



# Bixby Marketplace & Natural Language Categories

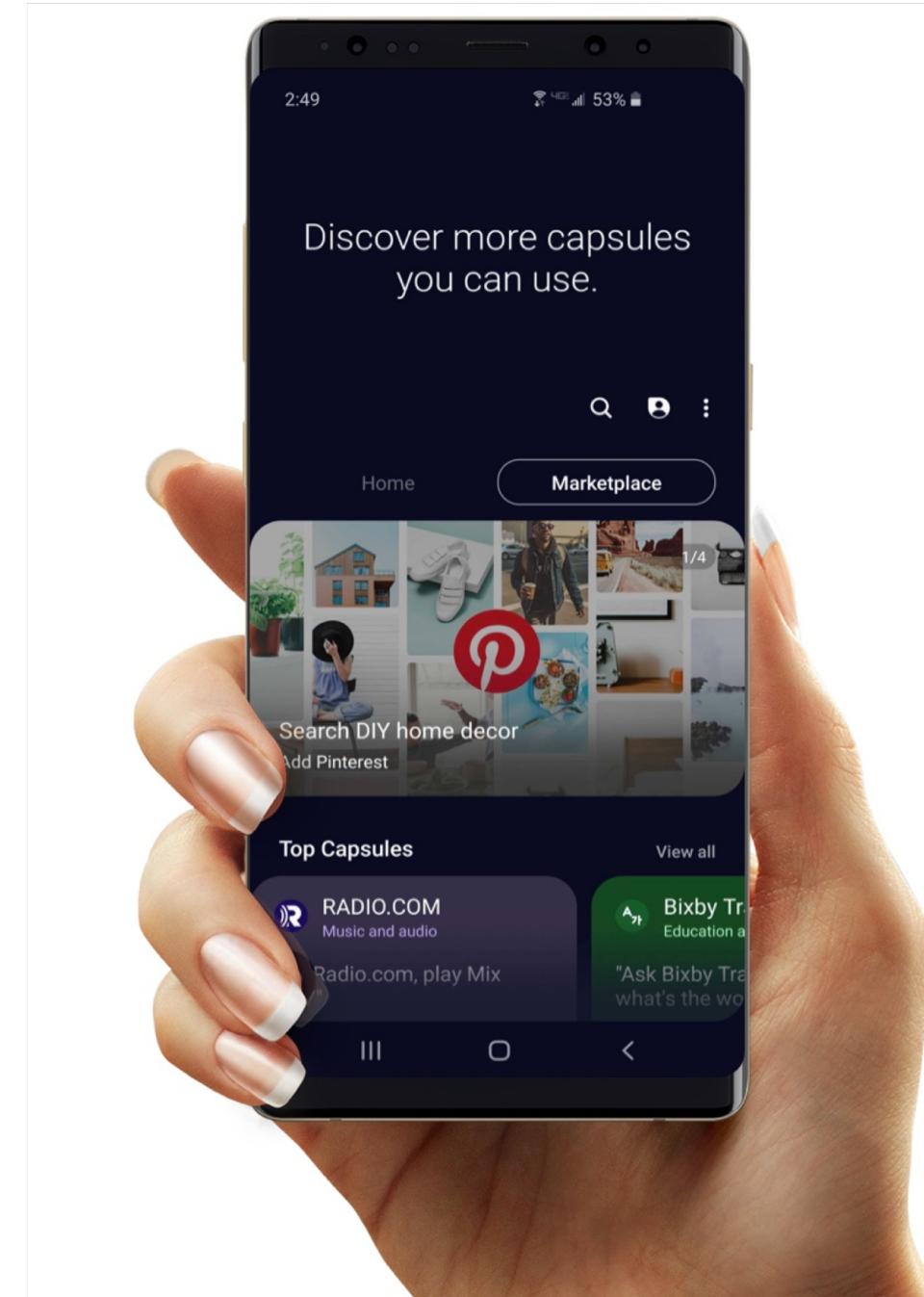
Jennifer Arnold  
Partner Engineering Lead, Samsung / Viv Labs  
 @\_JenniferArnold

require('bixby');



# Agenda Topics

- Why Bixby?
- Bixby Marketplace Overview
- Natural Language Categories
- Marketplace Submission



# Why Bixby ?



**Massive Consumer Reach**



**Differentiated Experience**



**A New Kind of Marketplace**

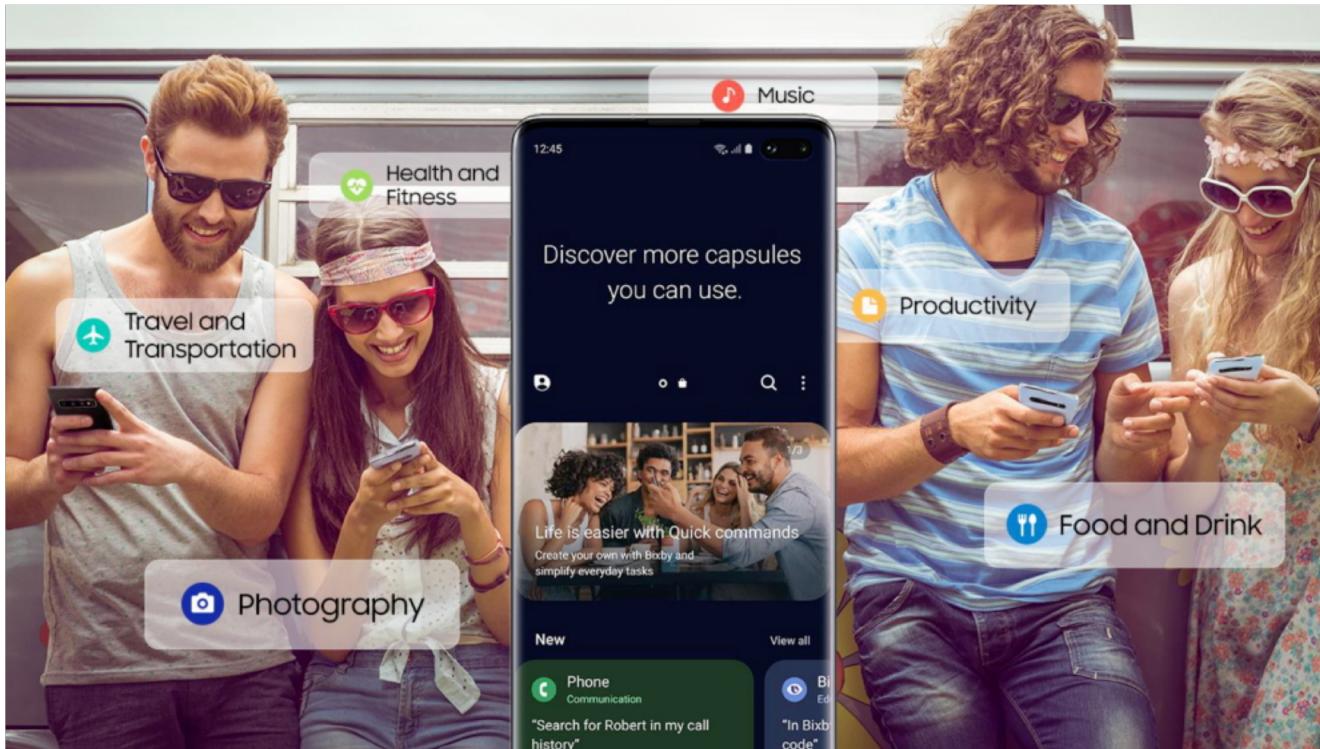


**Breakthrough Technology**



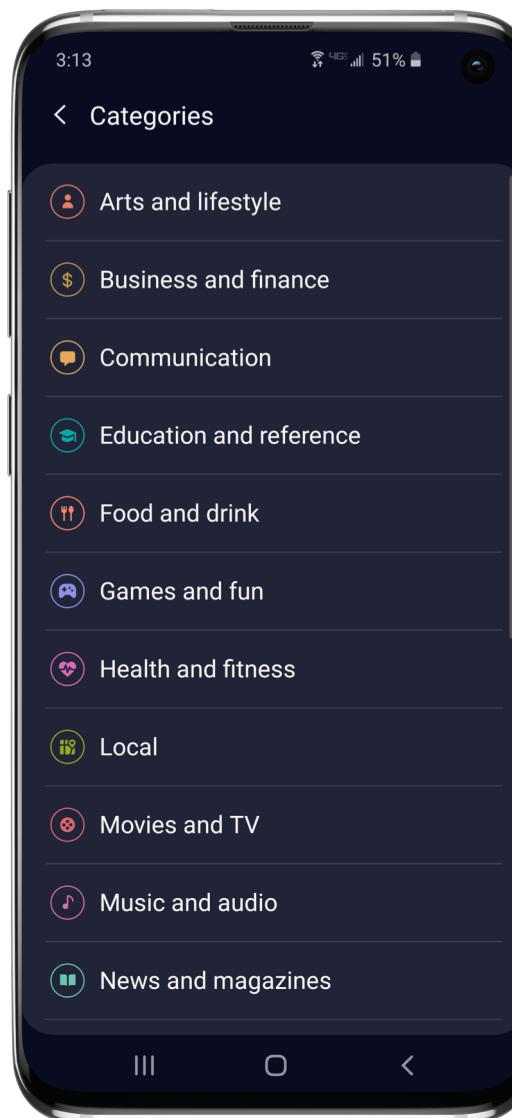
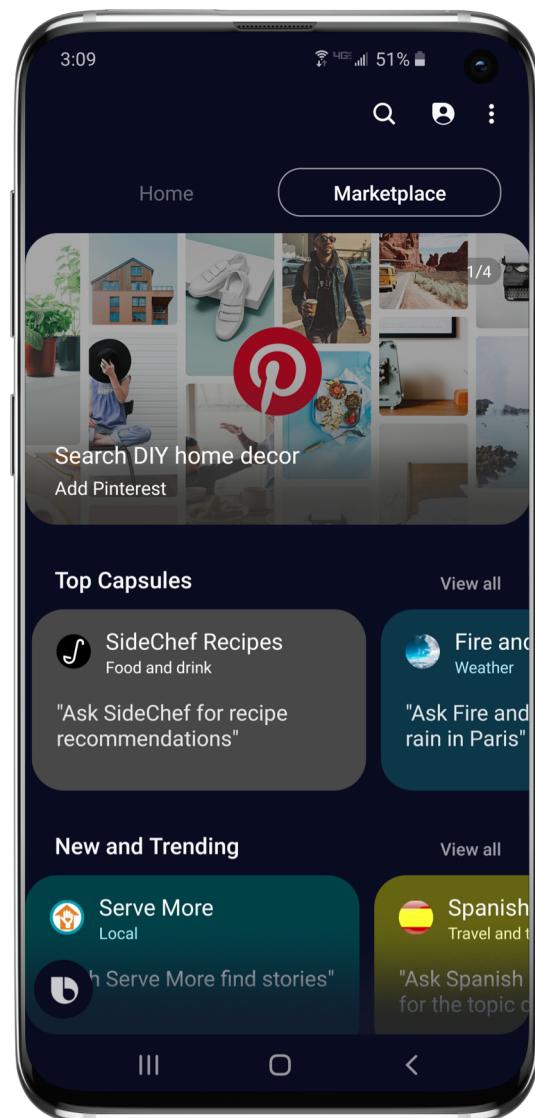
# Bixby: A New Kind of Marketplace

A scalable, open marketplace destined to be as important as the web and mobile



- **Equitable marketplace**
- **Frictionless service discovery**
- **Enhanced user engagement**
- **Personalized Bixby experience**
- **Early mover advantages**

# Introducing the Bixby Marketplace

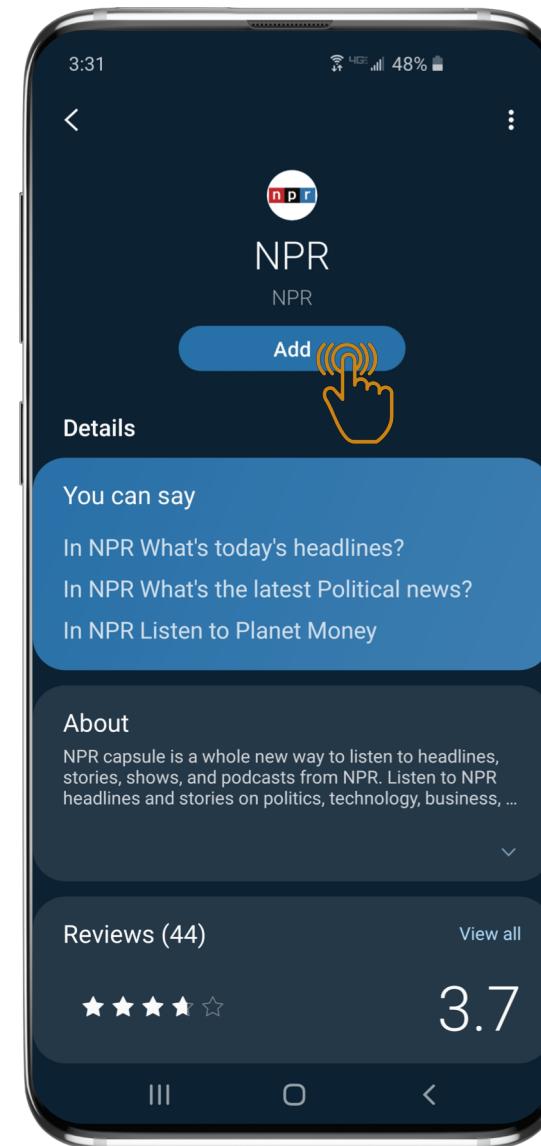
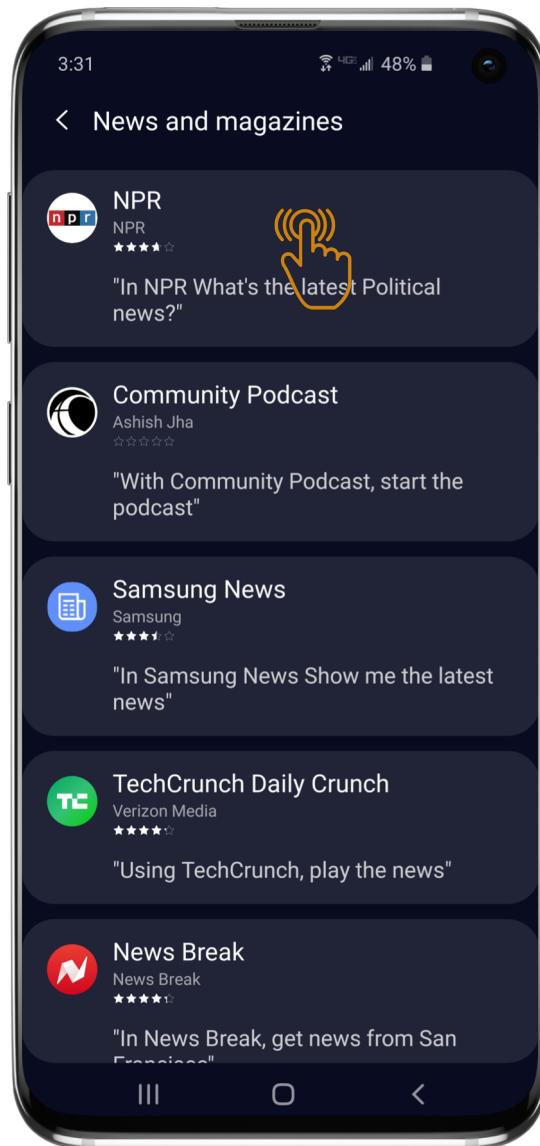
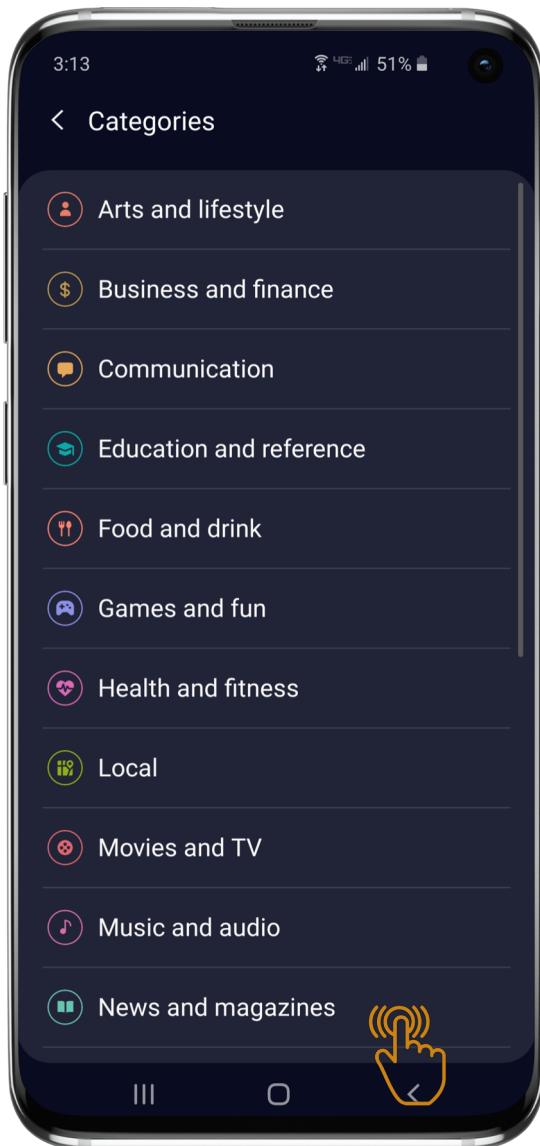


Accessible via tapping on the Bixby button then swipe left, or just say,  
**"Hi Bixby, open Bixby marketplace"**

Developers publish capsules to marketplace categories

Users can search and browse from assistant home page to discover, enable, and manage services

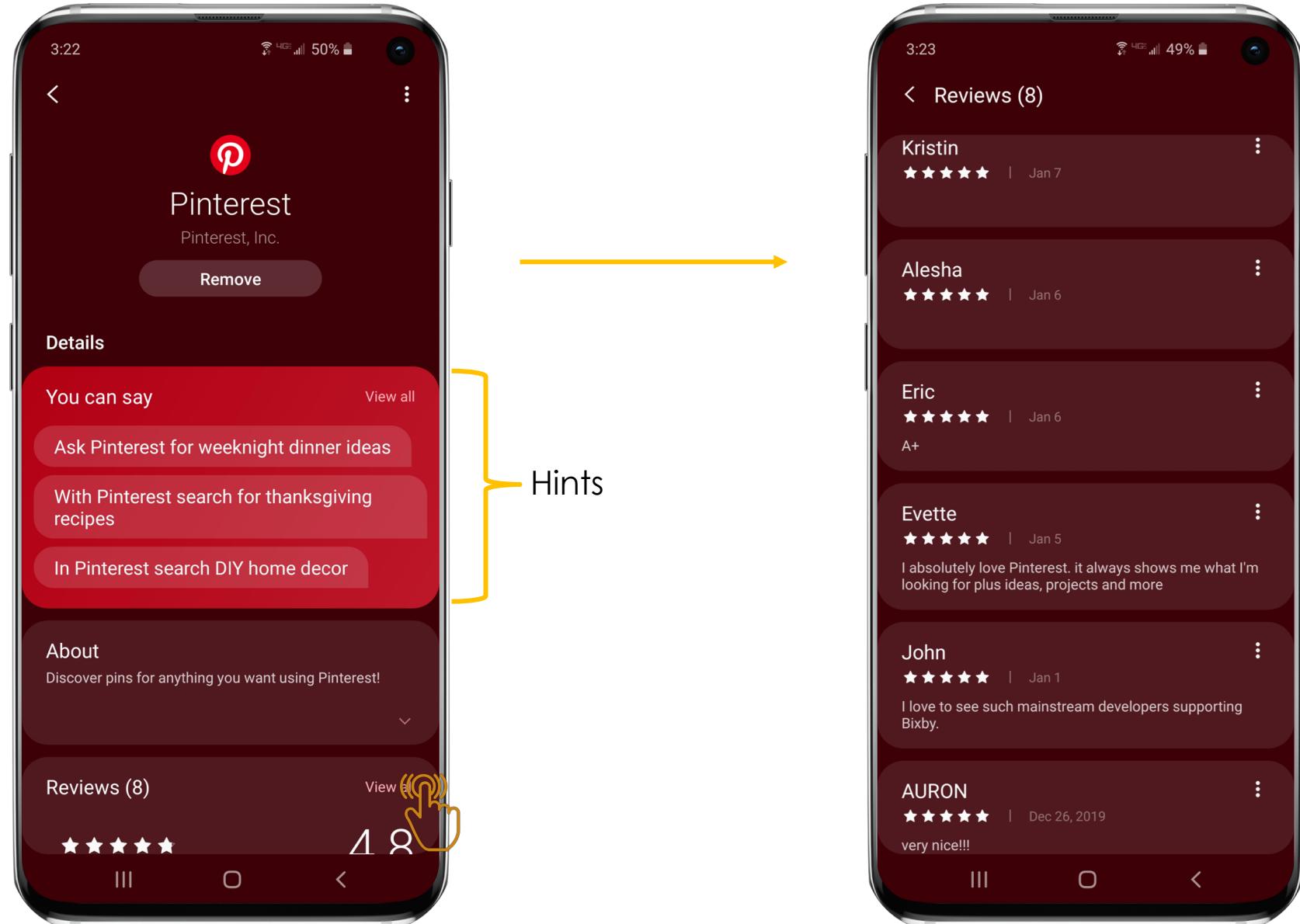
# Browse and Enable Capsules



# Capsule Home Page

Detail page shows  
utterance hints, capsule  
description, reviews,  
and more

Users can browse  
ratings & reviews  
and/or write their own



Flight Booking

Translators

Delivery/Takeout

Local Business

Podcast

Videos

Radio

Stock Info

Astrology

Hotels

# Natural Language (NL) Categories

Cooking/Recipe

News

Restaurants

Events

Language Learning

Rideshare

Home Services

Flight Info

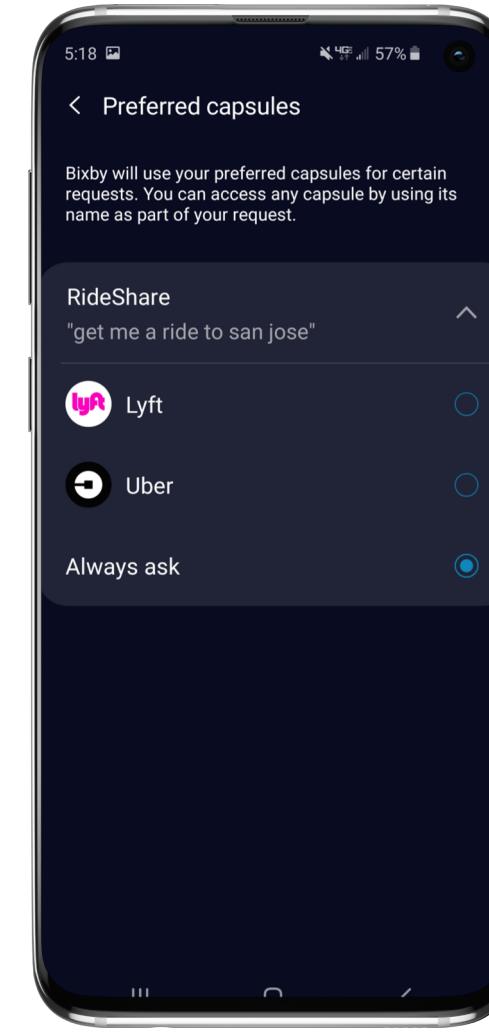
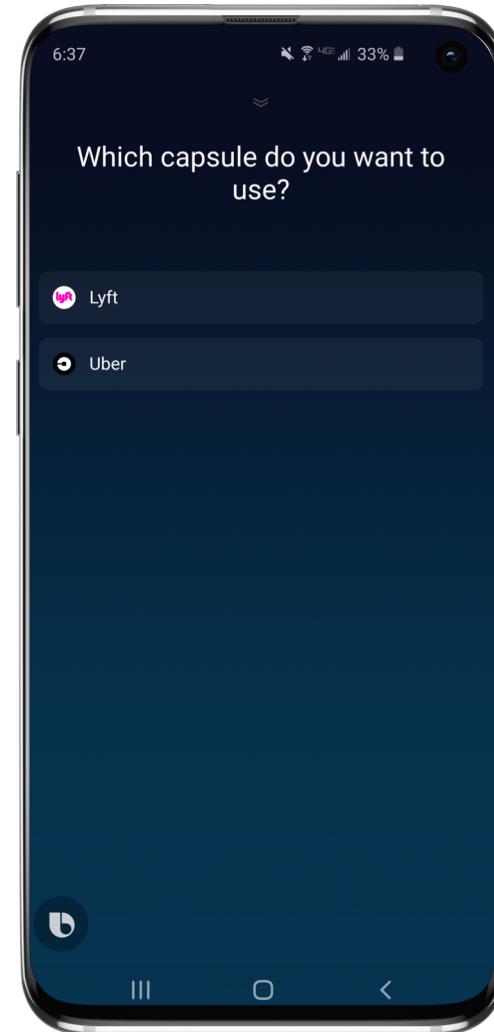
# NL Category Example

- An NL category is defined by a set of use cases for a particular domain and top-level language that would invoke those use cases
- See example below for **LocalBusinesses** NL category description (Bixby Dev Center)

Example Use Case	Example Utterance	Feature Requirement
Find nearby stores and businesses	"Find the nearest nail salon"	Required
Find by location	"I need a mechanic in San Antonio Texas"	Optional
Find by rating	"What's the top rated spa in Chicago?"	Optional
Find businesses with amenities	"Find a library with WiFi"	Optional
Find by price	"Find the cheapest tire store in Calgary"	Optional

# Discovery, Engagement and Personalization

Discovery integrated within Bixby request flow



Marketplace designed to promote user choice

Users configure Bixby to work with their preferred services

Then use natural language to invoke these services (no named dispatch)

Named dispatch can be used to override preferred services

# Marketplace Submission Process

- To ensure end users get the best experience, every capsule must go through a submission process before launch
- The capsule review process includes both quantitative and qualitative checks
- If the capsule review team identifies any issues with your capsule, we will provide suggestions on how to improve those areas
- The deployment checklist is a good place to start before submitting your capsule, <https://bixbydevelopers.com/dev/docs/dev-guide/developers/deploying.checklist>

Guides / Developer Guides / Deploying Your Capsule / Deployment Checklist

## Deployment Checklist

This section lists the tasks you should do before your capsule can become available on the Marketplace. Click on a step for more information. You can find additional tips and tricks on our [Bixby Developers YouTube playlist](#).

### Required Steps

These steps are **required and must be completed** before your capsule can be approved for the Marketplace.

#### Update Your capsule.bxb File

[Update your capsule.bxb file](#). All capsules require a `capsule.bxb` file in your capsule's root directory. Make sure your `capsule.bxb` file contains all the required information for the submission and approval process:

Step	Explanation
<a href="#">Increase your capsule version</a>	You need to submit a version of your capsule that is higher than the last submitted version.
<a href="#">Provide store countries</a>	This chooses in which store countries your capsule is available.
<a href="#">Choose a store section</a>	This places your capsule in a specific section of the Marketplace store front. We recommend one most relevant store section, though you can add a second one, if justified.

# capsule.bxb File

```
capsule {  
    id (example.flightFinder)  
    version (1.0.0)  
    format(3)  
    runtime-version (2) {  
    }  
    targets {  
        target (bixby-mobile-en-US)  
    }  
    ...  
    store-sections {  
        section (TravelAndTransportation)  
    }  
    capsule-categories {  
        category (FlightInfo)  
    }  
    store-countries {  
        only {  
            allow (US)  
        }  
    }  
    default-action (FindFlight)  
}
```

- Make sure that your capsule org and name are correct in your capsule **id**
- Make sure your **store-sections** are applicable to your service (up to 2)
- Define your desired NL categories using the **capsule-categories** key
- **default-action** defines a default action to be executed if a user invokes your capsule with no specific request, e.g. “Start My Flights Finder”

# capsule-info.bxb File

```
capsule-info {  
    display-name (My Flights Finder)  
    developer-name (Jane Smith)  
    icon-asset (images/icons/example_icon.png)  
    description ("Track flights with My Flights  
Finder to stay on top of all your plans.")  
    website-url (https://exampleURL.com/)  
    search-keywords {  
        keyword (flights)  
        keyword (travel)  
        keyword (airfare)  
        keyword (vacation)  
    }  
    dispatch-name (My Flights Finder)  
    dispatch-aliases {  
        alias (My flight finder)  
    }  
}
```

- **display-name** and **dispatch-name** should be conceptually identical, e.g. **display-name** of ACME Banking Inc. can have **dispatch-name** of ACME Banking
- **icon-asset** should be 1:1 aspect ratio
- **description** should clearly describe your capsule's functionality
- Define relevant **search-keywords** for easy discovery in marketplace search (up to 10)
- **dispatch-name** and **dispatch-aliases** need to be conceptually identical
- **dispatch-name** and **dispatch-aliases** cannot be single word or generic, and should be tested with Bixby's ASR

# hints File

```
hints {  
    uncategorized {  
        hint ("Ask My Flights Finder to find flights on United Airlines from JFK to SFO  
              departing before 12 o'clock")  
        hint ("In My Flights Finder, what airports are in New York?")  
        hint ("With My Flights Finder, does Delta Airlines fly out of San Jose?")  
    }  
}
```

- All hints must return reasonable results (3 or more required)
- In order to make sure that your training is robust, test variations of your defined hints
- Ensure that your hints are accurately transcribed by Bixby's ASR as defined
- Hints cannot contain spelling or grammar mistakes

# Register Capsule in Bixby Developer Center (Website)

The screenshot shows the Bixby Developer Center interface. On the left, a sidebar lists navigation options: Bixby Developer Center, Getting Started, Guides, References, Sample Capsules, and Teams & Capsules (which is highlighted with a pink oval). The main area displays a user profile for Jennifer Arnold (JE) with the current team set to jennifer. A modal window titled "Register Capsule" is open, prompting for a Capsule ID, which is entered as "jennifer.flightFinder". The modal includes "Cancel" and "Submit" buttons. In the background, other capsule entries like "JA" are visible.

Bixby Developer Center

Getting Started

Guides

References

Sample Capsules

Teams & Capsules

Current Team : jennifer

Jennifer Arnold

Register Capsule

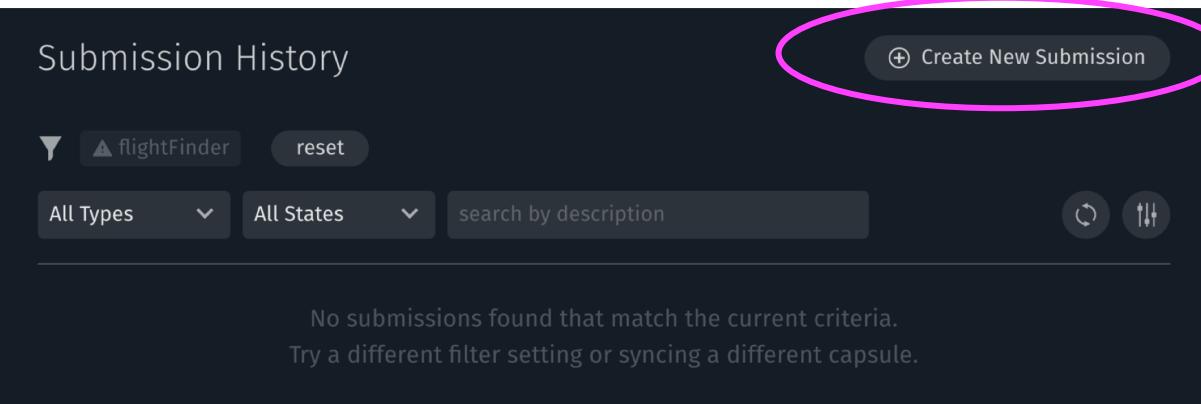
Capsule ID  
jennifer.flightFinder

Cancel Submit

+ Register Capsule

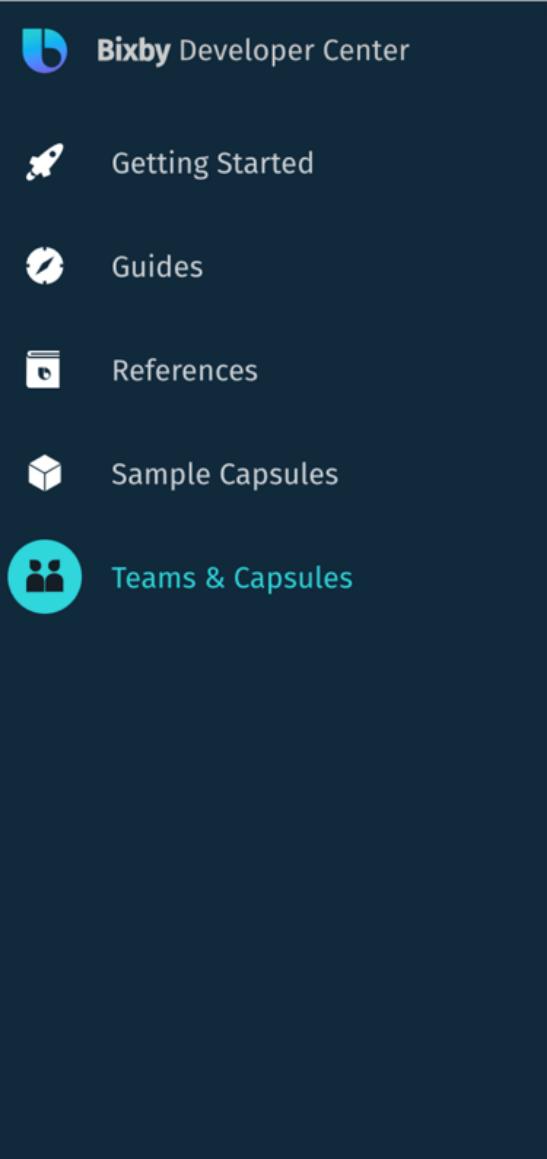
To perform any submissions, you need to first register your capsule to your namespace in the Bixby Developer Center

# Create Submission for Capsule in Bixby Developer Studio (IDE)



The screenshot shows the 'Create New Submission' dialog. It has tabs for 'Public' and 'Private', with 'Public' selected. A message reads: 'Creating a Public Submission is the first step towards releasing your capsule to the Marketplace. You should be familiar with the Deployment Checklist before making a Public Submission.' Below this, the user's information is listed: 'JENNIFER ARNOLD' and 'jennifer@viv.ai'. There is a 'Select All' and 'Deselect All' button. A list of capsules to submit shows '✓ jennifer.flightFinder 1.0.0'. At the bottom, there is a 'Description' field containing 'Initial submission for flight finder capsule' and a 'Submit Capsule' button at the bottom right.

# Submit Capsule for Marketplace Approval (Website)



Capsule ID: jennifer.flightFinder

JE

FL

Flightfinder

JA



Versions

Config & Secrets

Release Status

Next Release

--

In Review

Approved

Release

No version queued for the next release

Bixby Marketplace

--

Available Versions

1 result

1.0.0

a day ago

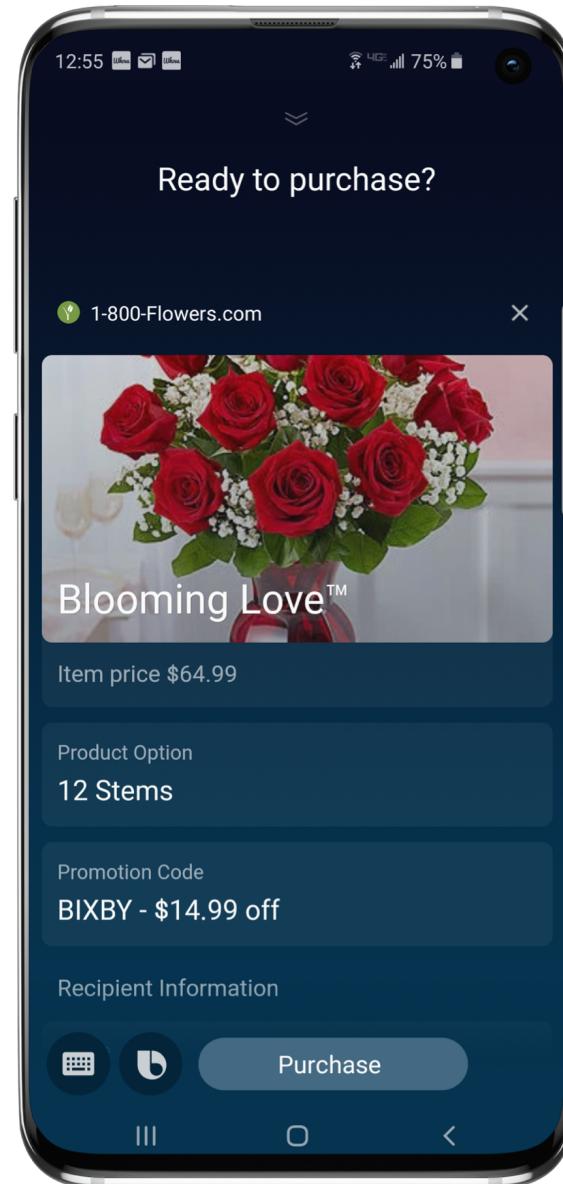
Initial submission for flight finder capsule

Submit for Review

# Bixby Monetization Business Models

Support for in Bixby transactions via:

1. Samsung Payment Service
2. OAuth 2.0



We understand content providers will need to monetize based on their existing business models

Stay tuned for upcoming announcements shortly

# Marketing and Promotional Opportunities

Numerous mechanisms to promote your brand and products

## Channels

In-App Placements

Promotional Offers

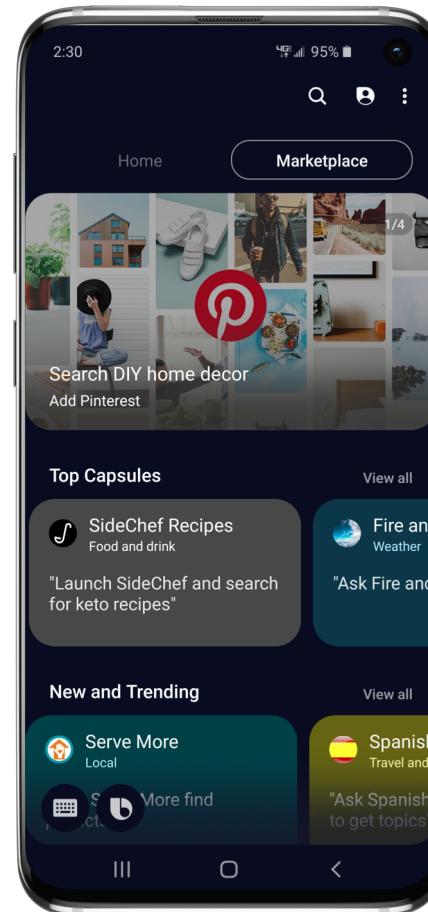
Cross-Service Placements

Capsule Launch Notices

Joint Press Release

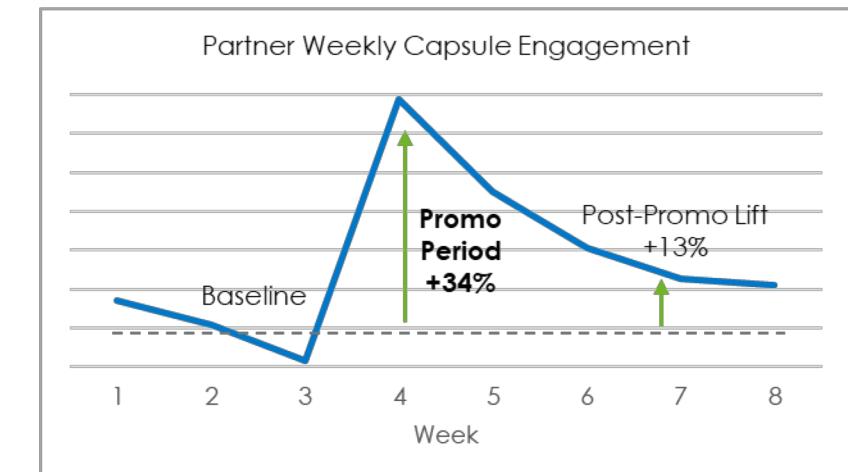
Social Media

## Sample Creative



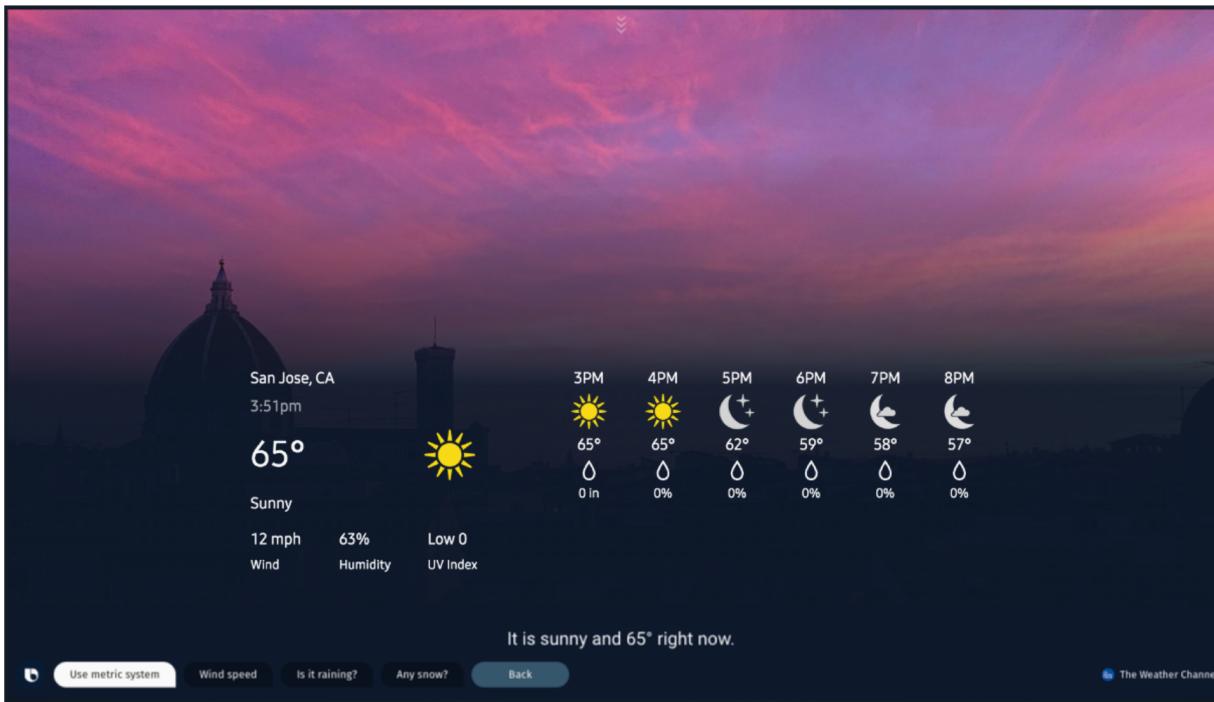
## Case Study

- Partner Marketplace Banner resulted in a significant lift in capsule engagement (+34%)
- Capsule engagement lift above the baseline was sustained post-promotion (+13%)

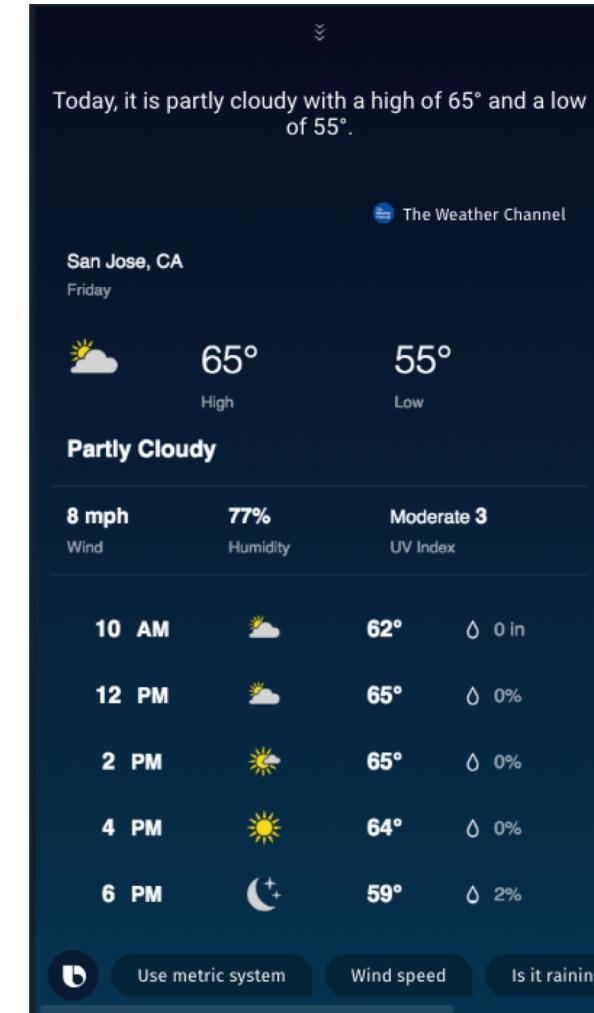


# Marketplaces for Additional Devices Coming in 2020 !!

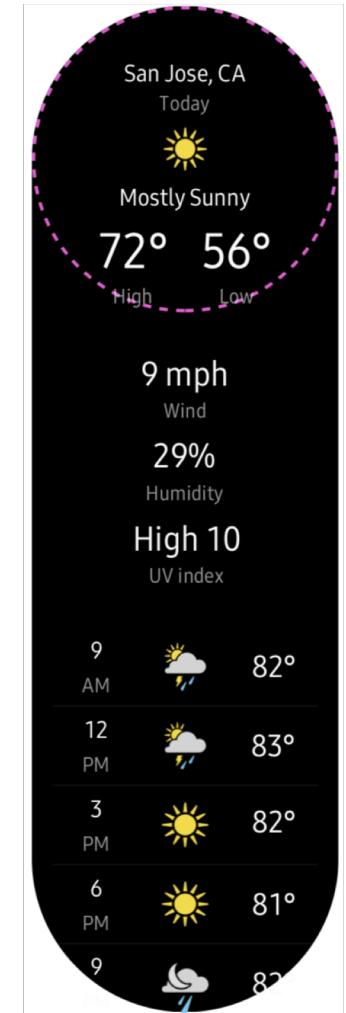
- Bixby Views system allows developers to write once and deploy everywhere
- Bixby's IDE simulator supports additional device types: TV, fridge, watch, and tablet



[TV]



[fridge]



[watch]

# How do I get started?

**Home:** <http://bixbydevelopers.com>

**GitHub:** <http://github.com/bixbydevelopers>

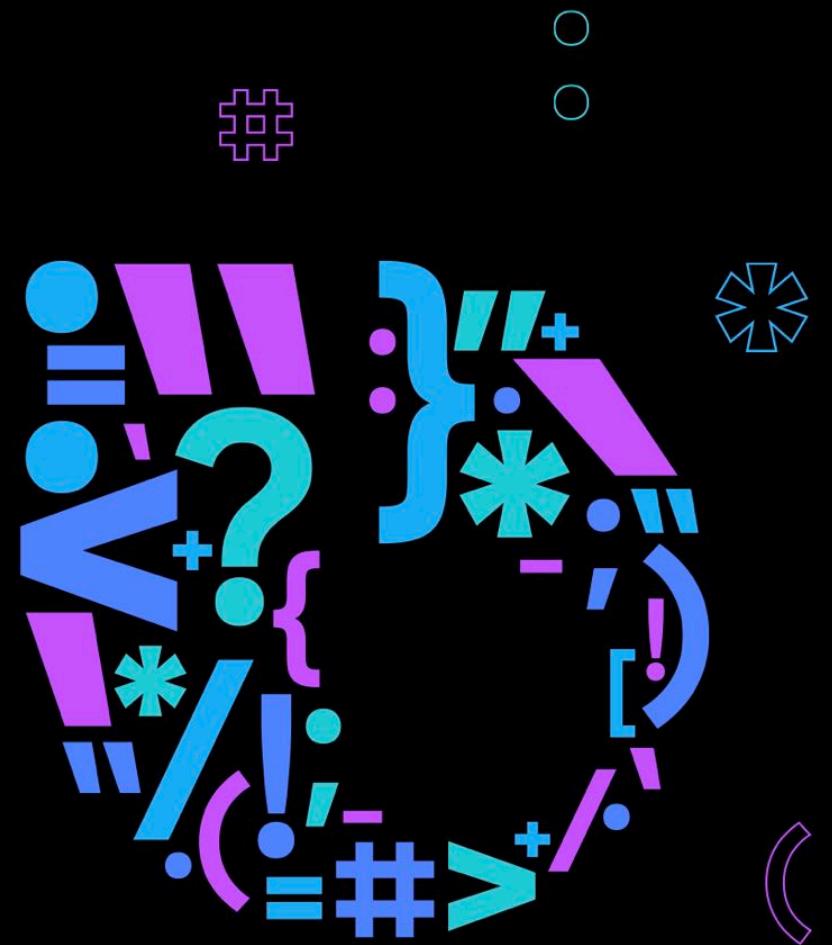
**YouTube:** <http://youtube.com/c/BixbyDevelopers>

# How do I get help?

**Twitter:** <http://twitter.com/bixbydevelopers>

**Slack:** <http://bit.ly/bixbydevslack>

# Questions?



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