Intelligent Assistant Trends

Over 50% of Apple and Android phone customers use Personal Intelligent Assistants with Natural Language interfaces

~20% use them daily

"Millions" Amazon Echo devices sold

Recently launched Google Home gaining share

Intelligent Assistant Trends

Today, Intelligent Assistants tend to be general purpose and tied to a device or platform

Enterprises are starting to deploy Intelligent assistants on specific channels

Intelligent Assistant Trends

Where do the general purpose and enterprise intelligent assistants Intersect?
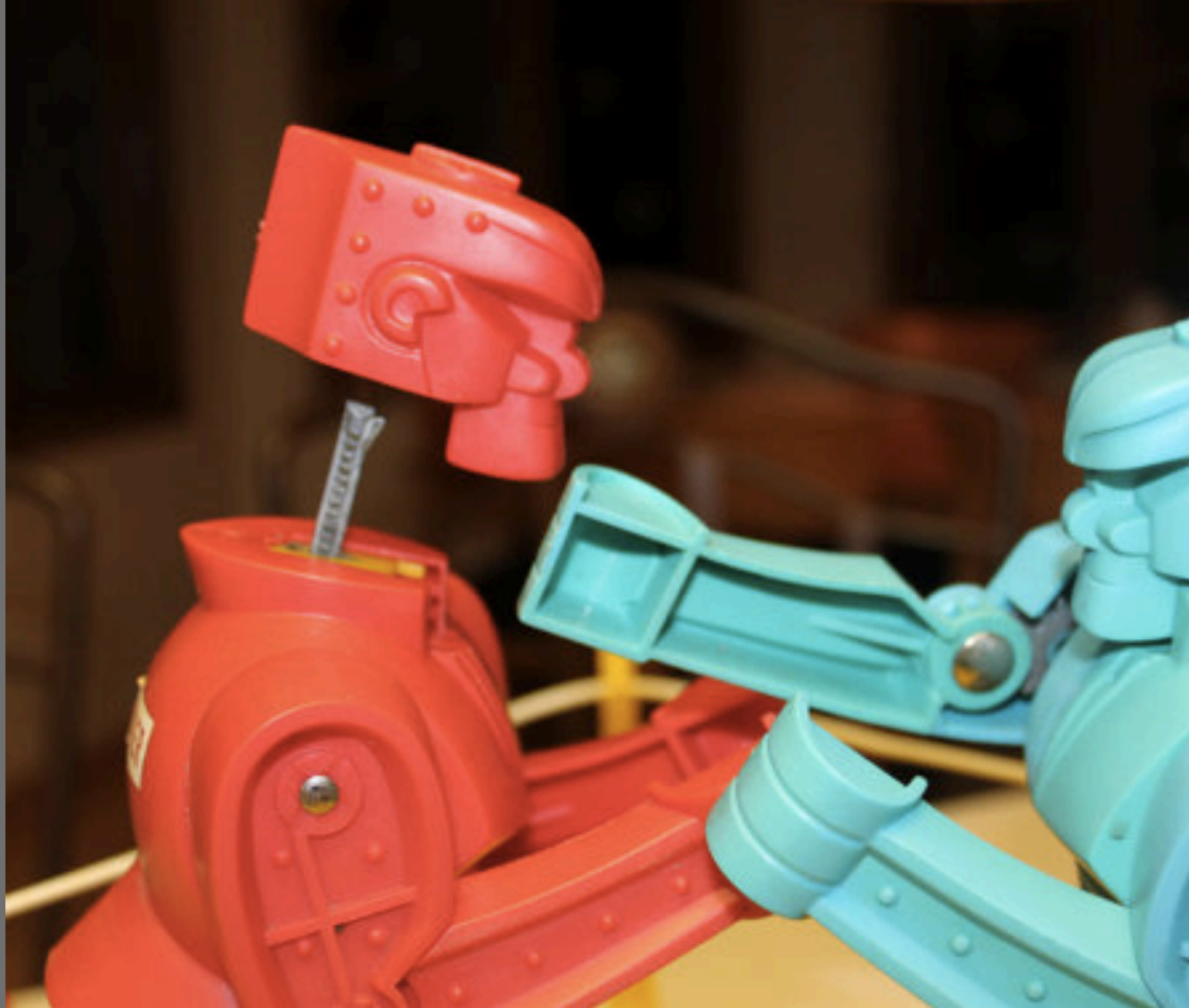
Challenges Facing Enterprises

"I am starting to build a separate bot for every channel"

"I have very little technical leverage – resources are spread"

"I have my own needs, content, language, product and services"
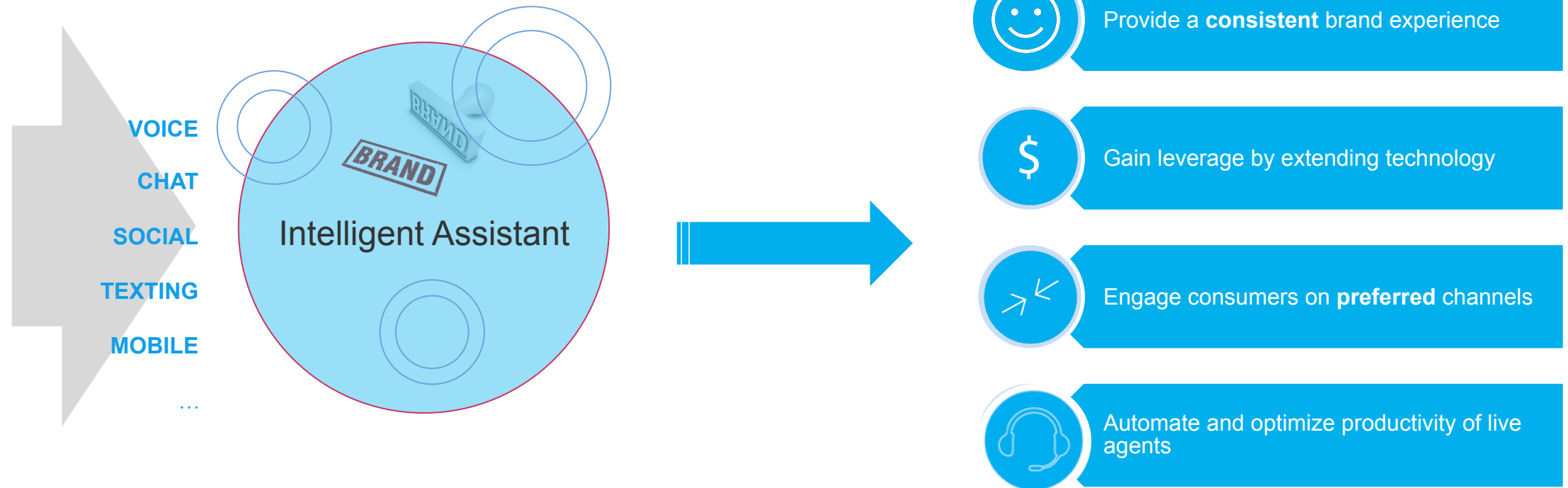
"My brand is getting lost"

→ PVA vs EVA

→ Most of the data is hidden/private Enterprise data

→ Customization is critical

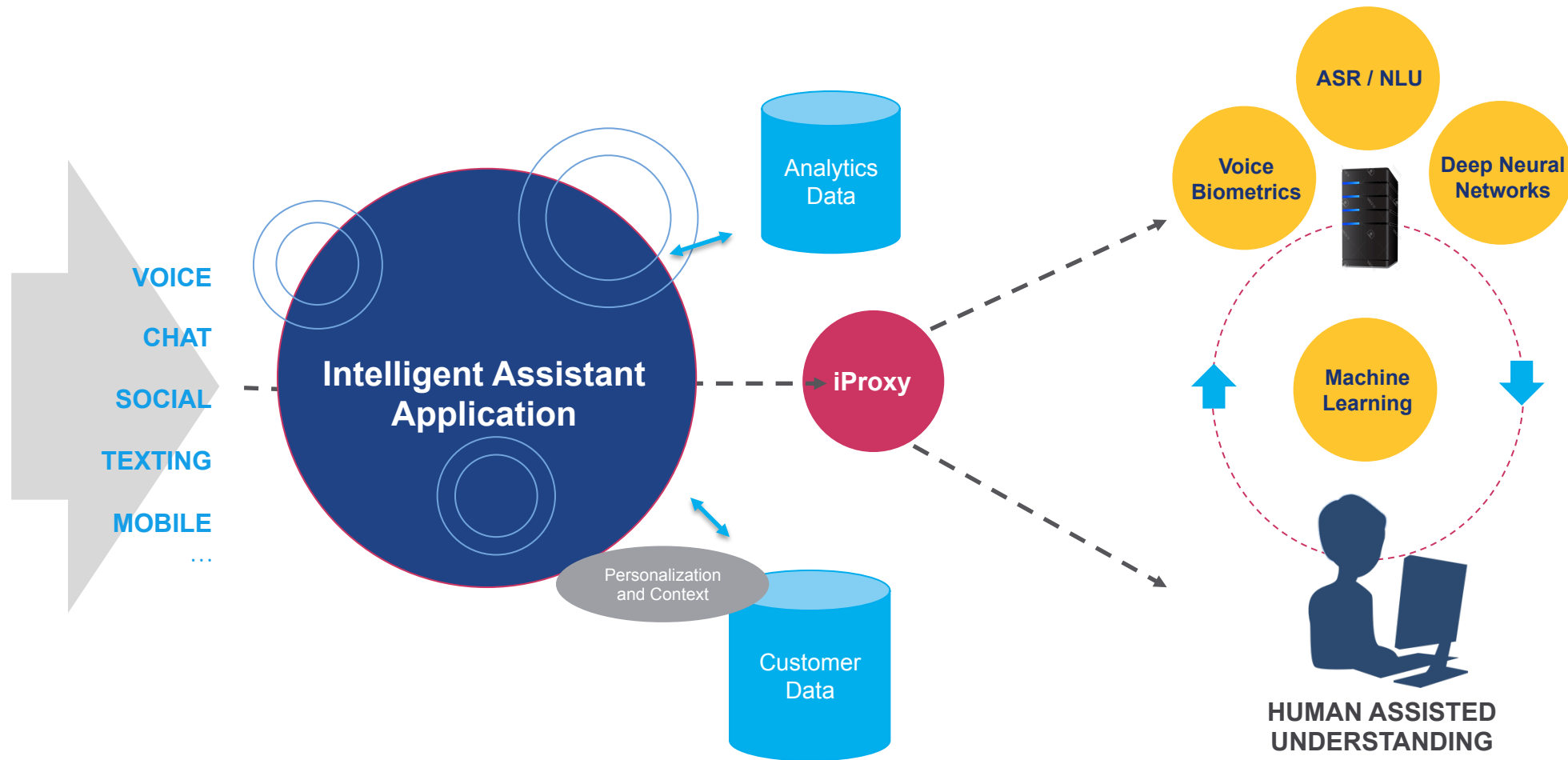# CHALLENGES – NLP AND UNDERSTANDING FOR ENTERPRISES

- **Text:** For my rx meds glumetza and generic Lipitor refills …pls change qty from 3 mnths to 1 month

- **Text**: Galexxy 7 screen is graet but itsbattery life sucks & power supply keeps breaking

- **Text:** hello ! i was reading about the upgrade program and wanted to preorder online with the upgrade program friday , but i realized i don't have a credit card , i only have a debit card , will this not work ?

- **Text:** hi , i am about to order my computer online here - i live in portland , or . typically i would go downtown and buy it directly , as i work for xxx and often use my 10 % discount for products . however , its a mad house out there and i have no desire to head downtown to pick it up directly . i read on the site earlier that 2 hour carrier delivery service is sometimes available in certain cities . is this possible in portland , or ?

- **Voice/ASR:** i had trouble with the um remote control that they sent me uh when i purchased it i purchased it from uh xxx but they went to you they called y'all and got it for me it was because the other one tore up and now this ones torn up and it hasn't been that [.frag] it hasn't been that long ago since i got this and i'm frustrated

- **Voice/ASR:** to have a um service or somebody come out to check a new TV that was delivered yesterday there appears to be a crack in the screen and i called and they said that it's under manufacturer warranty and they can have somebody come out and replace it

OPPORTUNITY FOR ENTERPRISES

VOICE

CHAT

SOCIAL

TEXTING

MOBILE

…

Intelligent Assistant

BRAND

Provide a **consistent** brand experience

Gain leverage by extending technology

Engage consumers on **preferred** channels

Automate and optimize productivity of live agents

A single consistent Intelligent Assistant that extends your brand and services across all channels

TECHNOLOGY LEVERAGE FROM A SINGLE AI STACK

VOICE

CHAT

SOCIAL

TEXTING

MOBILE
…

Intelligent Assistant Application

Analytics Data

Personalization and Context

Customer Data

iProxy

ASR / NLU

Voice Biometrics

Deep Neural Networks

Machine Learning

HUMAN ASSISTED UNDERSTANDING

CONVERSATIONAL AI: MULTIMODAL CUSTOMER CARE

> Intelligent interactive applications empowered by natural modalities to make it effortless for users to access information and execute tasks

Natural Input and Output

- Speech recognition and synthesis
- Motivation:
  - *Vast range of commands through single point of entry*
  - *Natural language*
  - *Key for mobile, hands free*

Multimodal

- Gesture / Visual displays
- Multimodal integration
- Motivation:
  - *Input/output by most effective means*
  - *Maps and other visual displays*
  - *Adapt to environment: physical/social*

Conversational

- Multi-step cooperative dialog
- Motivation:
  - *Enable fulfillment of complex intents through multi-step interaction*
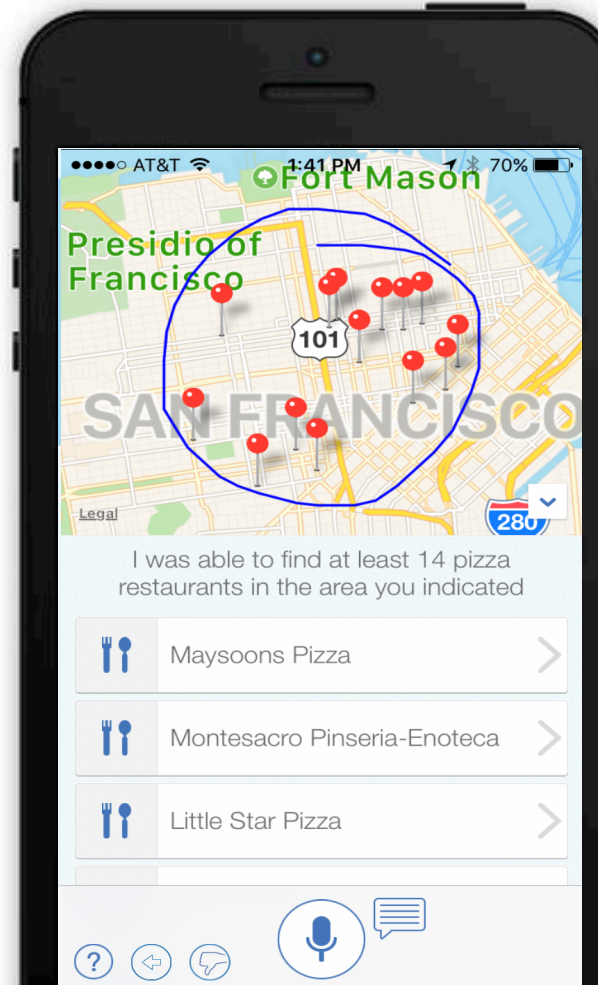
Contextual

- Interpret user input with respect to flow of conversation, history, local knowledge, etc.
- Motivation:
  - *Natural, concise interaction*

Adaptive

- Machine learning technology applied throughout
- Motivation:
  - *Learns from experience*
  - *Performance improves with use*

Personalized

- Knows who you are
- Speaker verification/ID
- Proactive adaption to user
- Motivation:
  - *Effortless, retain user*

WHO WE ARE

Interactions was founded on the belief that the combination of machine and human intelligence could improve the way businesses and their customers communicate.