate info
 - If not, used to improve the coverage



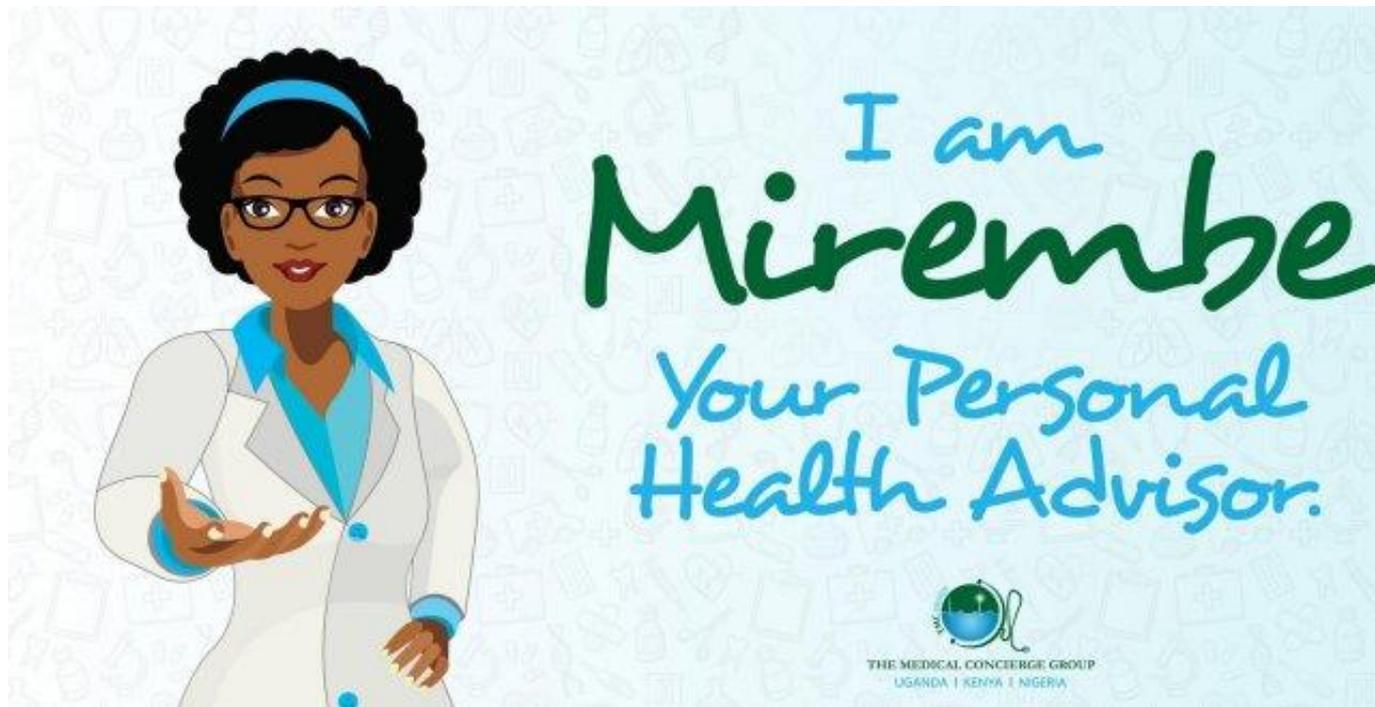
Tencent Holdings' digital assistant for WeChat

- + "Xiaowei" for WeChat helps the Chinese messaging service's billion-plus users with simple tasks
 - + Such as playing music and hailing a ride
- + Link to many of Tencent's own services such as QQ Music
- + Also to apps from third parties such as **Meituan Dianping** (food delivery and ticketing) or **Didi Chuxing** (ride-sharing)



The Medical Concierge Group (TMCG), Uganda

- + Free triage and care advice for health symptoms in Facebook Messenger



India-based Grofers

- + Low-price online supermarket
- + Problem: Major sale expected to overwhelm human agents
- + Solution: **Haptik** built and deployed a conversational Support Bot in two days (adapting it after deployment)
- + FAQs
 - + *About the Sale*
 - + *Cashback/Refund Issues*
 - + *How to Redeem 100% cash back*

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- + Result: **Handled 75% of customer queries without the need for human intervention**

Orange (Formerly France Telecom)

- + Digital assistant Djingo
- + Includes buying products through Amazon



A digital assistant can help employees as well as customers

- + Human Resources
- + Access to enterprise software

Salesforce “Einstein Voice”

- + Employees
 - + Personalized daily briefings
 - + Conversational updates to Salesforce via
 - + Salesforce Mobile App
 - + Smart speaker
- + Customers
 - + Customer-facing Einstein Voice Bots connected to Salesforce



“Okay, give me my Salesforce daily briefing ...”

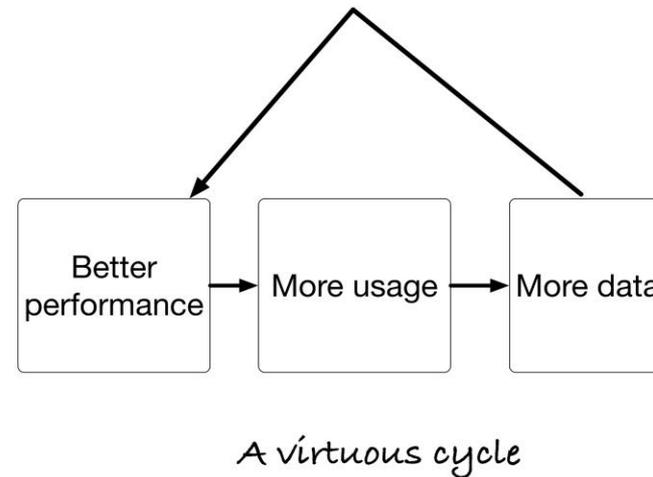
- ✓ Start your morning with a voice-activated briefing
- ✓ Customize and highlight the actions you care most about
- ✓ Access your briefing through Siri, Google, or Alexa

The technology is beyond the “tipping point” of utility

- + Speech recognition and Natural Language Understanding
 - + Conversational systems
- + Driven by availability of data and computing resources
 - + Machine learning and Deep Neural Networks
 - + Continuing investment by deep-pocketed firms and startups

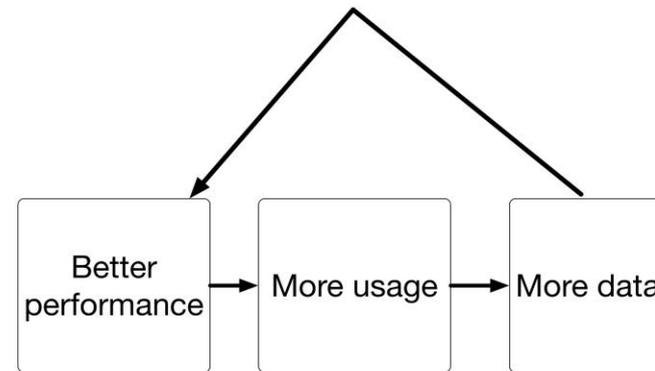
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A virtuous cycle

Companies learn by
deploying

Questions?

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