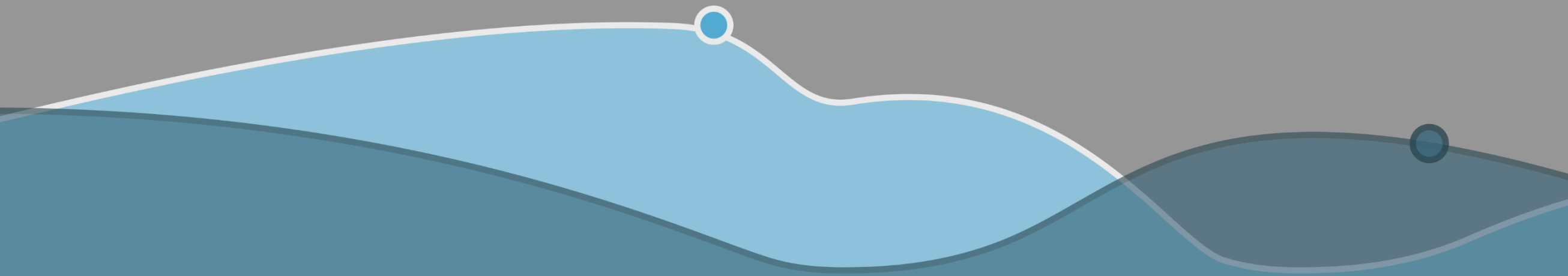




Cortana Analytics Workshop

Sept 10 – 11, 2015 • MSCC

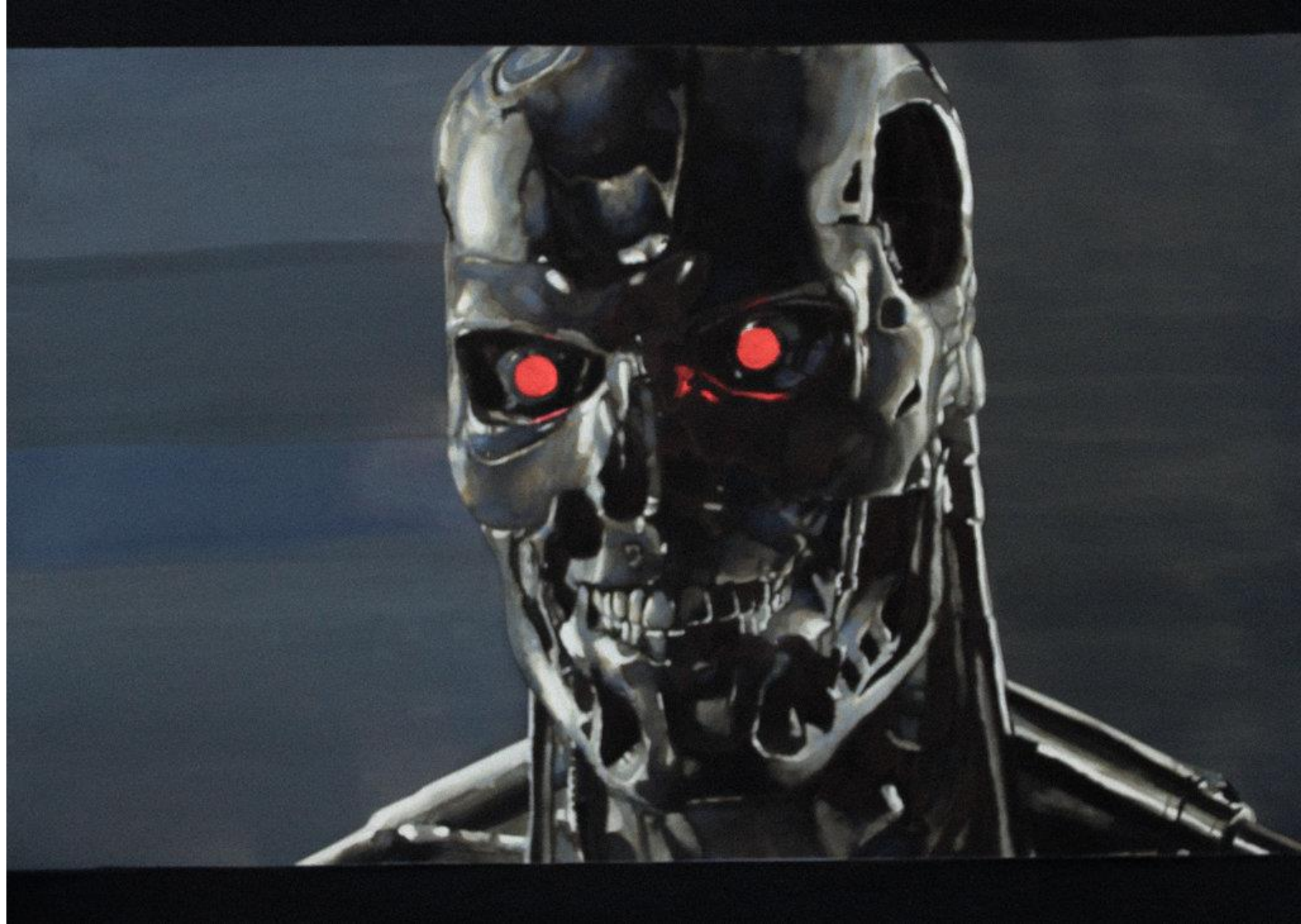


AI: Assistive Intelligence

Marcus Ash
Group Program Manager
Windows PC, Tablet and Phone



The future we
were warned
about



Customer's reality

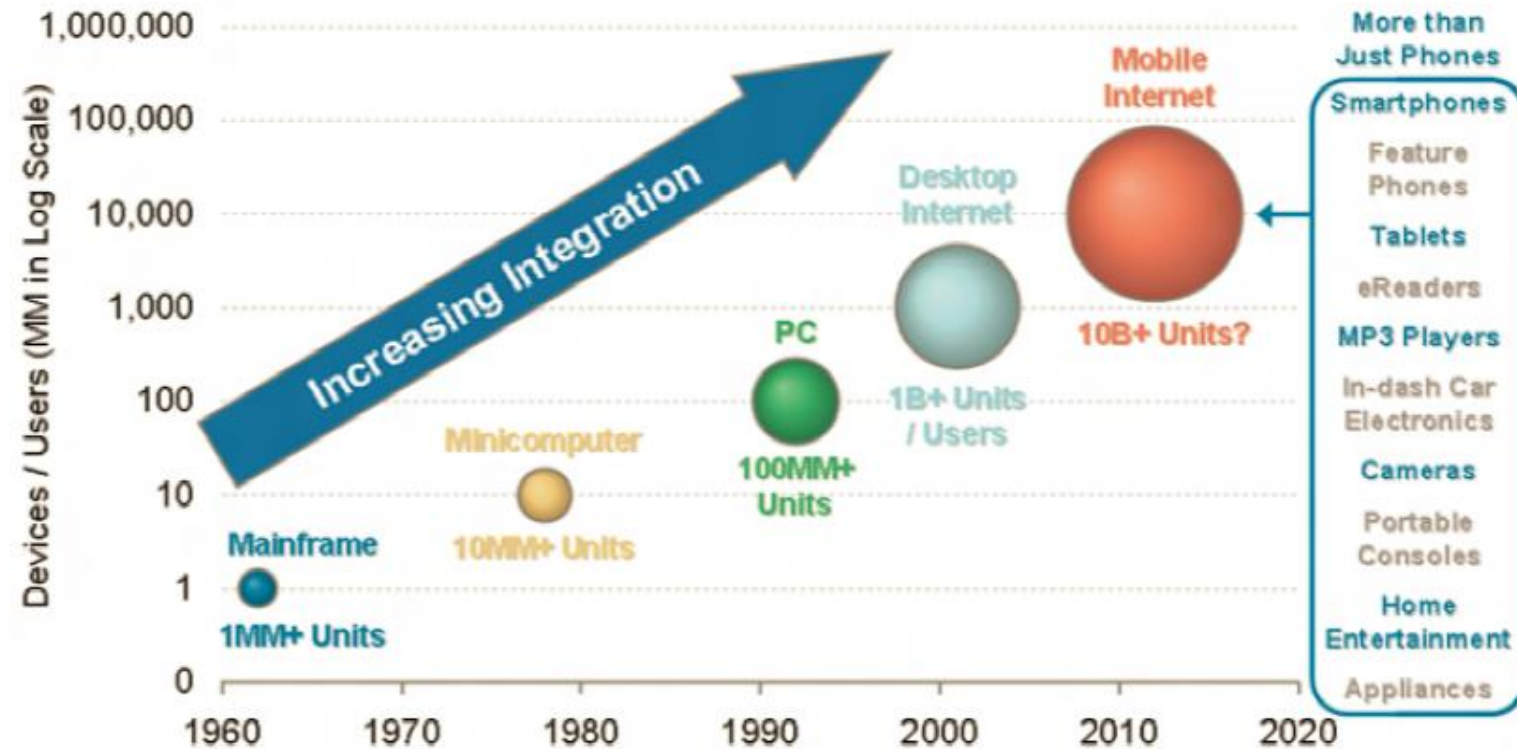


Each New Computing Cycle = 10x > Installed Base than Previous Cycle

Exhibit 29

**Each new computing cycle typically generates
around 10x the installed base of the previous cycle**

Devices or users in millions; logarithmic scale



**What would
a real
personal
assistant do?**



Cortana.

**A personal assistant
not for all of us, but
for each of us and
with you everywhere**

1. Natural Interaction

2. Productive

3. Trust

4. Proactive Intelligence

Natural interaction \neq Speech

Consistent

Contextual

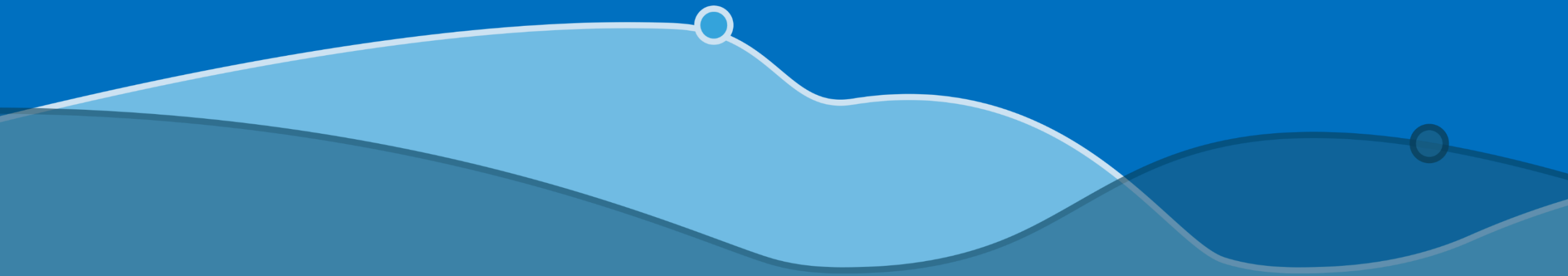
Emotional

Before the demo...

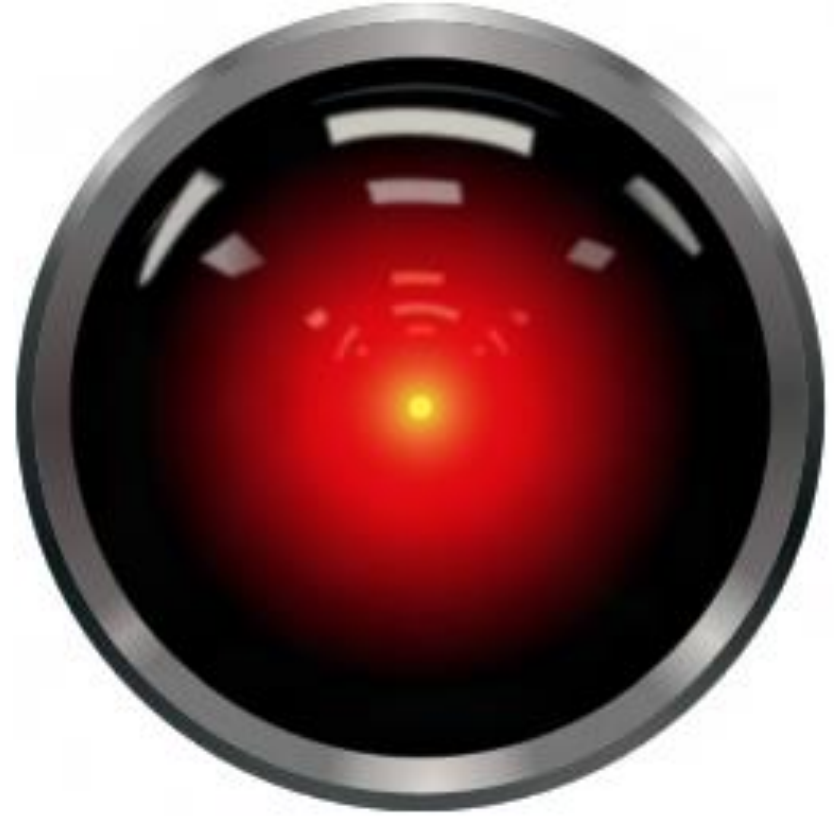


Demo

Cortana on Windows 10



**I'm sorry Dave
I can't do that.**



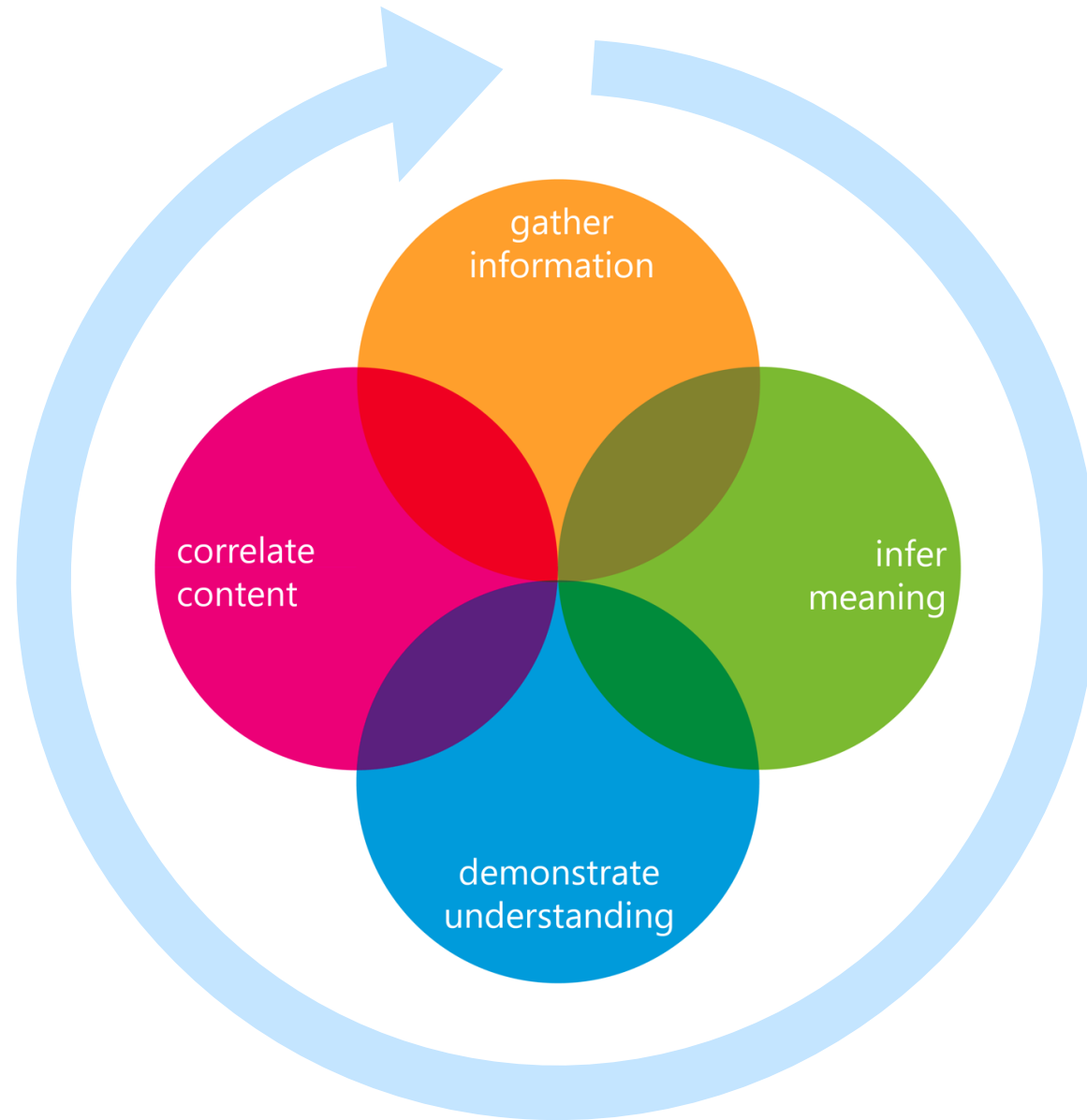
Cortana.

A personal assistant not
all of us, but for each of
and with you
everywhere

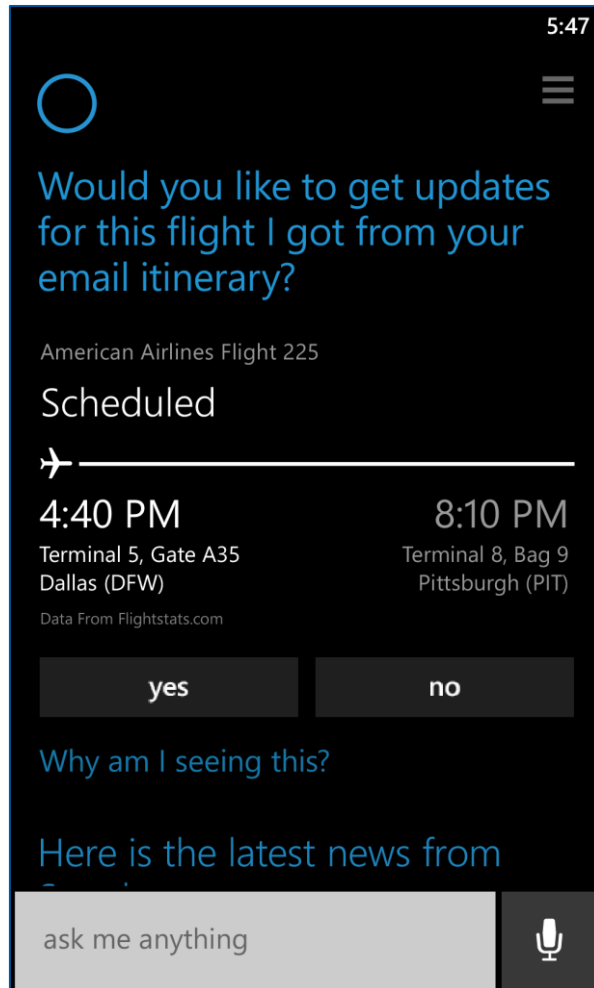
3. Trust

Circle of trust

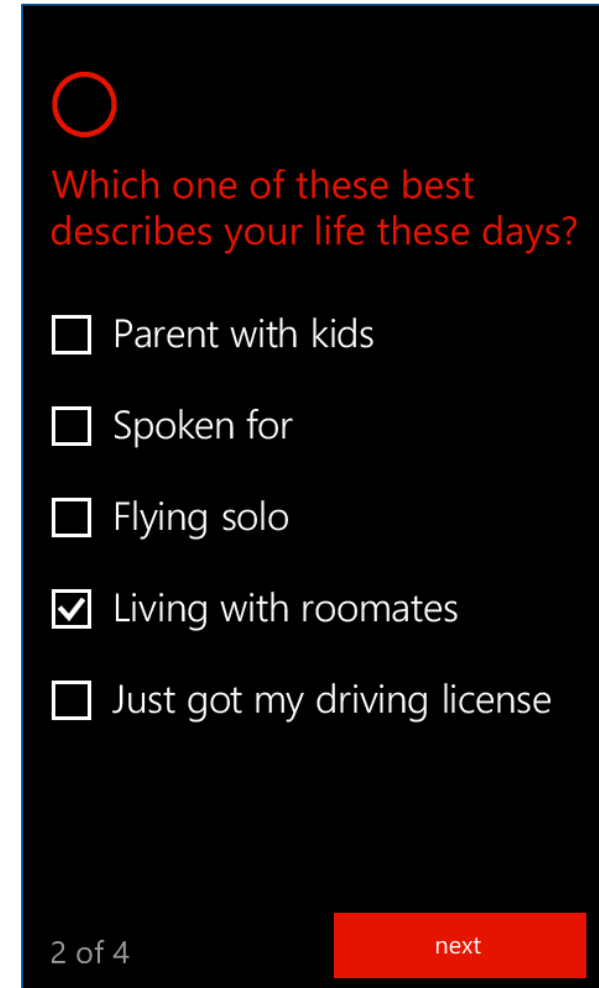
Trust will build over time
if customers receive
Clear value
Transparency & control



Using questions to solve hard machine learning problems



Flight chat



Cortana first run question

What is memory for a personal digital assistant?



Remember this



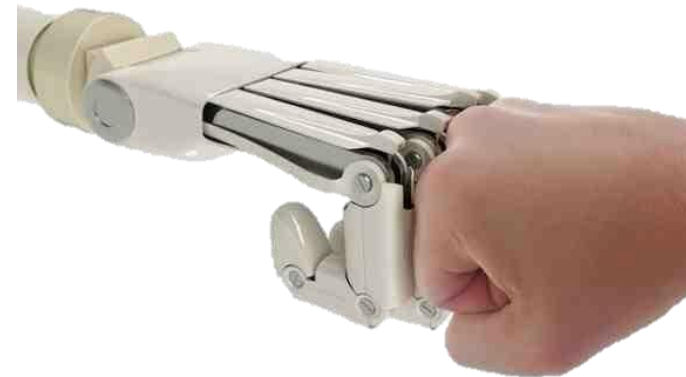
Not this

Personality matters

Q: Are computers just tools?

Cliff Nass: "No, these things talk, they have relationships with you, and they make you feel good or bad."

1. People are likely to assign a personality to a system, whether personality in that system is by design or not
2. People are more tolerant of mistakes when a system displays a personality
3. Ambiguous personalities are universally disliked



Cortana's personality traits

friendly - not mean or rude

confident and competent

transparent

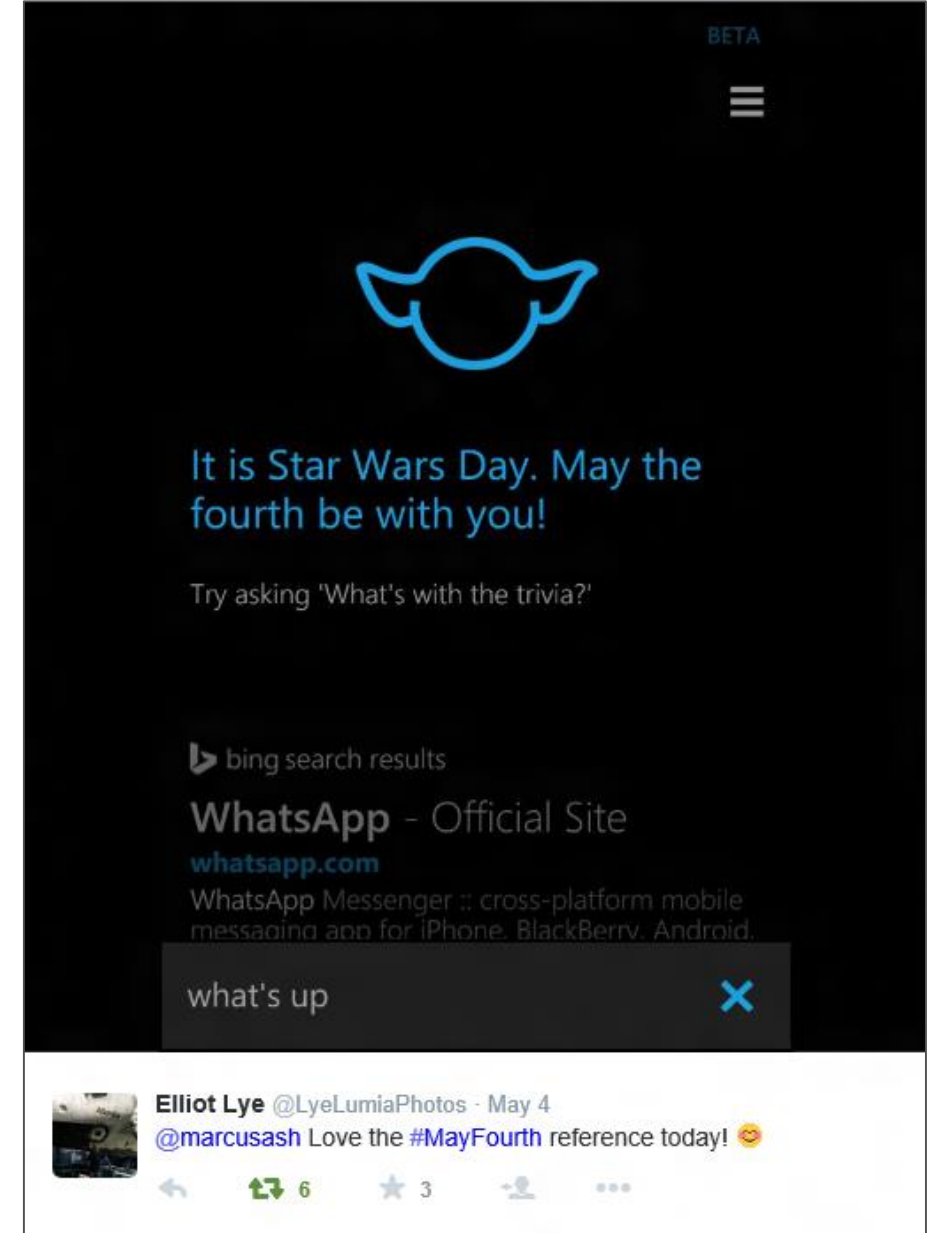
caring

won't tolerate meanness or rudeness

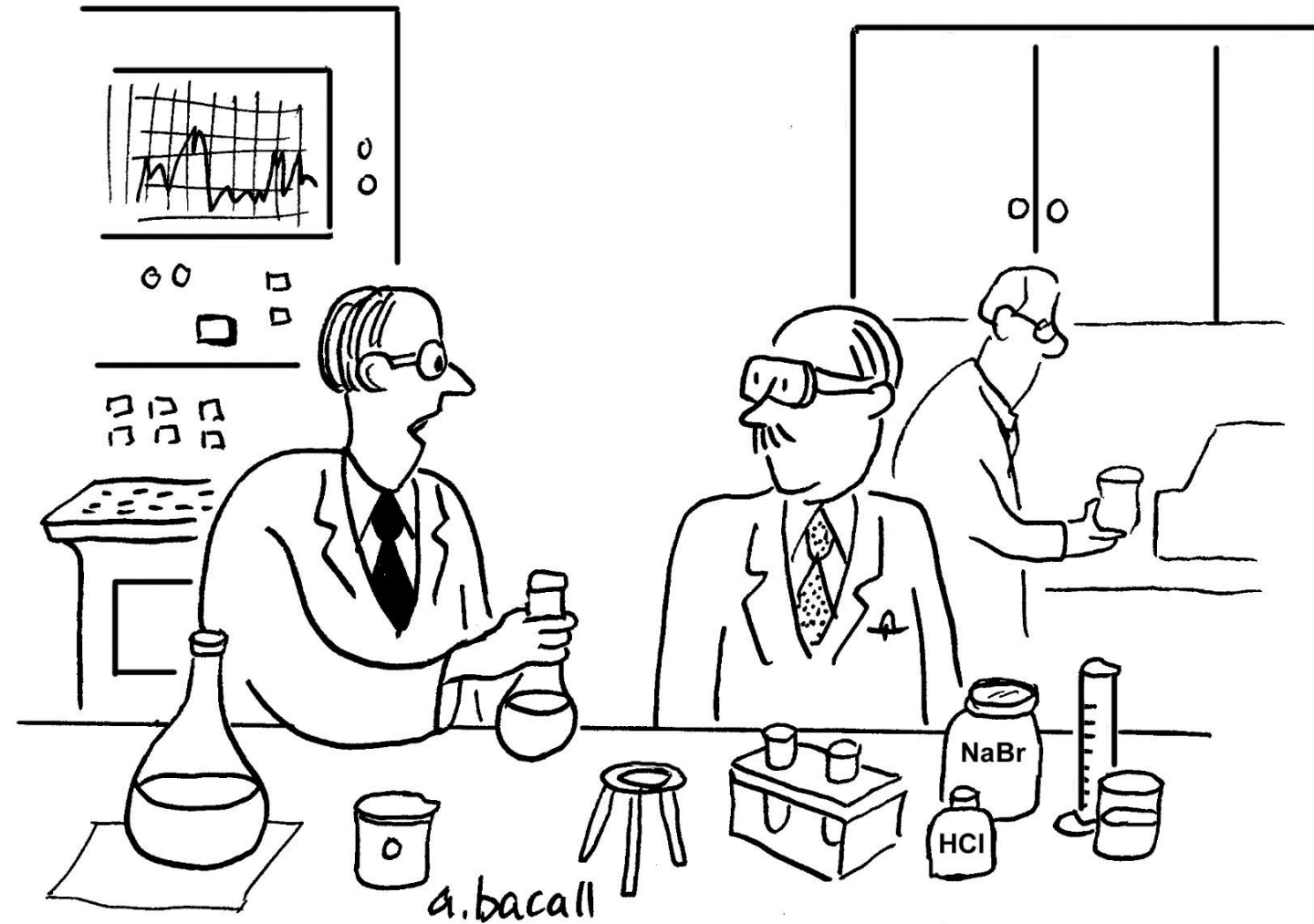
fun - clever over funny

knows she is AI (not trying to be human)

culturally relatable



How do we design for mistakes?



"I find that if you want to reach your goal sooner, double your failure rate."

Cortana.

A personal assistant
all of us, but for each
and with you
everywhere

4. Proactive Intelligence

Cortana X Product Vision

And what did I do? Nothing. It's just there. Freakin' fantastic.

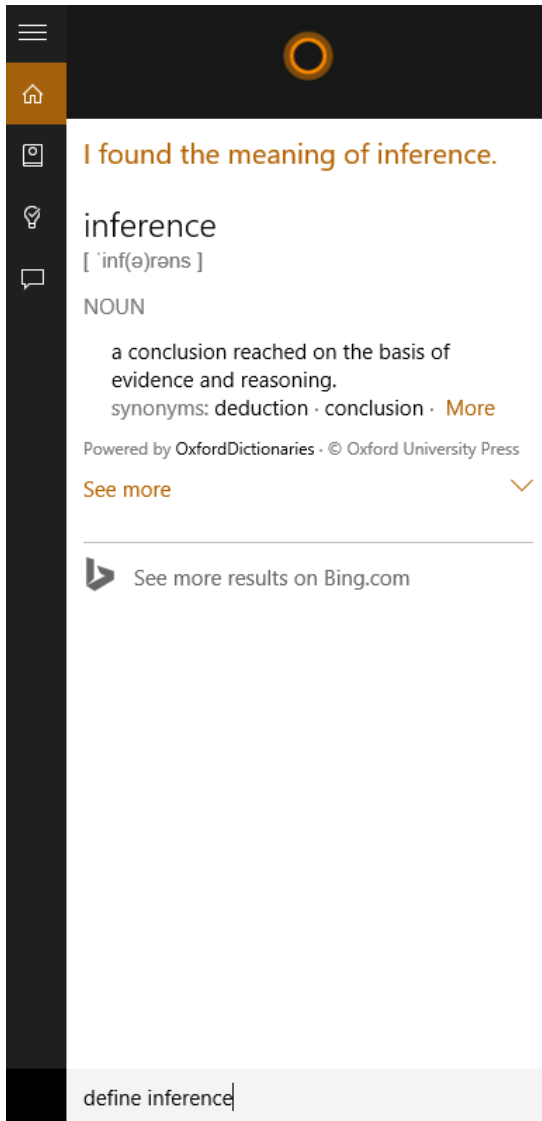
From: <name omitted>
Sent: 5/4/2015 4:54 PM
To: [Joe Belfiore](#)
Subject: random cortana praise

Saw this on my FB wall today from a former apple user

"Cortana is amazing. It discovered my Dublin trip from my emails, shows me my flight plan, gives me a map to the airport with optional navigation, current 5-day weather forecast for my destination, etc. And what did I do? Nothing. It's just there. Freakin' fantastic"

Thought you'd like that 😊 Sums up the value add of Cortana quite nicely.

Make the user experience as broad as the definition



How can inferences help...

...with your daily habits and rituals?

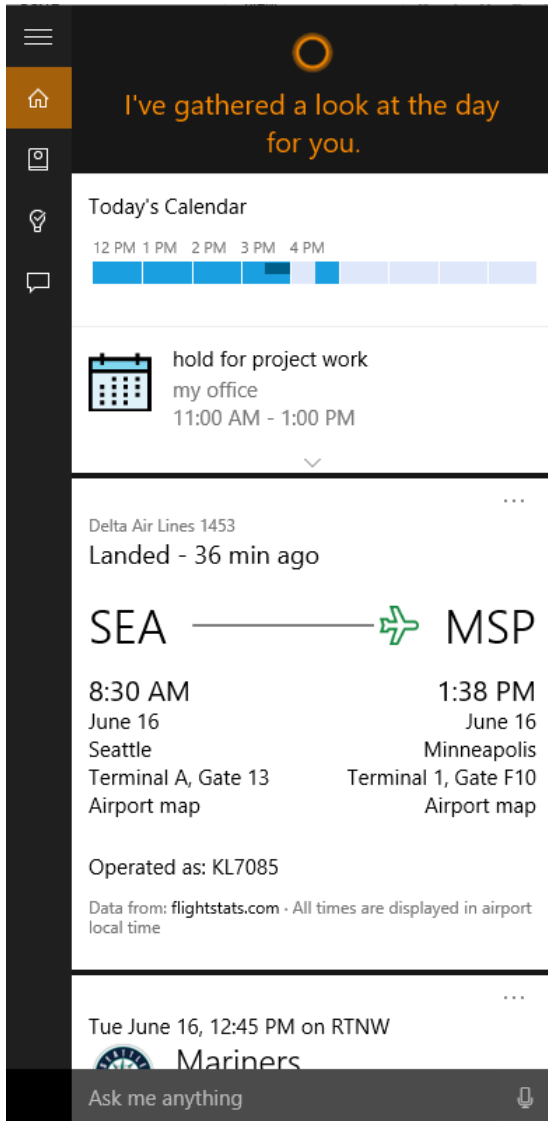
...by knowing when you are off your routine and need help?

...by using a known fact about your current situation to add intelligence to an experience (e.g. you are driving)?

...by leveraging what she knows through the experiences of other humans?

...create the emotions of interacting with a human?

Intelligence design as a continuous experience



How can Cortana keep me on track to get this project done?

My mom's flight landed. Did she make it safely? Is her next flight on time? When will she get home?

The future of intelligence isn't just about me

The fastest drivers spend a lot to save a little

Compared to drivers who average 65 MPH on the highway

SLOWEST 10%

55 MPH

AVERAGE HIGHWAY SPEED

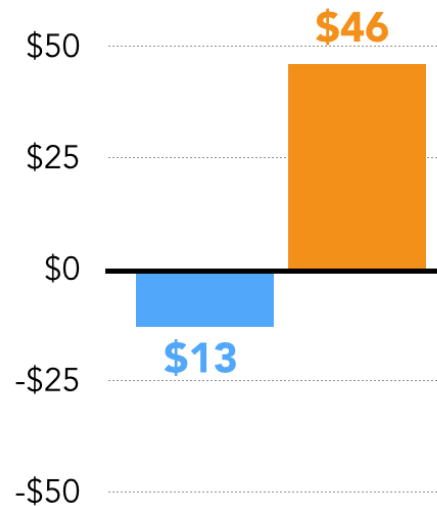
FASTEST 10%

70 MPH

AVERAGE HIGHWAY SPEED

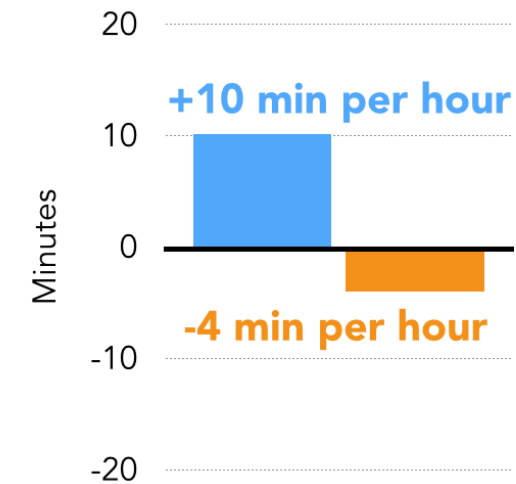
Gas cost difference

PER MONTH (1000 MILES)



Travel time difference

PER HOUR OF DRIVING



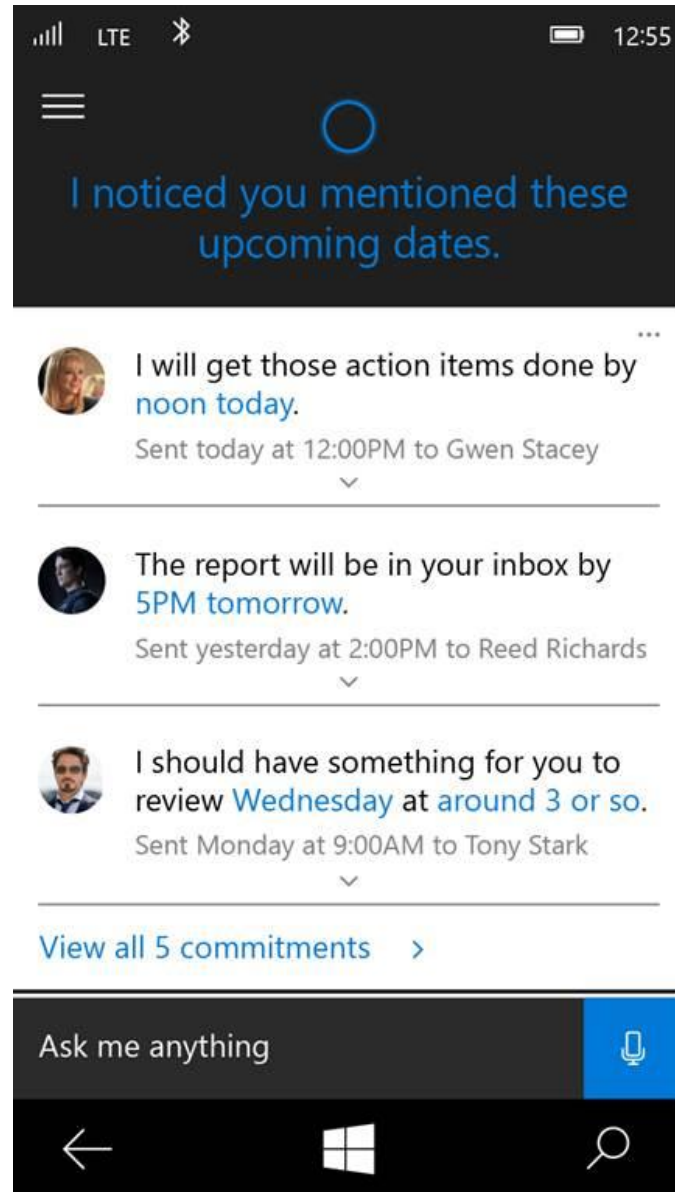
Source: Analysis of Subaru Outback drivers at <http://blog.automatic.com/cost-speeding-save-little-time-spend-lot-money/>

Give humans superpowers based on machine strengths

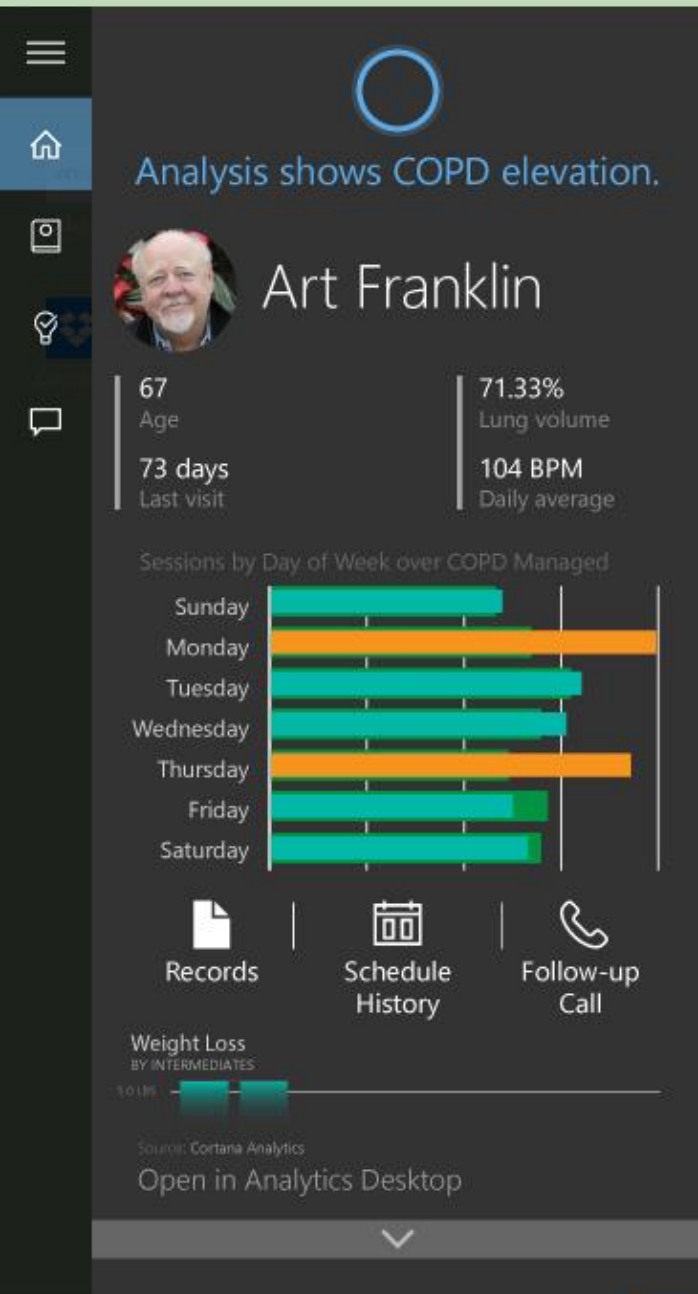
Humans struggle with...	Devices (with the right data) are good at...
Bias and Judgment	Pattern Analysis and Objectivity
Delayed Gratification	Modeling Potential Future Outcomes
Remembering and Organizing	Categorizing and Tracking
Multi-tasking	Filtering

Huge opportunity in augmenting human-led decision making and helping changing habits/behaviors

To Do list with additional no work required?



Future possibilities for turning insights into action





Attributions

- [Slide 3 image NuvaTube](#)
- [Slide 4 image Cory Doctorow](#)
- [Slide 5 from Mary Meeker @KCPB 2014 Internet Trends](#)
- [Slide 9 from Nandesuka](#)
- [Slide 11 from Cryteria](#)