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# Crafting Enhanced Customer Experience Through Digital Assistants, Beacons and Oracle JET



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Live for  
the Code



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# Program Agenda

- 1 ➤ The customer experience use case
- 2 ➤ Conversational interfaces
- 3 ➤ Augmented reality and proximity sensing
- 4 ➤ Building AR web apps using low-code platforms
- 5 ➤ Demo!

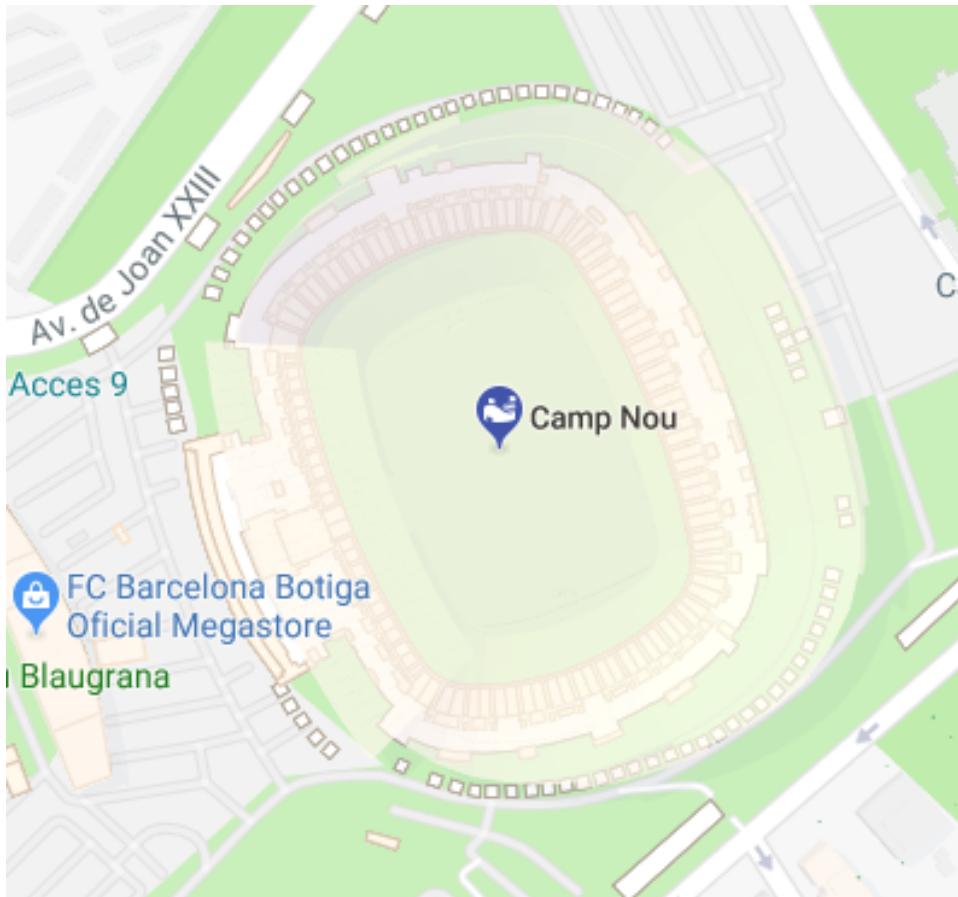
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# An Experience to remember



# Camp Nou- Outdoor Maps v/s Indoor Maps



# The customer experience use case

## Challenges

- Customer service at the venue
- “Where am I?” problem
  - Navigation to specific locations of interest
- Mapping the spaces in the venue
- Retail experience

# Our Proposed Solution



# Program Agenda with Highlight

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# Customer Experience through different channels in Venues



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1. Search for phone number
2. Navigates through IVR
3. Wait on hold indefinitely
4. Eventually chat with agent

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- 1. Open website
- 2. Browse sections
- 3. Download unwanted pages
- 4. Find your query
- 5. Repeat above till you succeed

# Customer Experience through different channels in Venues



- |  |   |   |
|--|---|---|
| <ul style="list-style-type: none"><li>1. Search for phone number</li><li>2. Navigates through IVR</li><li>3. Wait on hold indefinitely</li><li>4. Eventually chat with agent</li></ul> | <ul style="list-style-type: none"><li>1. Open website</li><li>2. Browse sections</li><li>3. Download unwanted pages</li><li>4. Find your query</li><li>5. Repeat above till you succeed</li></ul> | <ul style="list-style-type: none"><li>1. Discover for App in App Store</li><li>2. Download the app</li><li>3. Install Application</li><li>4. Launch and find your query</li><li>5. Delete the app after use</li></ul> |
|--|---|---|

# Customer experience via different channels

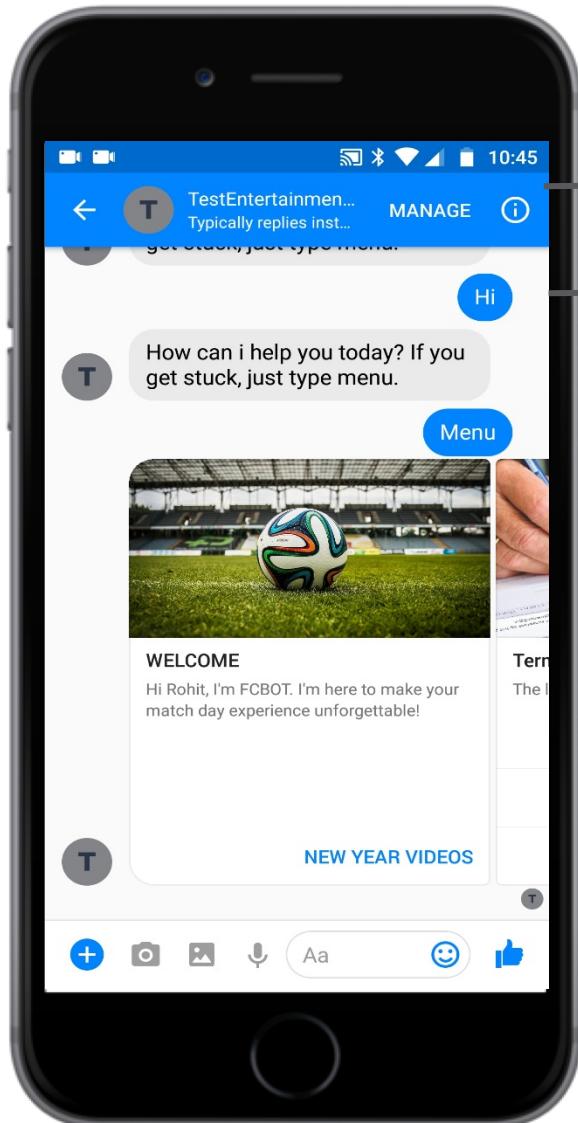
What if...

- You didn't need to buy a paper program
- Use the device which you are already using at the venue!
- You didn't have to download an app
- You didn't have to stick your finger in your ear and shout to be understood
- You didn't have to find the function you needed
- The responses were specific to you, your where and now
- Just speak or type

# What if you could use a messaging app at the venue?



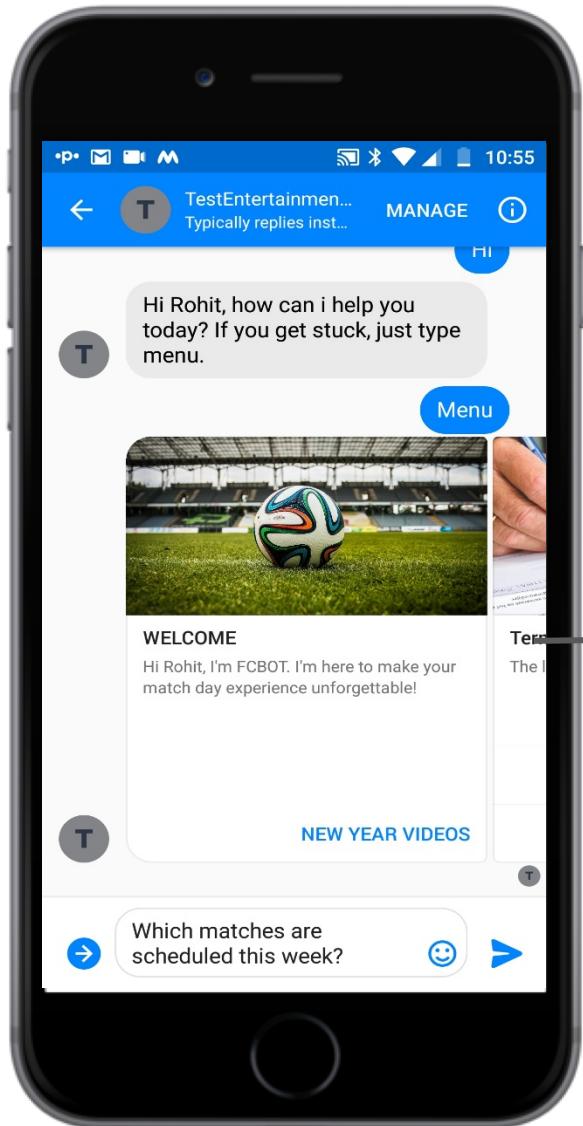
## FCBot, FootBall Stadium Bot 😊



Facebook Messenger Channel

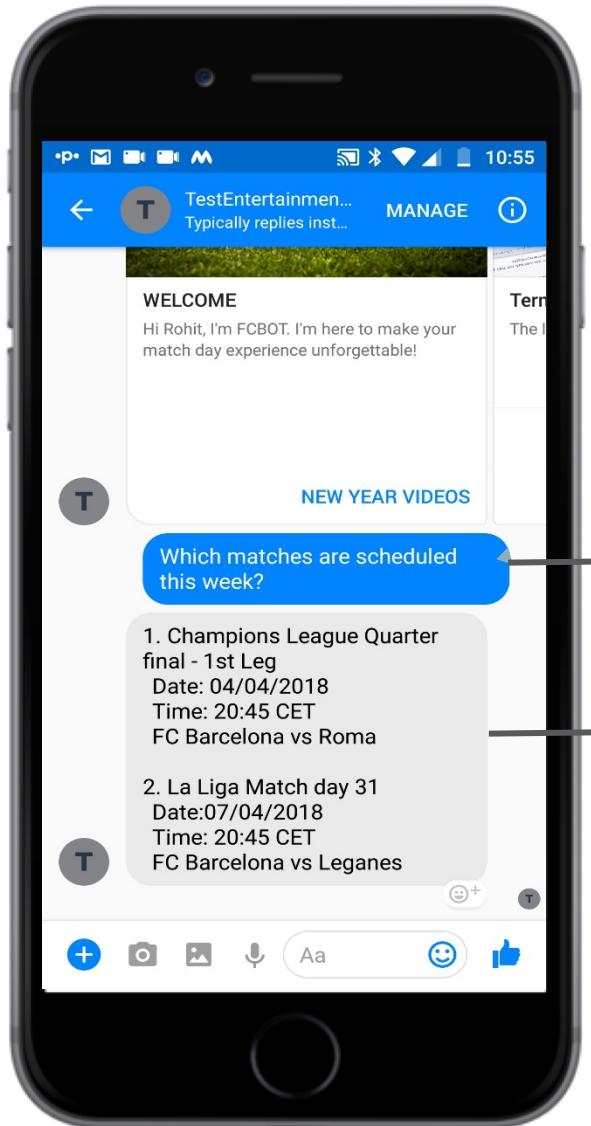
DA parses Greeting intent and  
responds

## FCBot, FootBall Stadium Bot 😊



System components to display specialized interface that includes images, text, cards and action buttons

## FCBot, FootBall Stadium Bot 😊



Entity Extraction

Data Fetched data from external web services, and exposed to chatbot client

Schedule Entity: `timedate`

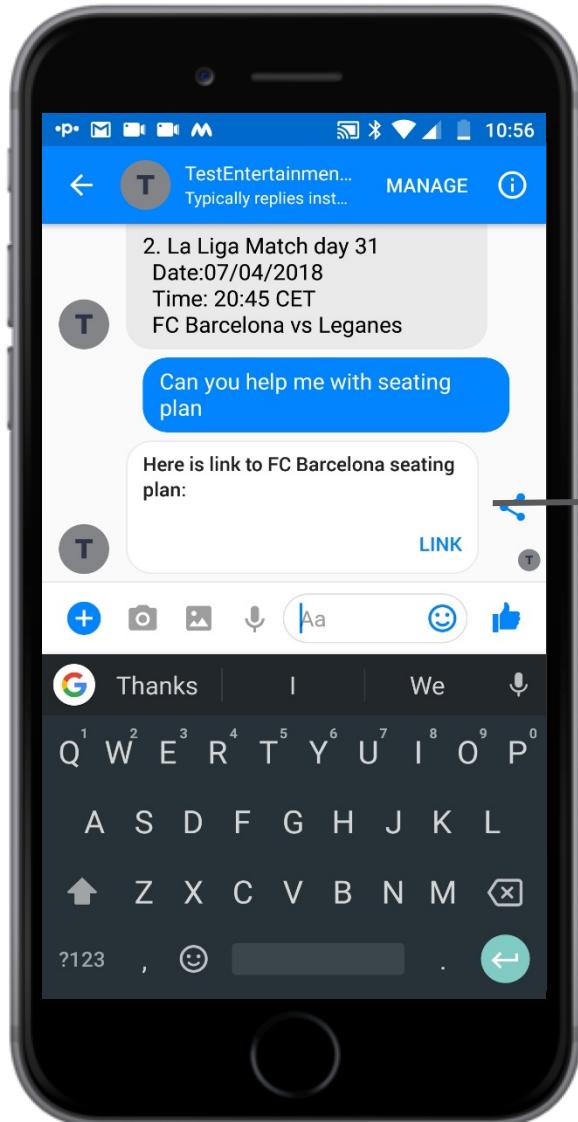
Today

Date

Duration

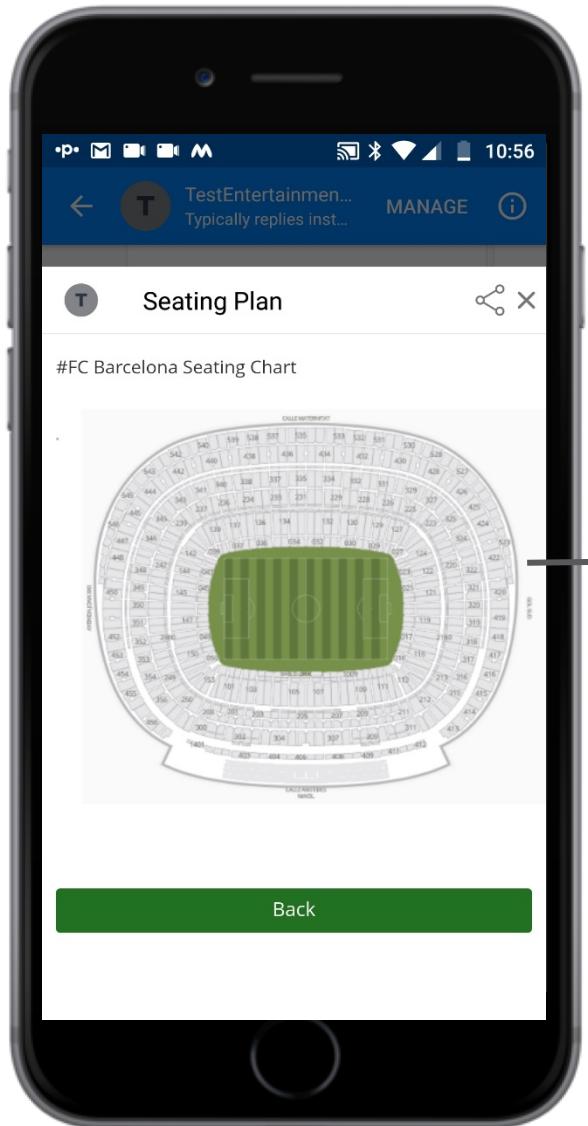
week

## FCBot, FootBall Stadium Bot 😊



Link to seating plan PDF

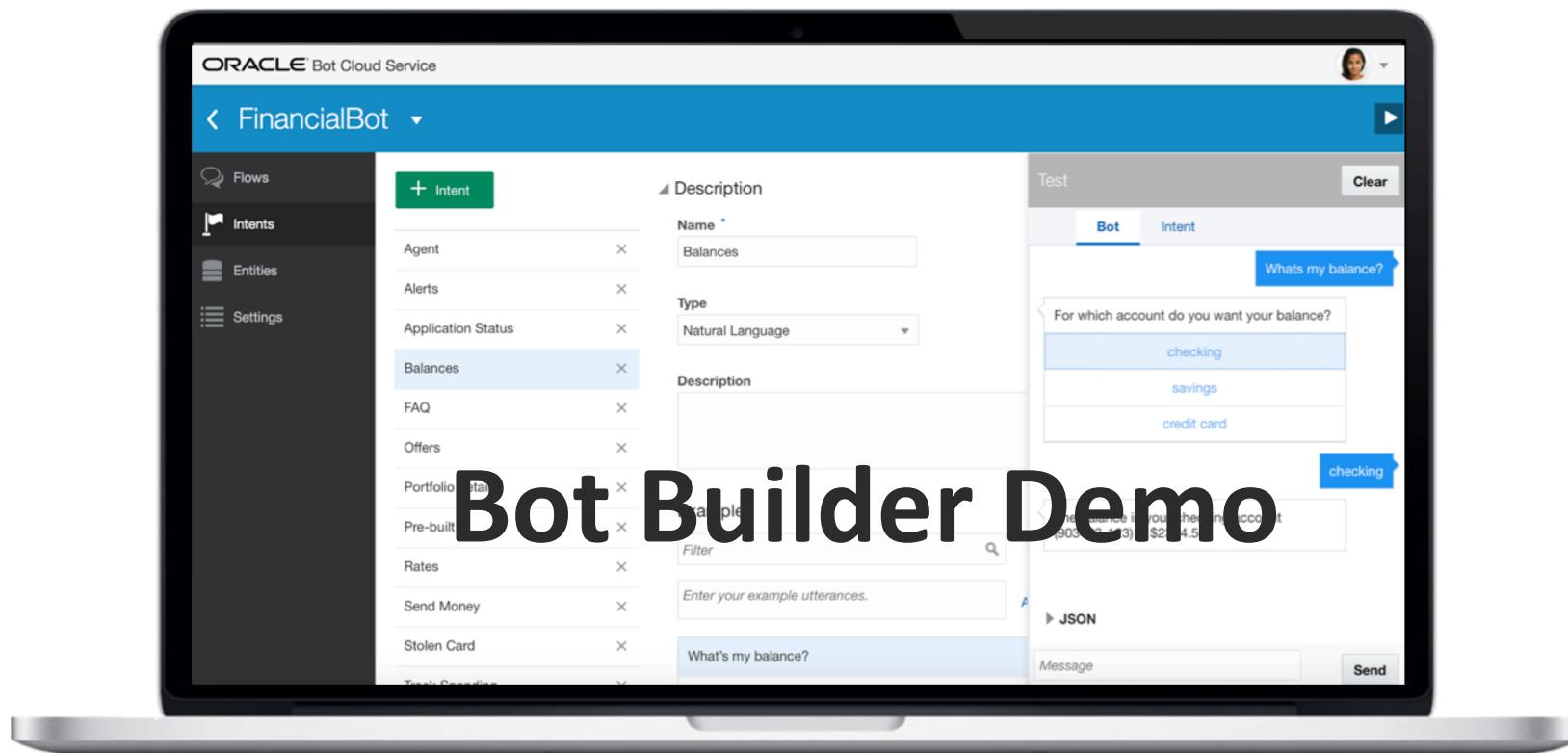
## FCBot, FootBall Stadium Bot 😊



→ Detailed Seating Plan information without leaving the current conversation!

# Building FCBot - Demo

- Intent -> Entity -> Probabilistic -> Dialog -> Backend -> Channels



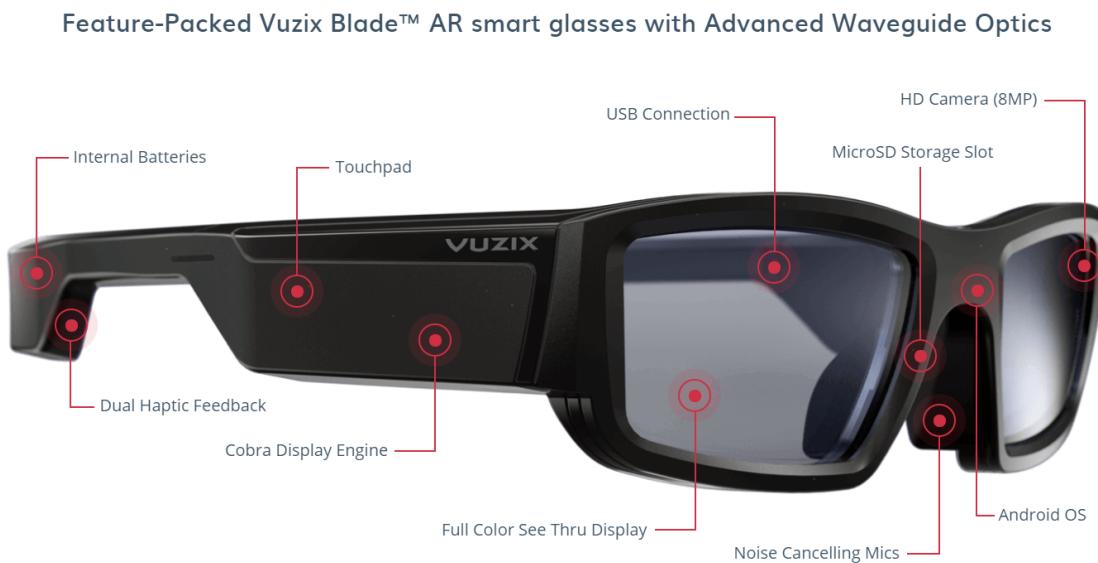
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# Approaches to AR

- Designated Hardware

Vuzix Blade™ AR smart glasses



- Installed Native Apps

Pokémon Go with ARKit Mode



\*Image - <https://www.vuzix.com/>

\*<https://techcrunch.com/2017/12/20/pokemon-go-gets-a-new-and-improved-augmented-reality-mode-but-only-on-ios/>

# Why Web Apps Are The Future Of Augmented Reality?

## Hardships Of User Acquisition

- Cost per Install (CPI)
- Discoverability
- Attention
- Retention

## The Technology Gap is Closing

Web apps will begin to look more and more like native apps due to these technology trends:

- Progressive Web Apps (PWA)
- WebGL 2.0
- WebRTC
- Shared Memory and Multi-Threading

# Augmented reality frameworks for the “Web”



Argon.js



ARToolKit



ARCore

Google  
WebARonARCore  
& WebARonArKit

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# JavaScript Popularity and Growth

**63%**

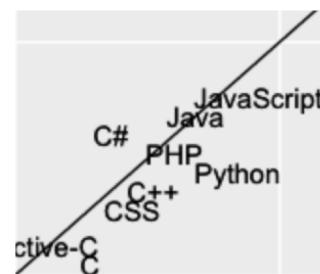
Developers who are  
JavaScript coders\*

**97%**

Increase in JavaScript  
projects in 2016^

**9.5M**

Web sites which use  
JavaScript\*\*



Industry Analysts rank  
JavaScript as the most  
popular programming  
language^^

\* Stack Overflow 2017 Developer Survey

\*\* W3Techs Web Technology Survey, Sept 2017

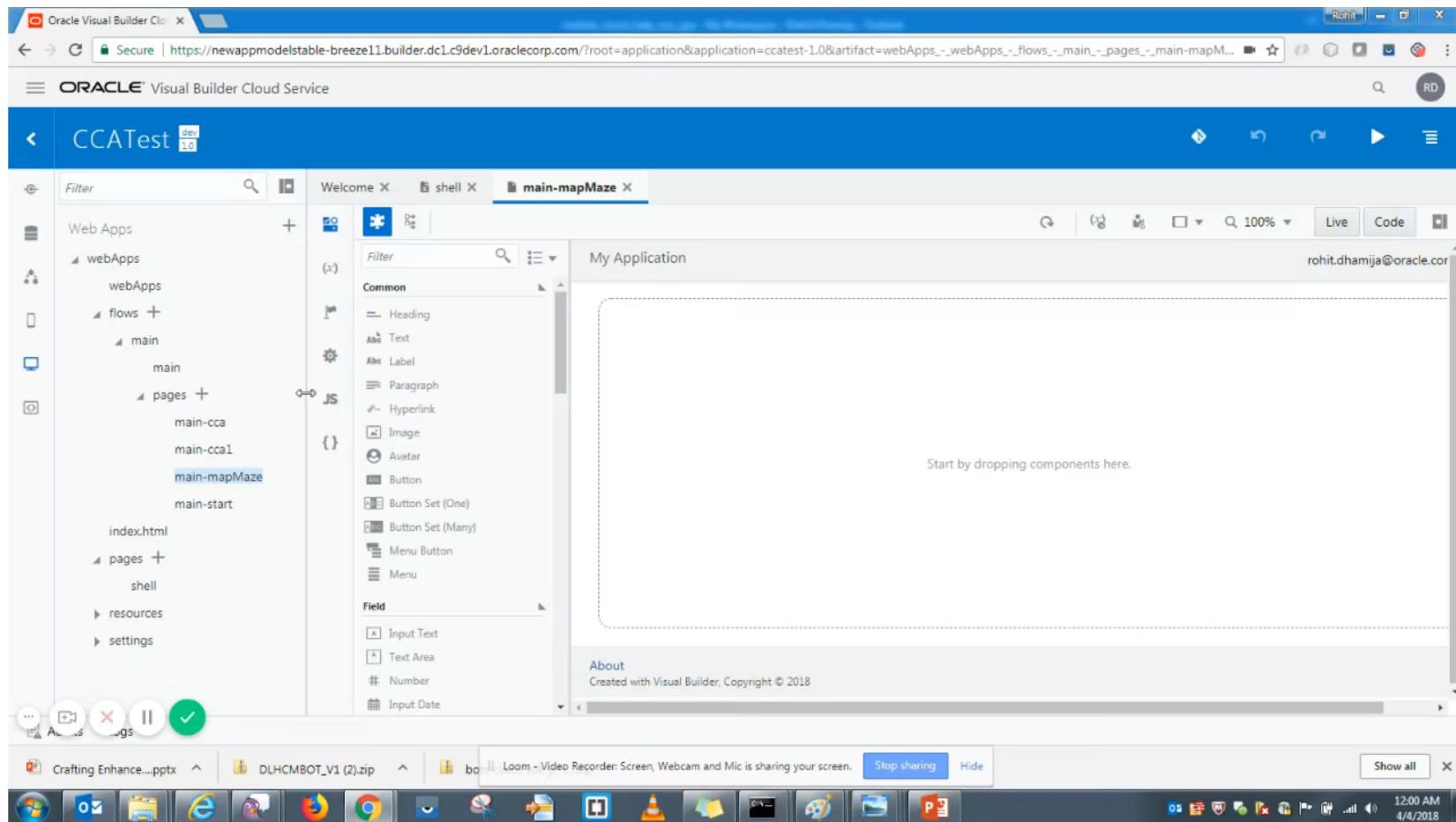
^ GitHub State of the Octoverse, 2016

^^ RedMonk Programming Language Rankings, 2017

# The Era of Visual Development tools for Javascript development

- Low Code Platforms – Rapid Application Development
  - Rapid delivery of business applications with a minimum of hand-coding
  - Minimal investment in setup, training, and deployment.
- Bringing Development with new technologies to a broader set of audience
  - Rapid developers, Business analysts
  - Increases the speed of development
- Web and Mobile based Business critical applications under one platform

# Maps on VBCS

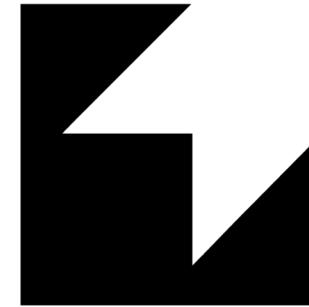


# Beacons -Bluetooth Low Energy transmitter devices



**iBeacon**

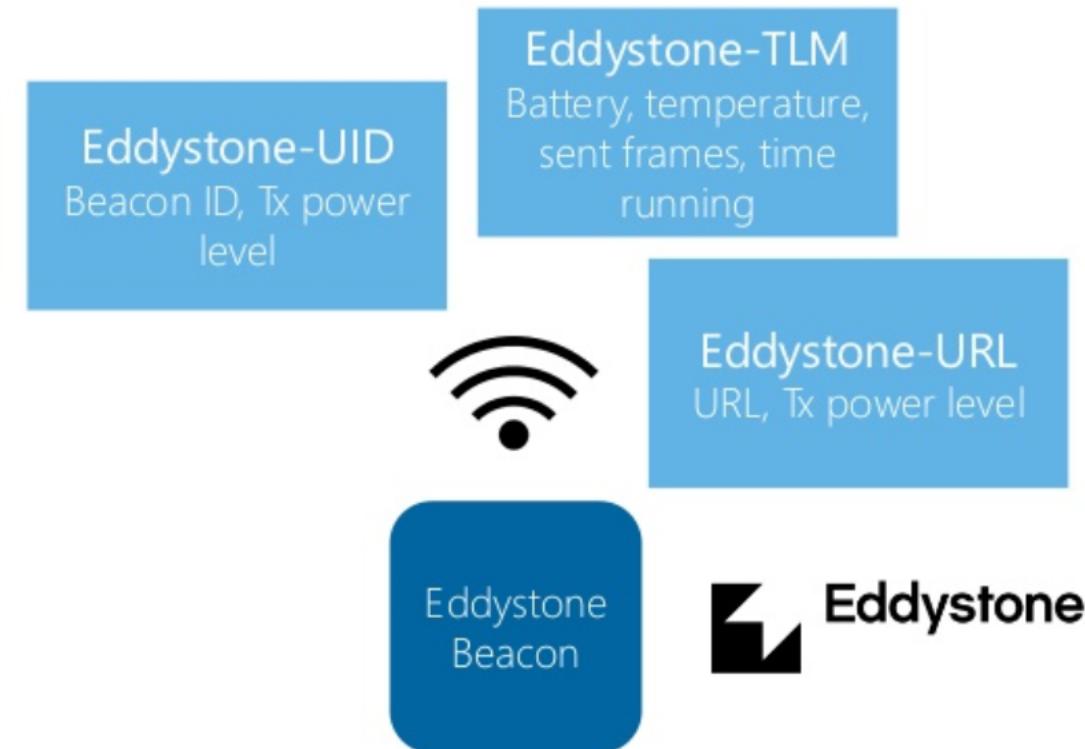
- Broadcasts a unique ID number
- Functions only through a native beacon-enabled app



**Eddystone**

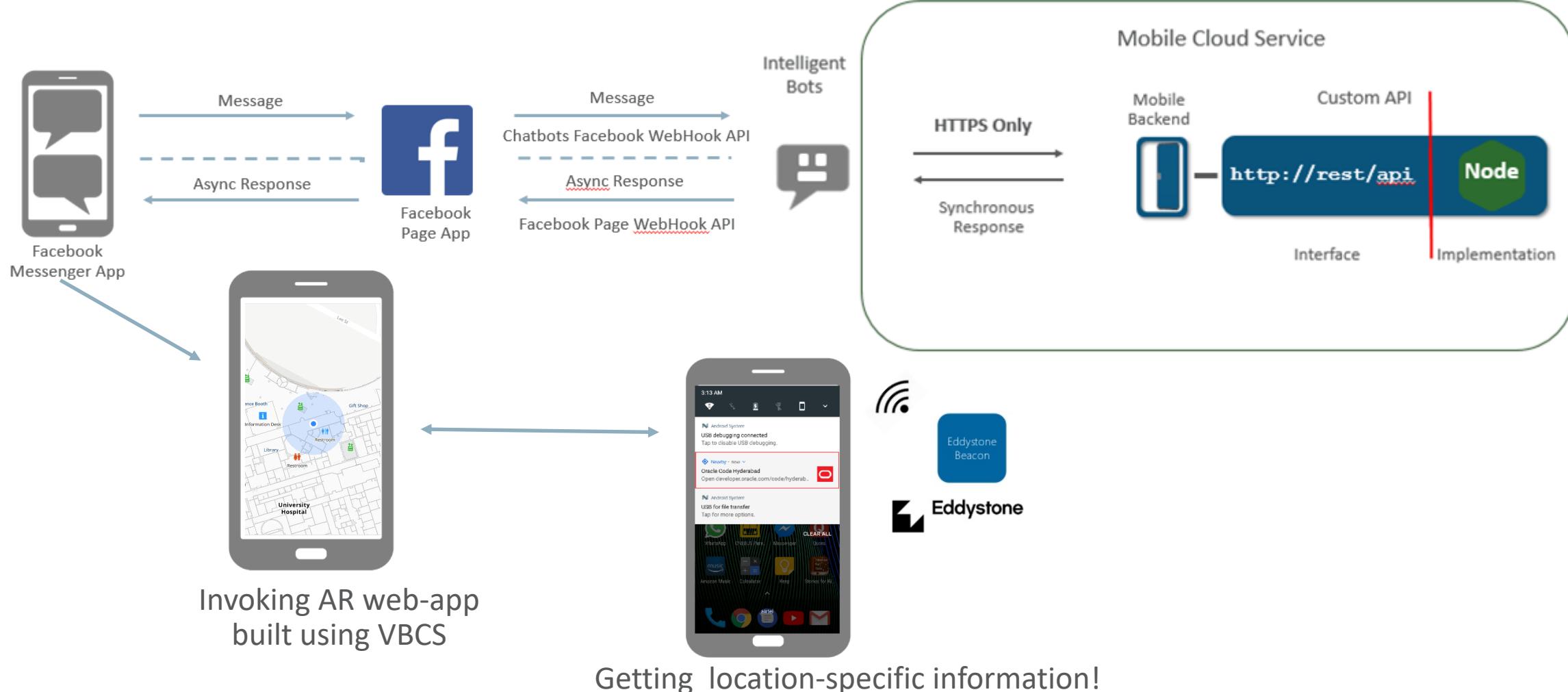
- Broadcasts a unique ID number, a URL address, and sensor telemetry
- Part of Android OS

# Bluetooth devices can *advertise* websites around them!



Open source specification  
<https://github.com/google/eddystone>

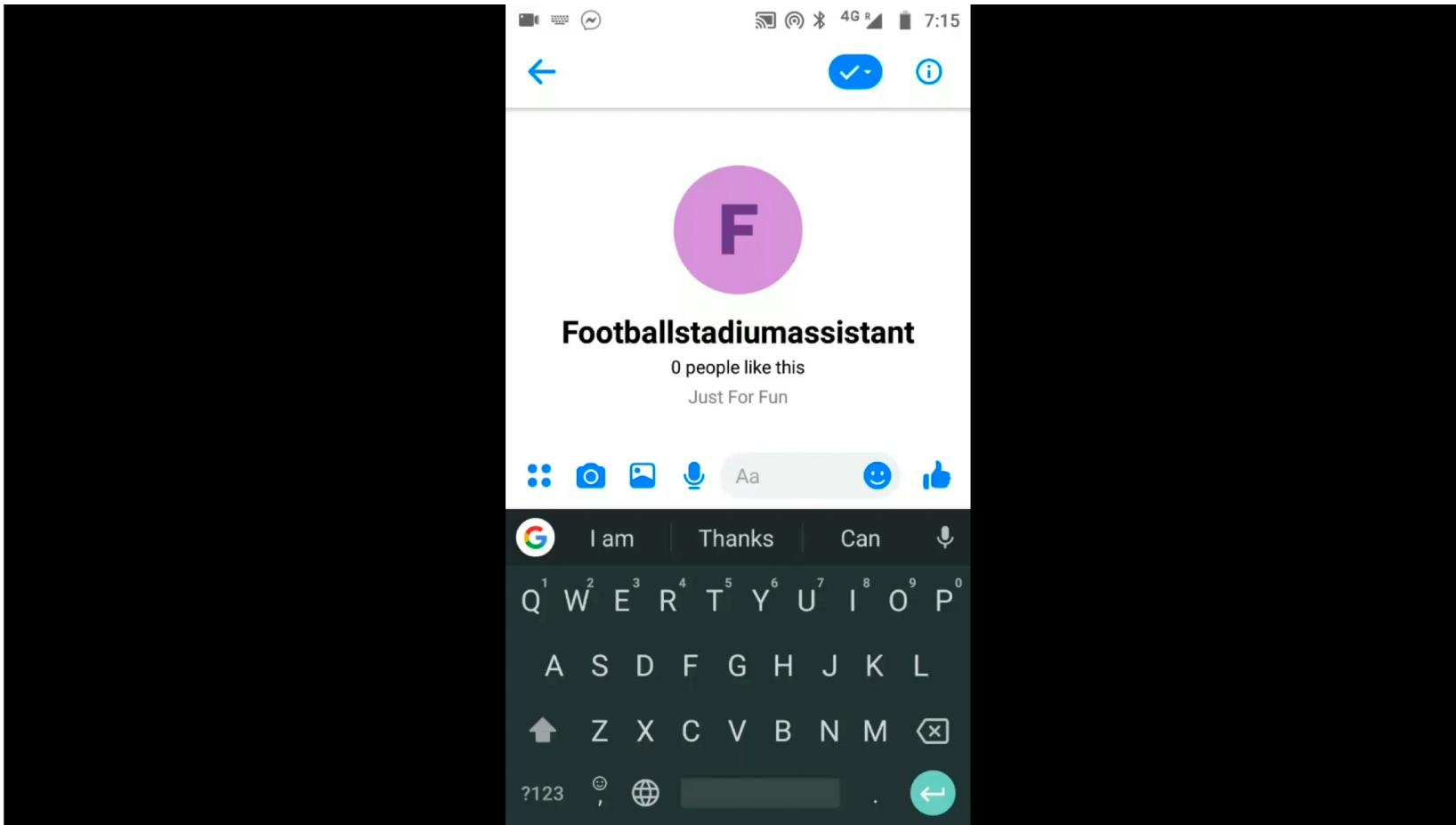
# Solution Run Time Flow



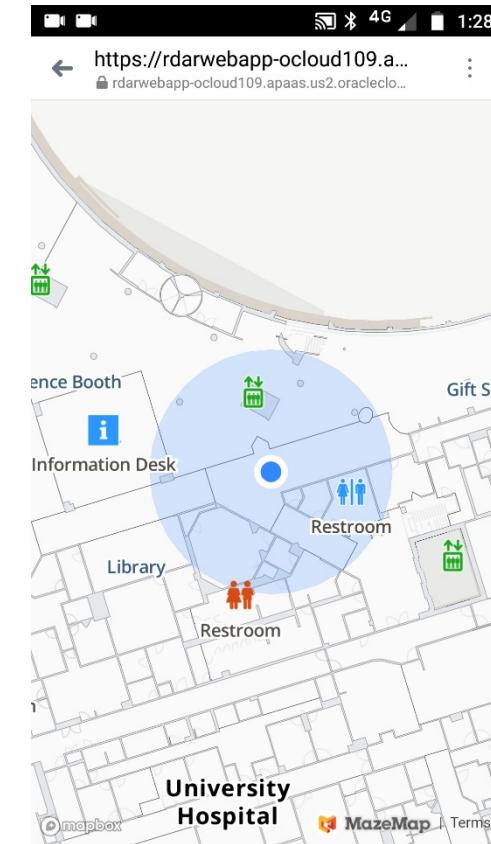
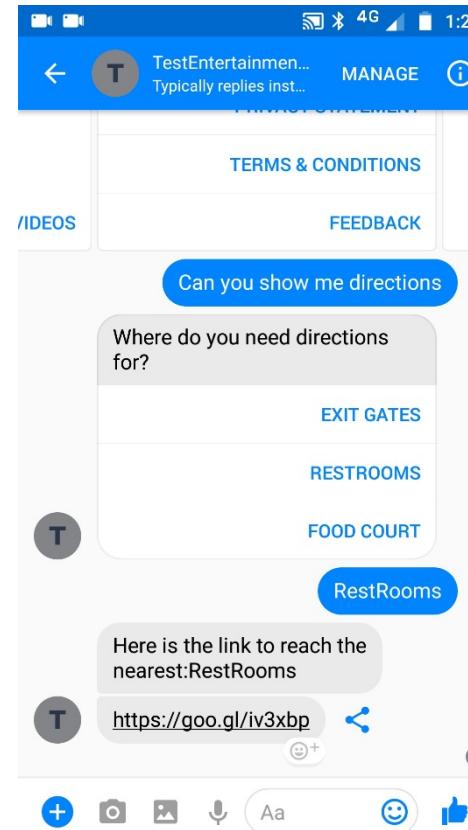
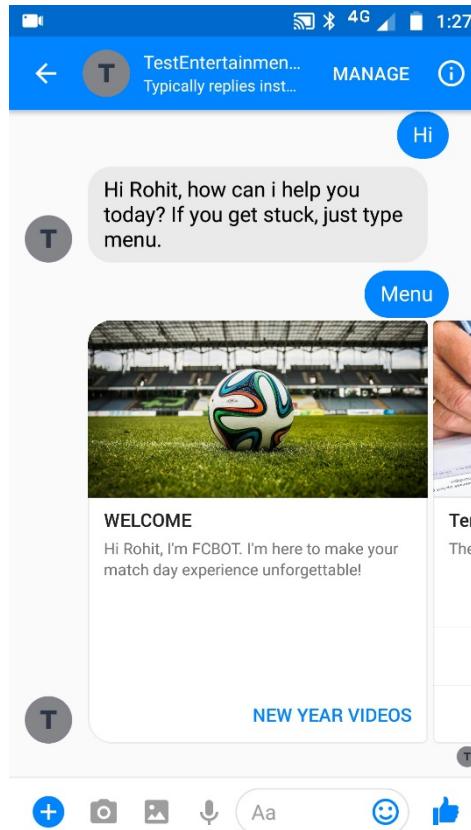
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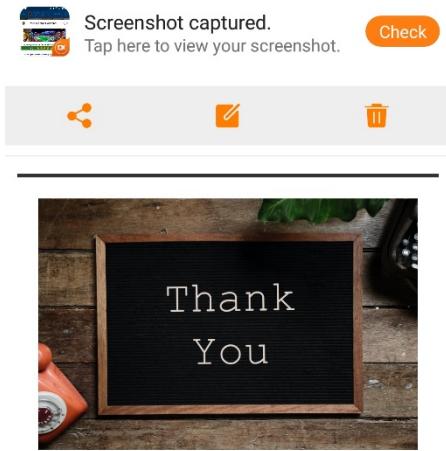
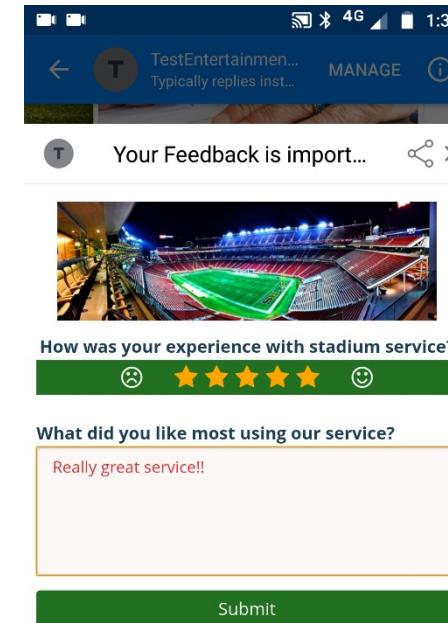
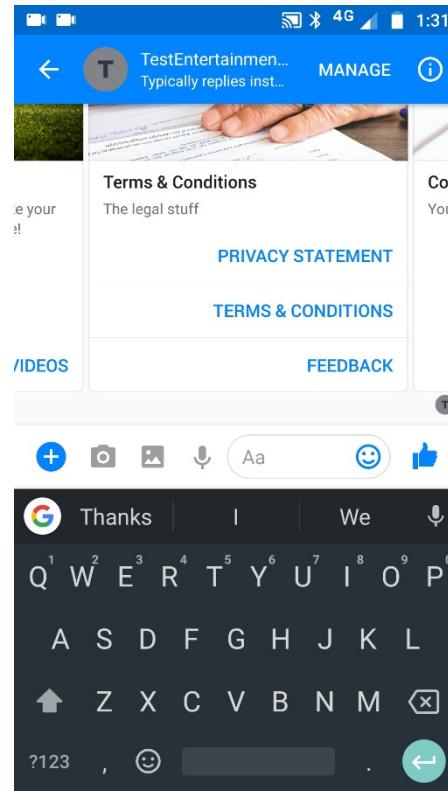
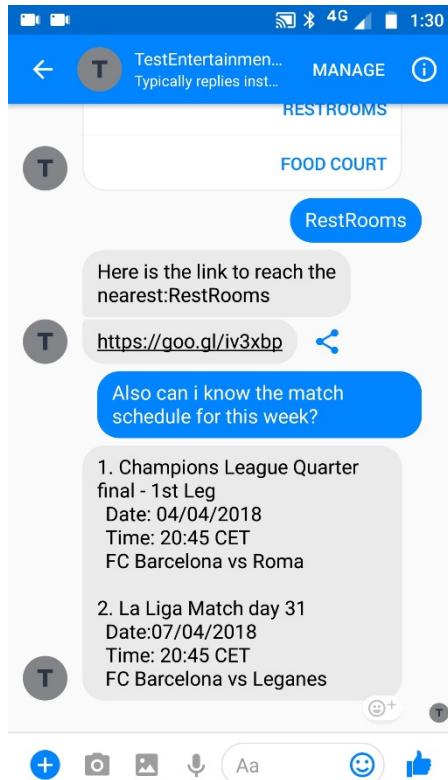
# Demo Video



# Demo Screens



# Demo Screens



\*\*Thank you, you can close this window now\*\*

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# Reference

- Web AR: <https://www.youtube.com/watch?v=dxH10x68mVA>
- EddyStone: <https://www.beaconzone.ao.uk/HowEddystoneWorks>