


Building Next Generation of User Experience using the Kinect Ambient Intelligence Framework

INTRODUCING KAIT (KINECT AMBIENT INTELLIGENCE TOOLKIT)



Computers + People = ?

ARE WE HAPPY WITH HOW WE INTERACT WITH COMPUTERS?



The real problem...

SMEARING THE FROSTING WHILE RUNNING OUT OF GAS.



Next Generation of User Experiences – Ambient Intelligence

SENSORS, DEVICES, IOT AND ML = MORE PERSONAL COMPUTE (MPC)

Ambient intelligence?

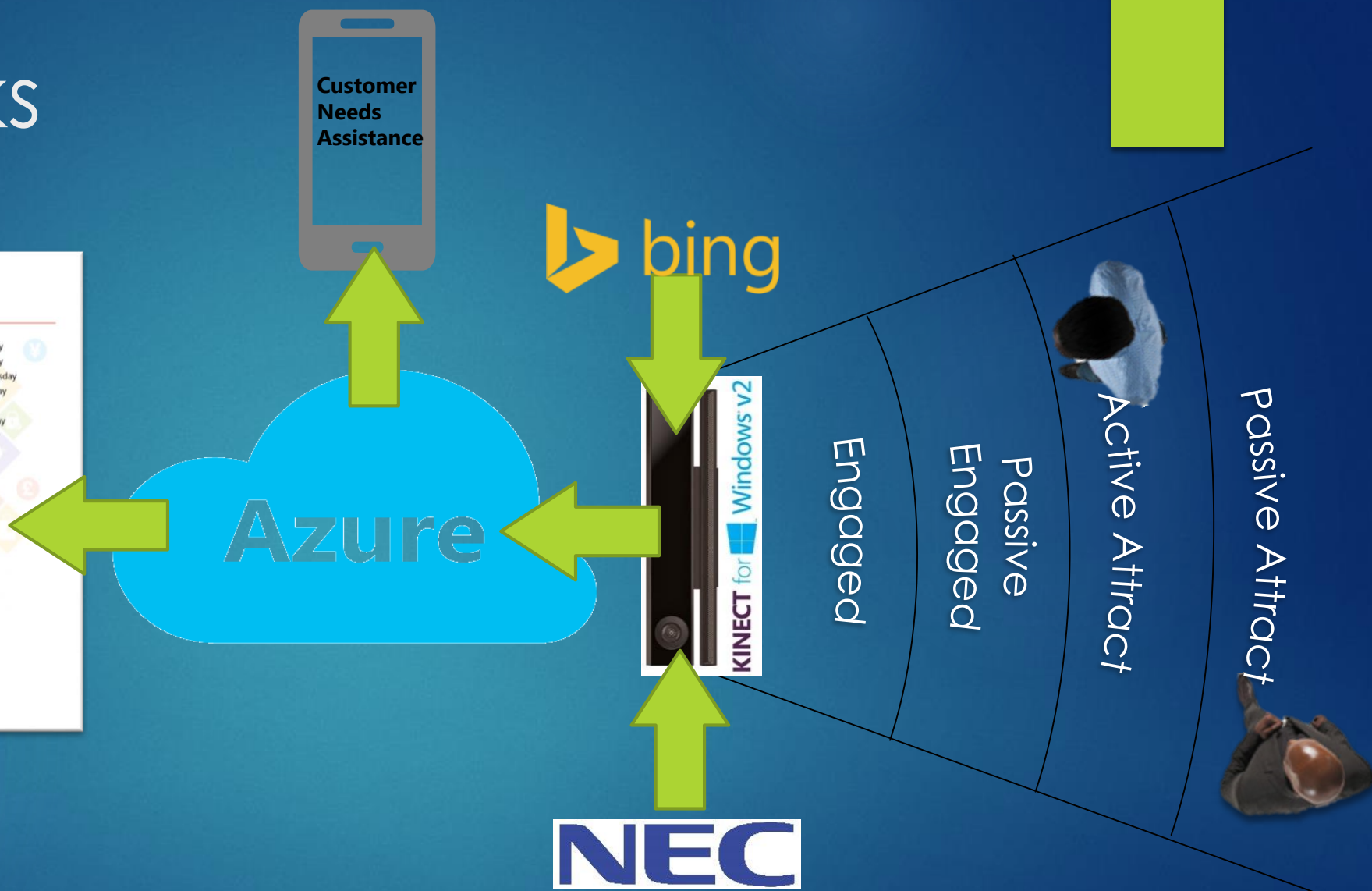
- ▶ Engage quests, users or visitors more naturally
- ▶ Make the environment sensitive to a users needs
- ▶ Augment existing infrastructure to support transparent user engagement
- ▶ Understand a users intent
- ▶ Do it in weeks not years
- ▶ Don't require a PhD

Introducing KAIT

KINECT AMBIENT INTELLIGENCE TOOLKIT (KAIT) – ENOUGH TALK SHOW
ME THE MONEY



How it works



Solution - KAIT

- ▶ Combine the power of Sensors , IoT and Big Data
 - ▶ Windows
 - ▶ Kinect
 - ▶ Visual Studio
 - ▶ NEC Biometric Services
 - ▶ Azure Event Hub
 - ▶ Azure Streaming Analytics
 - ▶ Azure Storage
 - ▶ Azure Notification Services
 - ▶ Azure Data Factory
 - ▶ Azure HD Insight
 - ▶ Power BI

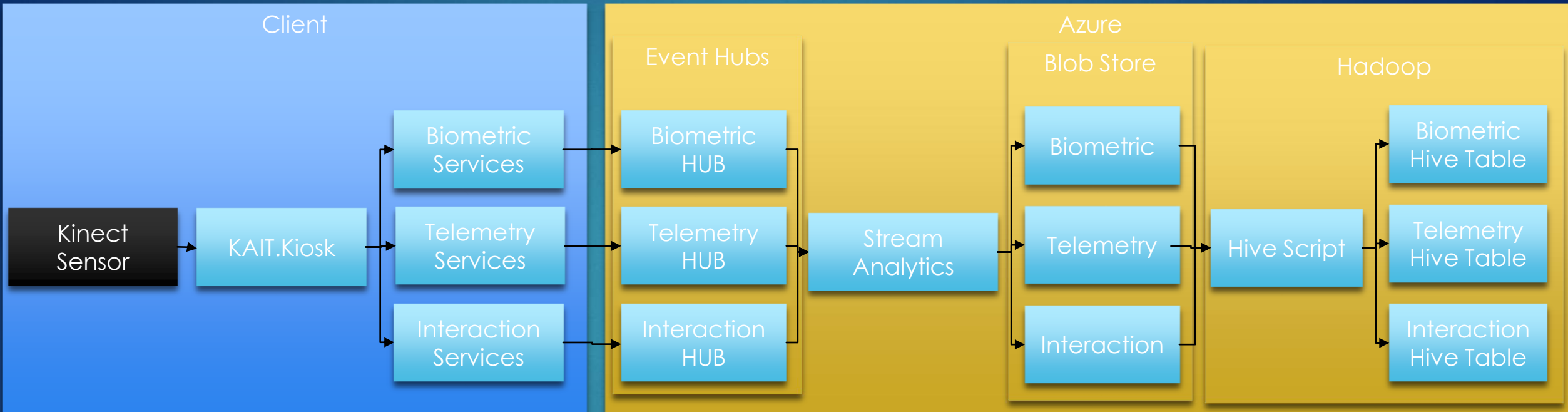
KAIT's Inception

- ▶ KAIT is a transparent computing experience designed to allow people to be people and have the environment change and react based on what they're doing
- ▶ Based on initial collaboration between Target and the Microsoft Technology Center – Minneapolis
- ▶ NEC developed an extension to the Inception work that allows the system to acquire anonymous demographics as well as supporting the world best face recognition API
- ▶ The original prototype was completed in 3 weeks. Pilot version delivered in 3 months.

KAIT's Capabilities

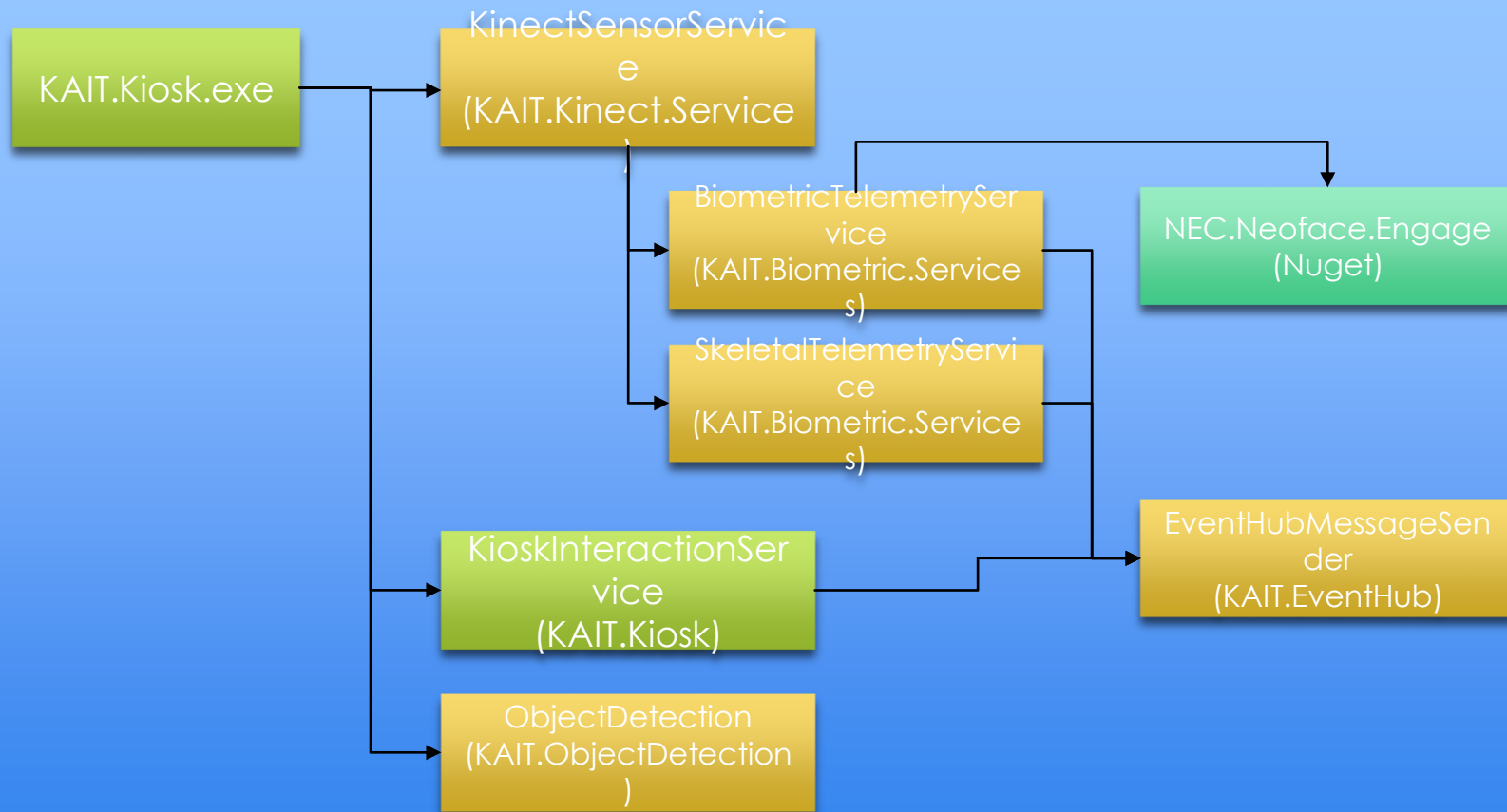
- ▶ Kinect Telemetry Capture
- ▶ NEC Telemetry Capture
- ▶ Azure Scripts to fully automate the deployment of Inception components: Storage, ASA, HD Insight
- ▶ Kiosk Reference App and Code
- ▶ Biometrics and Face Recognition Reference App and Code
- ▶ Basic Object Detection and Interaction Components

KAIT Kiosk high level Architecture



KAIT Kiosk application architecture

Client



External NUGET

External KAIT
Assemblies

KAIT Kiosk Assembly

Core Services Walk thru

- ▶ Kinect Sensor Service
- ▶ Biometric Services
- ▶ Event Stream Services
- ▶ Object Detection Services
- ▶ Kiosk Architecture

Go Dos

- ▶ KAIT + Windows 10 will let you quickly create experiences that border on magic.
- ▶ Go down load KAIT [github/toddvan/kait](https://github.com/toddvan/kait)
- ▶ Join the revolution – KAIT's open source so we're looking for people interested in extending and moding her with new capabilities.
- ▶ Make amazing things!