

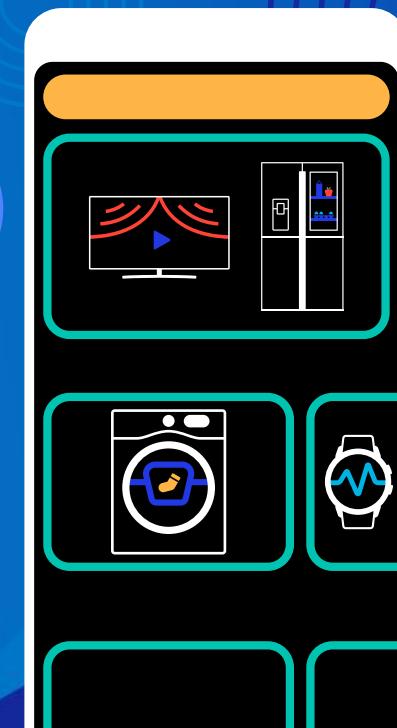
Bixby Marketplace & Capsules

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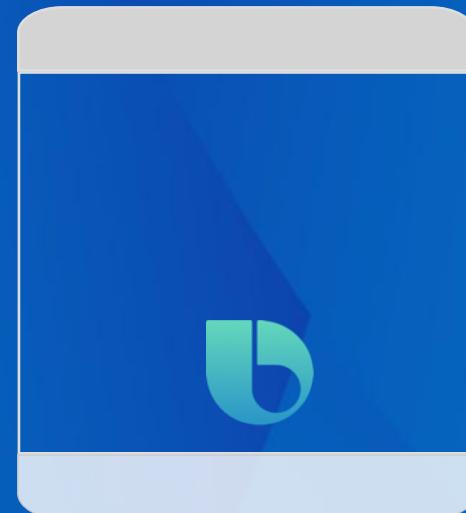
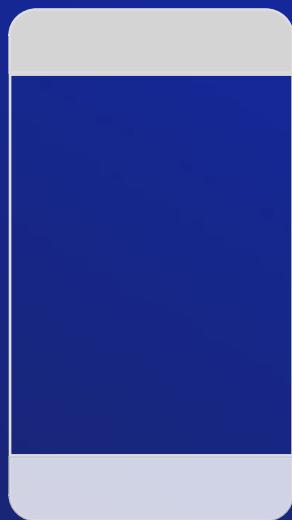
What Is Bixby?

- Samsung's Voice/Conversational AI assistant
- Bixby 2 introduced last November – based on Viv Labs Technology
- Massive reach
 - #1 in Smartphones
 - #1 in Televisions
 - #1 in US Appliances
 - 70% of US Households have a Samsung device
 - Significant market share in portable speakers/automotive via Harman



Bixby Reach

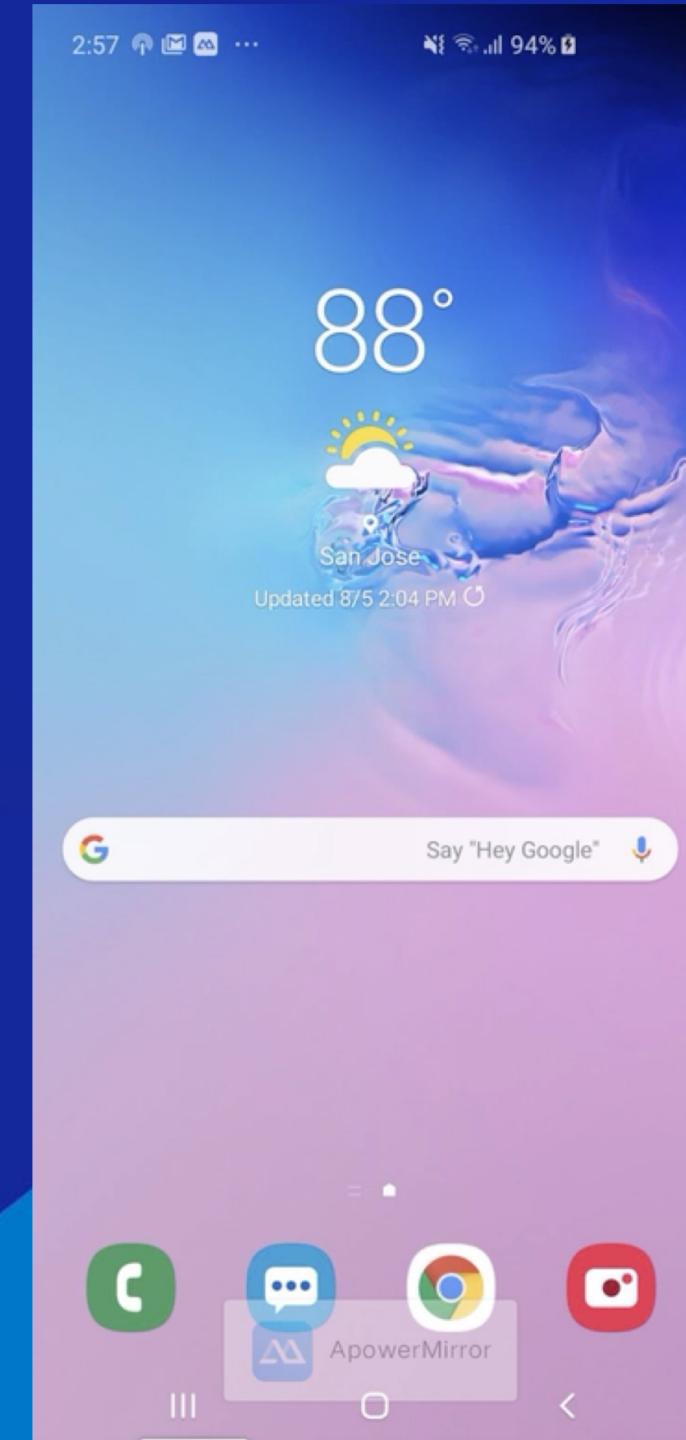
500 Million Bixby Enabled
Devices Shipped per Year



Bixby

Bixby Marketplace Demo

Demo Video

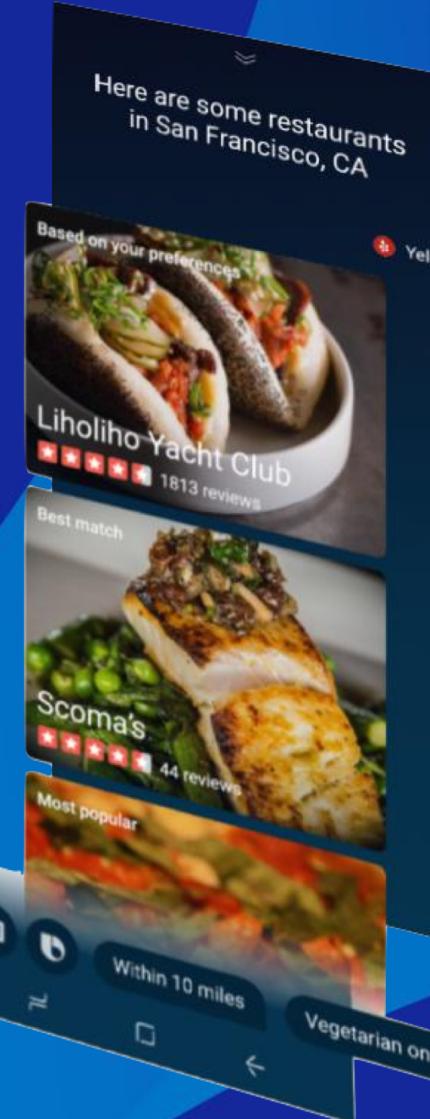


Bixby

How to Create a Great Bixby Capsule

Build a Multimodal Experience

Dialog: Text header/Voice



View: UI



Extras: Follow on actions

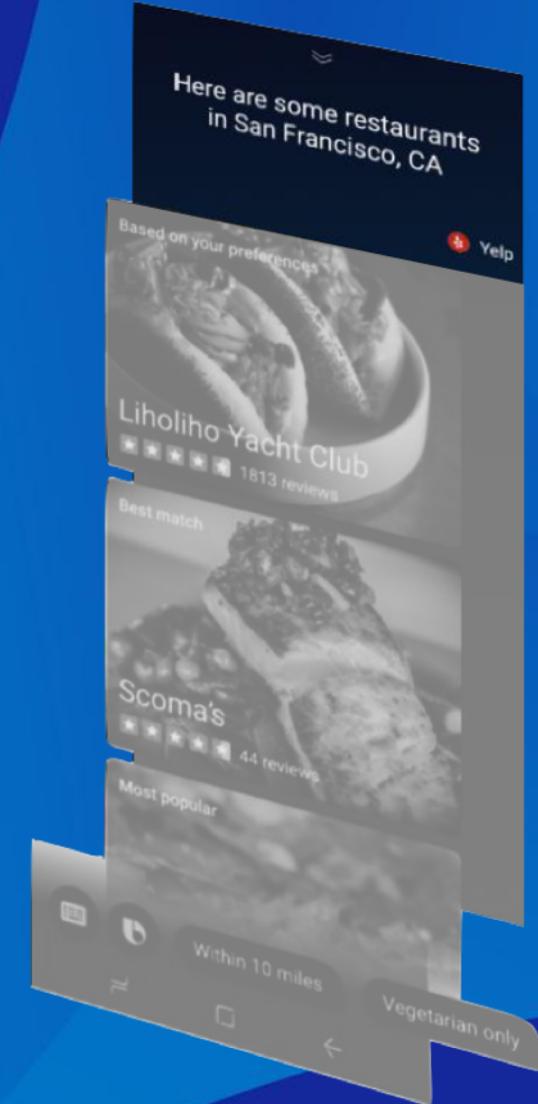


Dialog – Header/Spoken

Consists of header text and spoken words* (optionally different)

```
dialog (Result) {  
    match: Input  
    template("This is header text") {  
        speech ("This text will be spoken")  
    }  
}
```

Consider varying header text and what is spoken – make them complimentary



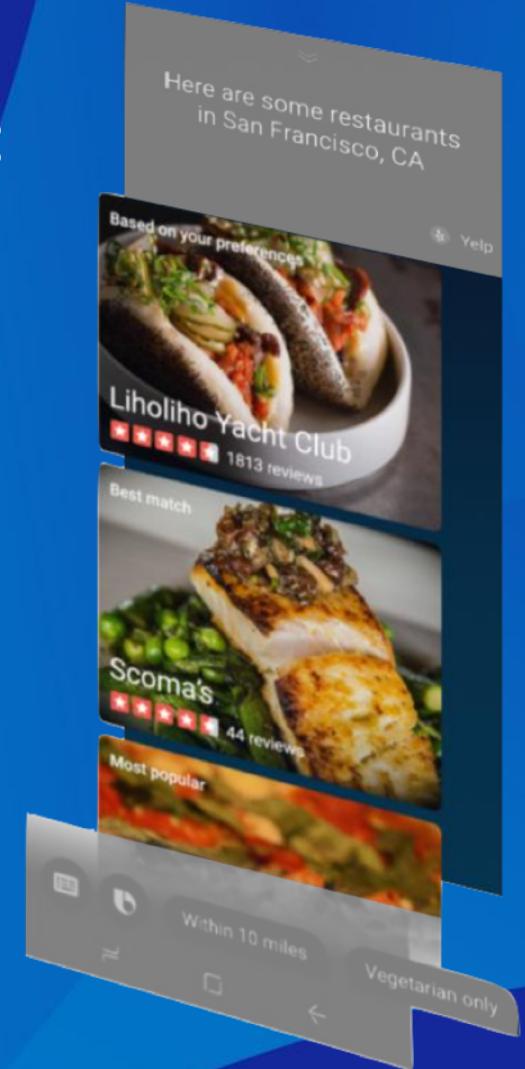
*SSML Support rolling out

View/UI - Input

- Input to Bixby can be either via voice or UI forms:
 - Text, number fields
 - Toggles
 - Sliders
 - Image picker
 - Date/Time pickers
 - Clickable cards
- Single or multiple fields
- Offer both to the User

Example code: The input-forms capsule in:

<https://github.com/bixbydevelopers/capsule-samples-collection>

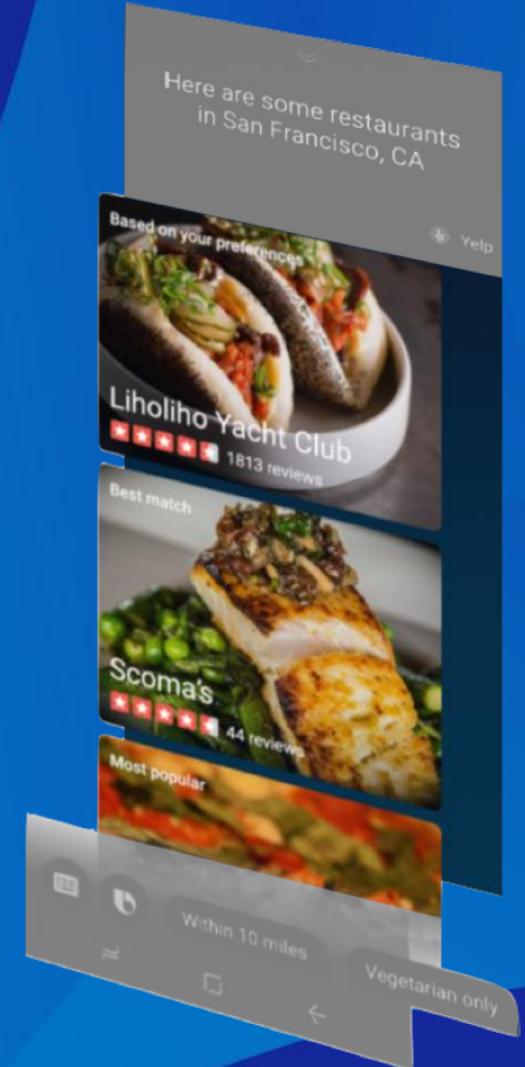


View/UI - Result

- Uses Bixby View Components
 - Cards (multiple types)
 - Images
 - Cells
 - Maps
 - Title
 - Boxes
 - ...
- And combinations of all of the above

Example code: The bixby-views capsule in:

<https://github.com/bixbydevelopers/capsule-samples-collection>

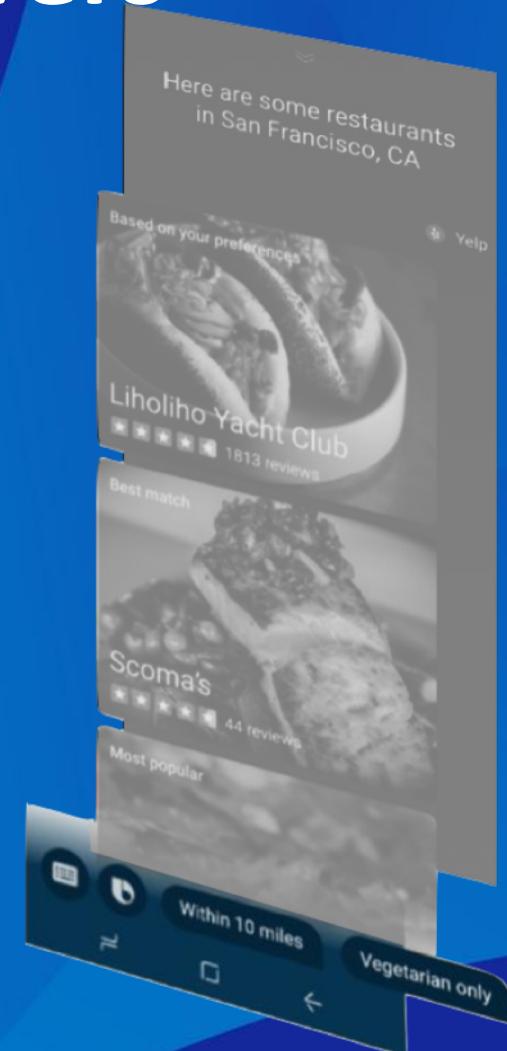


Follow On: Conversation Drivers

- Logical next steps e.g. “Reserve”
- Restart e.g. “Play Again?”
- Follow up e.g. yes or no (special handling – see followup in docs)

Text shown is the utterance passed to Bixby (model as a continuation in your NLU model)*

* Except for follow-ups – see special handling

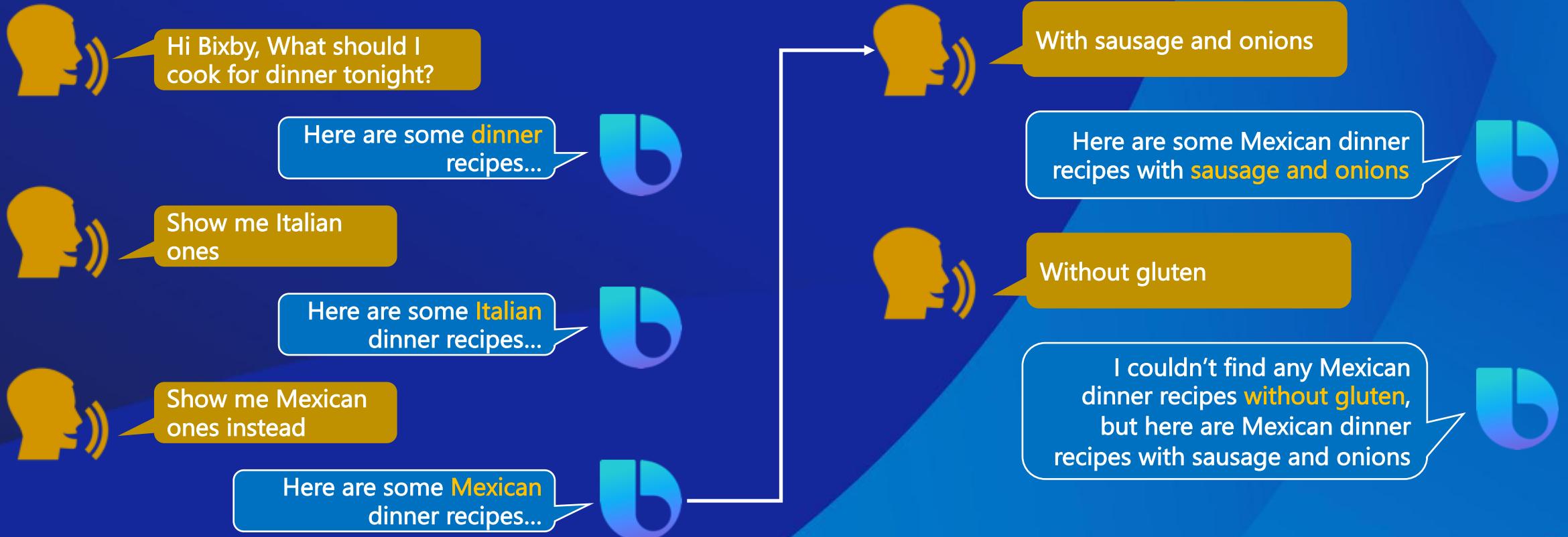


HEF: Hands and Eye Free

- Bixby runs in two modes – UI and HEF (hands and eyes free e.g. voice only)
- On phone, “Hi Bixby” = HEF, button = UI
- Use the \$handsfree EL variable to determine state and adjust accordingly
- Use Hands-Free list navigation for voice guided list selection



Continuations and Relaxations



Personalization

Make it magically “work better” – make it “know me”

- Preference Learning: Remember my preferences based on behavior and context
- Selection learning: Learn selections made by the user/all users – contextually aware

<https://bixby.developer.samsung.com/newsroom/en-us/Bixbys-Powerful-Personalization-Drives-New-Assistant-Experiences>



Library Capsules

Use built in functionality

- viv.contact/viv.self: Access to user's contact info, address list – requires permissions
- viv.time – Date time utilities and natural language understanding via DateTimeExpression
- viv.geo – geo structures and search via SearchTerm
- viv.maps – integration with Google maps
- And more . . .

<https://bixbydevelopers.com/dev/docs/dev-guide/developers/library>



The Future:
No named dispatch,
any capsule can be
the default



The image features a dense, diagonal arrangement of the word "Content". The word is repeated numerous times in a variety of sizes, orientations, and colors, including shades of blue, green, red, and grey. The words overlap each other, creating a layered and textured effect. The overall composition is dynamic and emphasizes the theme of content creation or marketing.

How To Prepare Your Capsule for the Marketplace

Practical Tips

- Follow the guidelines for the metadata in capsule.bxb and capsule-info.bxb
- In particular, follow the guidelines for dispatch-name and aliases
- Provide hints and make sure they work well with your dispatch name
- Spend time on the description – this is an ad for your capsule. Make the beginning sentence or two compelling
- Create a compelling icon –png or jpeg format and no transparency
- Spend time here!

Test Your Dispatch Name and Utterances

Test Your Dispatch Name and Utterances

Test Your Dispatch Name and Utterances

- Choose a dispatch name that works well with ASR and test it!
- Use a tool like RhymeZone's Find Similar Sounding words as an early test - <https://www.rhymezone.com/>
- Test all of your utterances (especially hints) and make sure they work

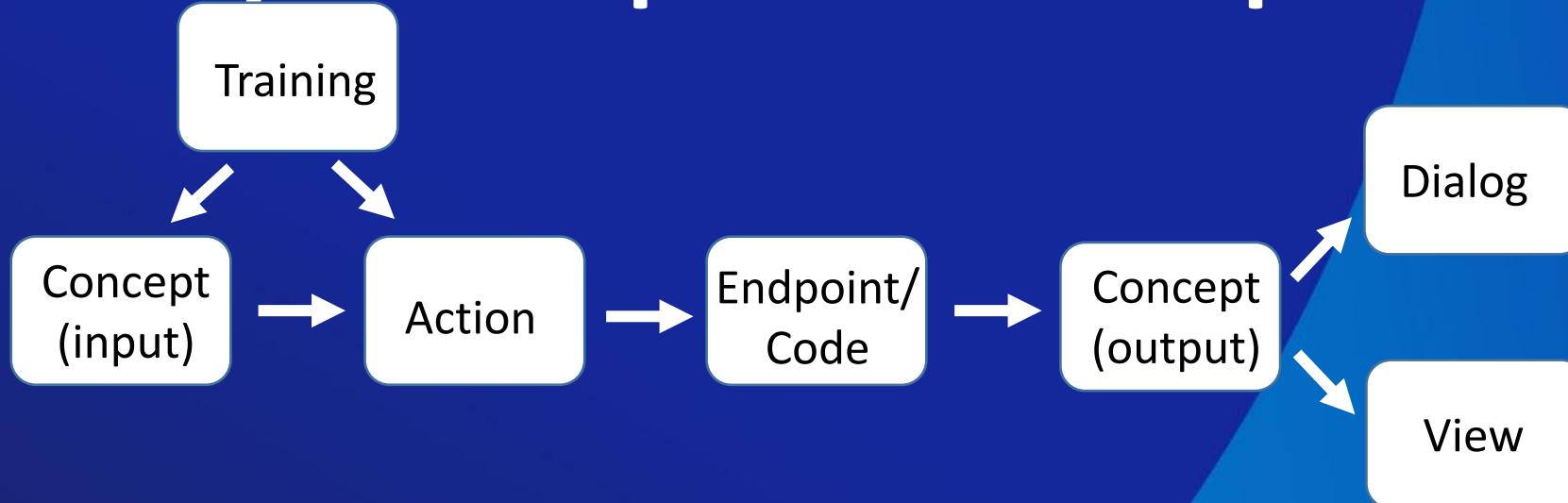


THINK BEYOND THE
SMART SPEAKER . . .

Thank you
& Questions

Roger Kibbe | Senior Developer Evangelist | Twitter: [@rogerkibbe](https://twitter.com/rogerkibbe)

Bixby Development – Components



- *Training*: NLU Utterance (Utterances/Training phrases)
- *Concept*: Input (and output) Objects (Slot/Entity)
- *Action*: Method (Intent)
- *Endpoint/Code*: Business Logic (Lambda/Webhook/Cloud Function)
- *Dialog*: Output Speech/Text (`response.speak`, `speech`)
- *View*: Formatted UI (APL, Card, Rich Responses)