

#WWDC19

# Building Great Shortcuts

Ian McDowell, Shortcuts Engineering

# Building Great Shortcuts

Configuration

Discoverability

Input and output

# Building Great Shortcuts

Configuration

Discoverability

Input and output

# Building Great Shortcuts

Configuration

**Discoverability**

Input and output



# Building Great Shortcuts

Configuration

Discoverability


Input and output



Soup Chef



Soup Chef

 SOUP CHEF ✕

Order **1** **Clam Chowder** for  
**delivery** to **Delivery Location**

Show More ^

9:41



Cancel

Next

# New Shortcut



 SOUP CHEF



Order 1 Clam Chowder for  
delivery to Delivery Location

Show More

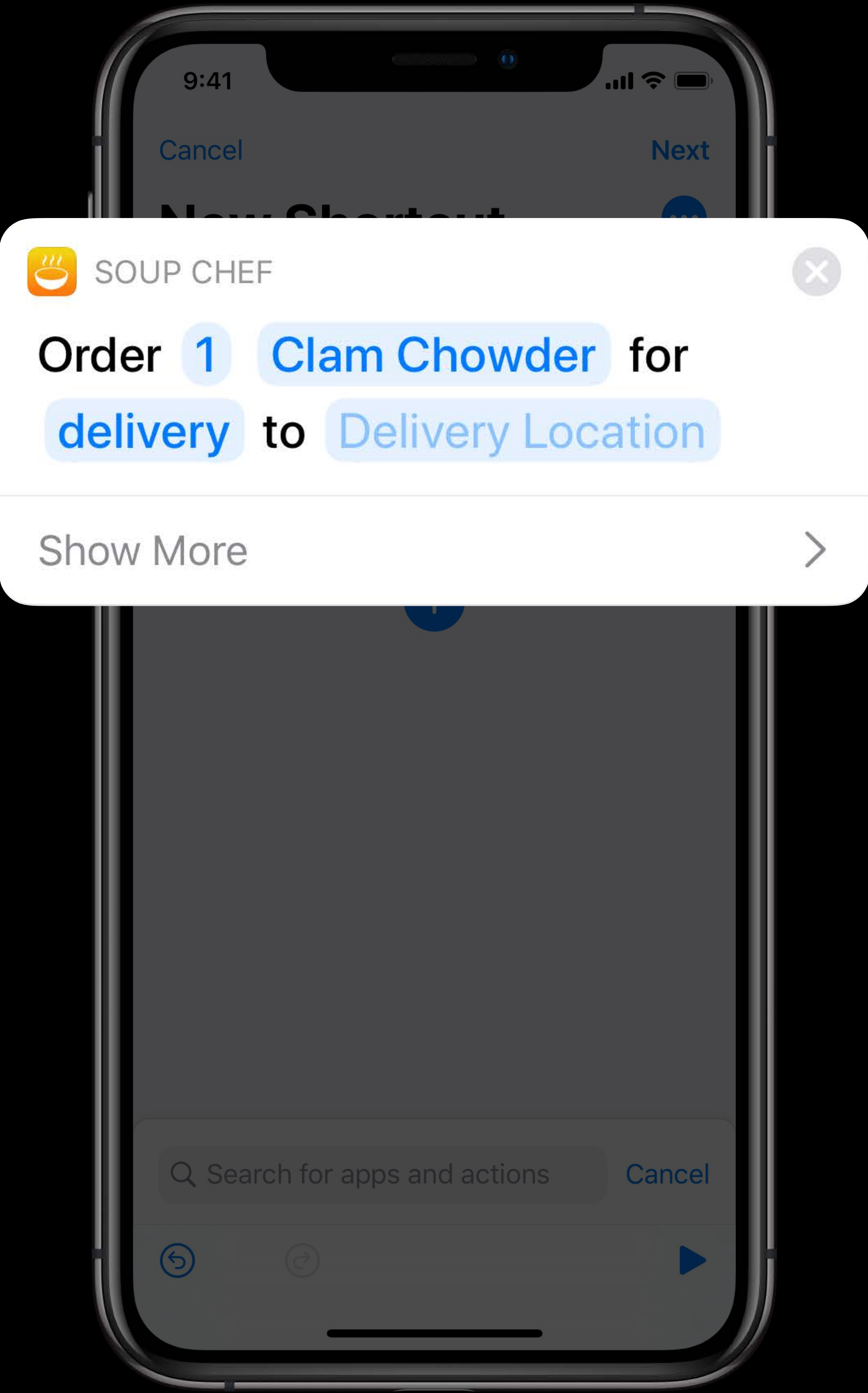


Q Search for apps and actions

Cancel







SOUP CHEF



Order 1 Clam Chowder for  
delivery to Delivery Location

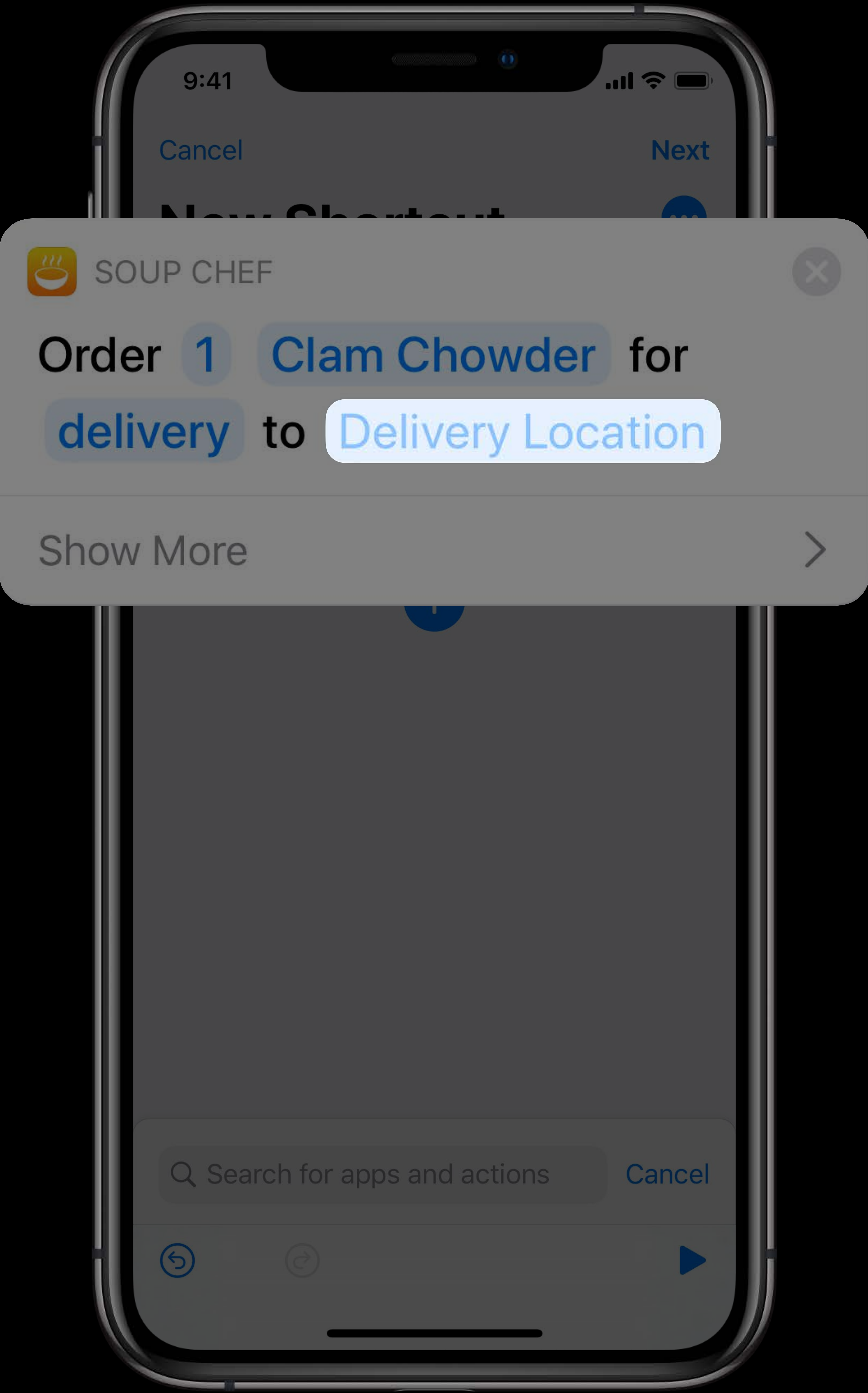
Show More



Search for apps and actions

Cancel





SOUP CHEF



Order 1 Clam Chowder for  
delivery to Delivery Location

Show More

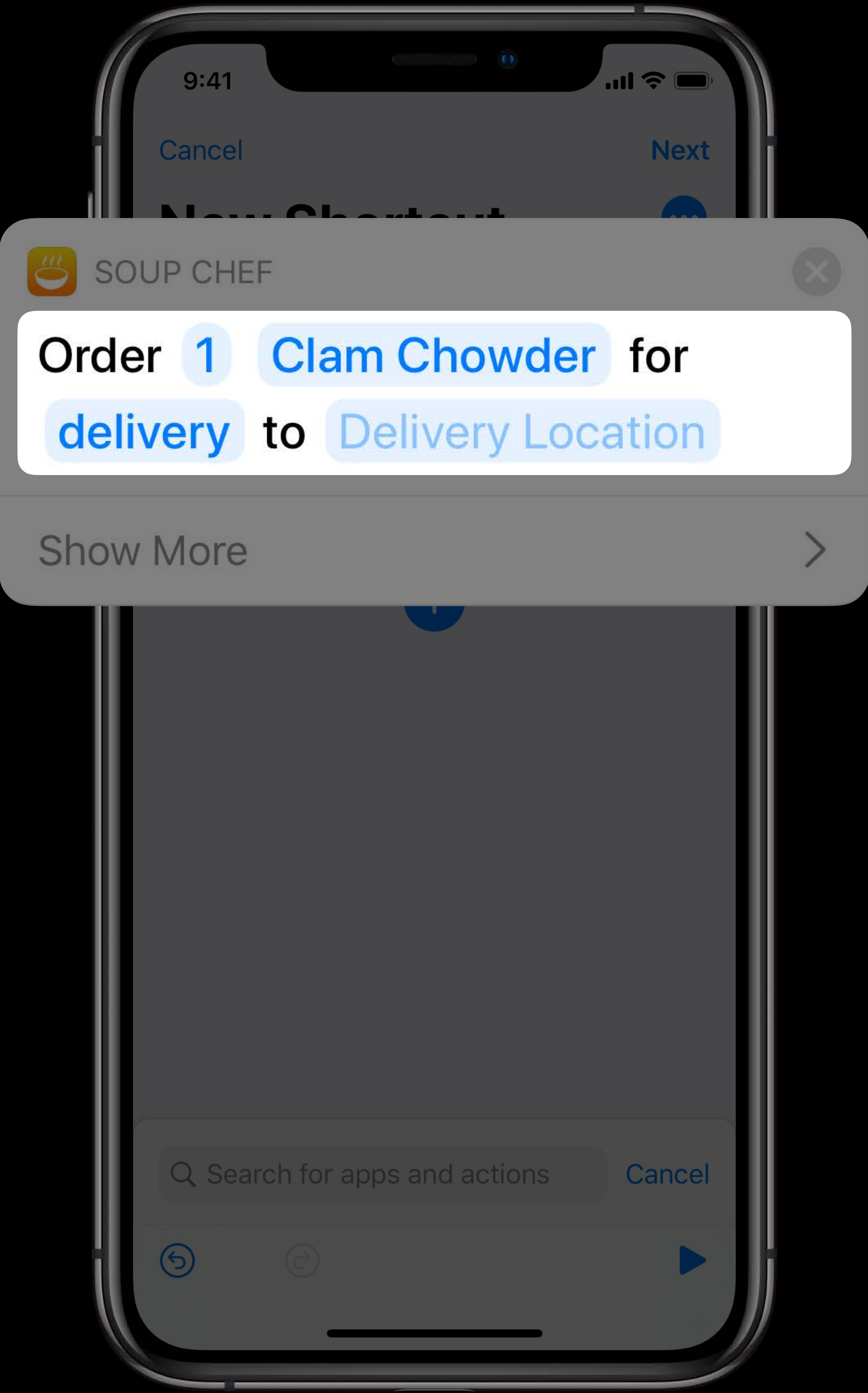


Search for apps and actions

Cancel





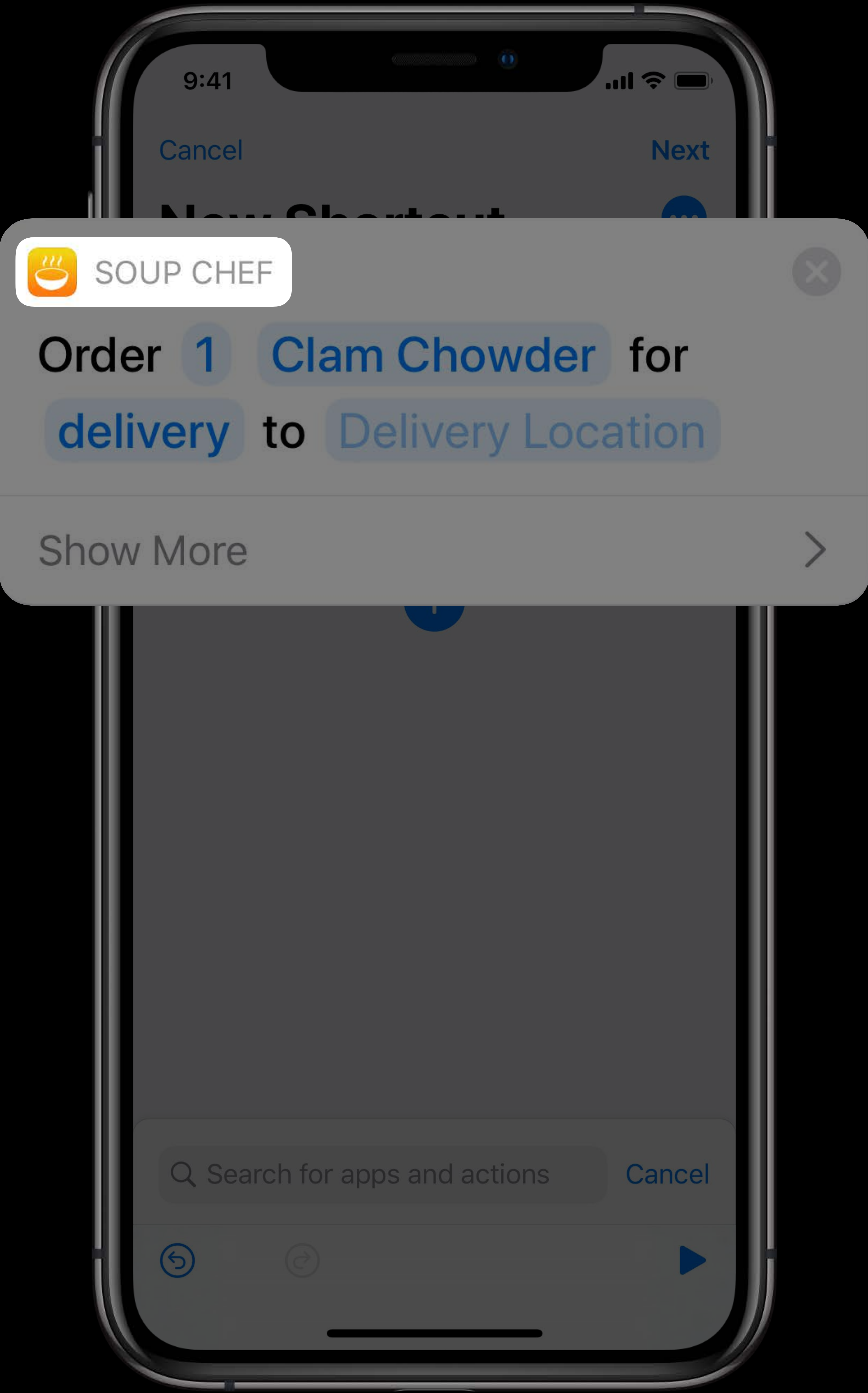


 SOUP CHEF

Order 1 Clam Chowder for  
delivery to Delivery Location

Show More

Search for apps and actions Cancel



 SOUP CHEF



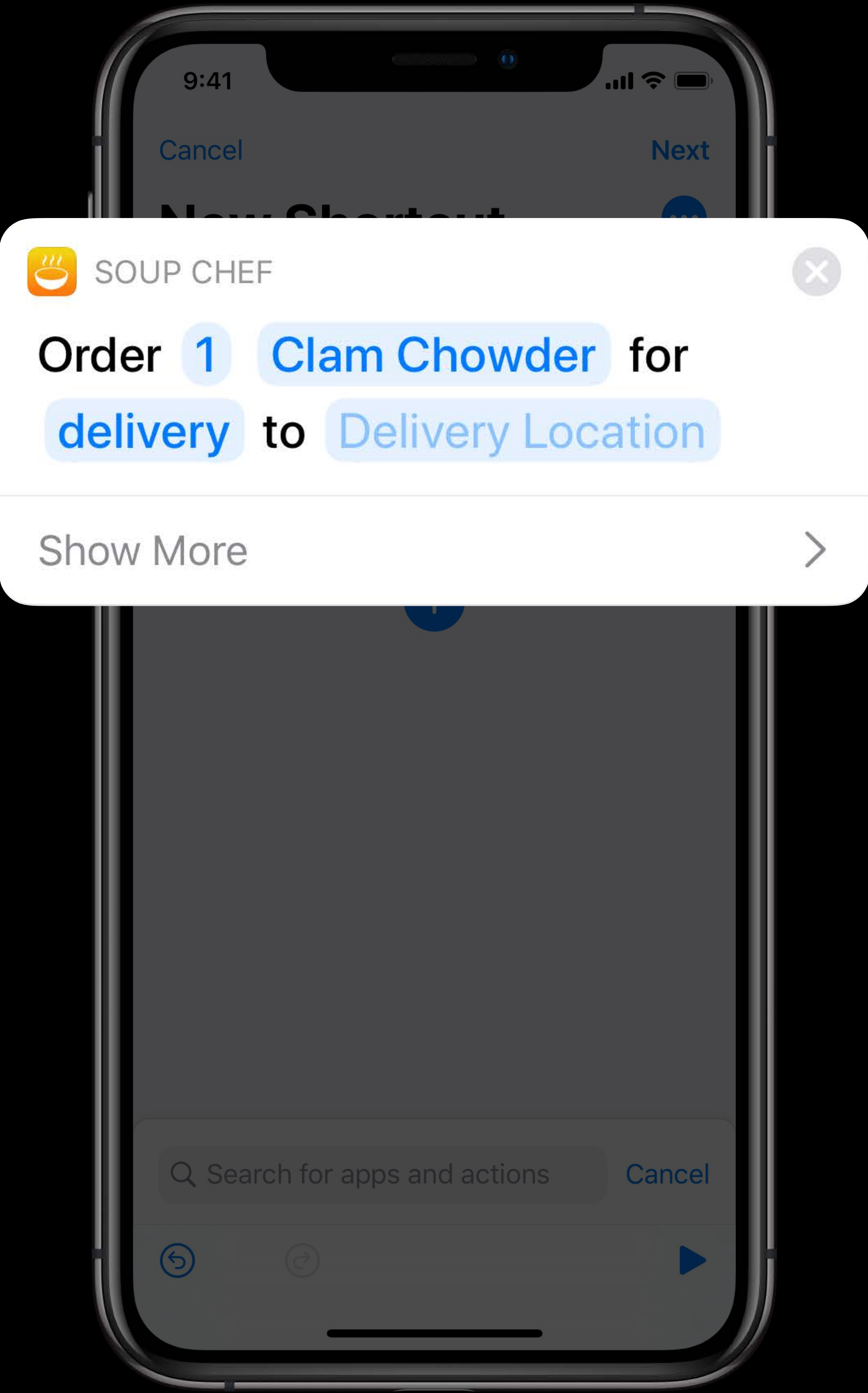
Order 1 Clam Chowder for  
delivery to Delivery Location

Show More >

Search for apps and actions Cancel







SOUP CHEF



Order 1 Clam Chowder for  
delivery to Delivery Location

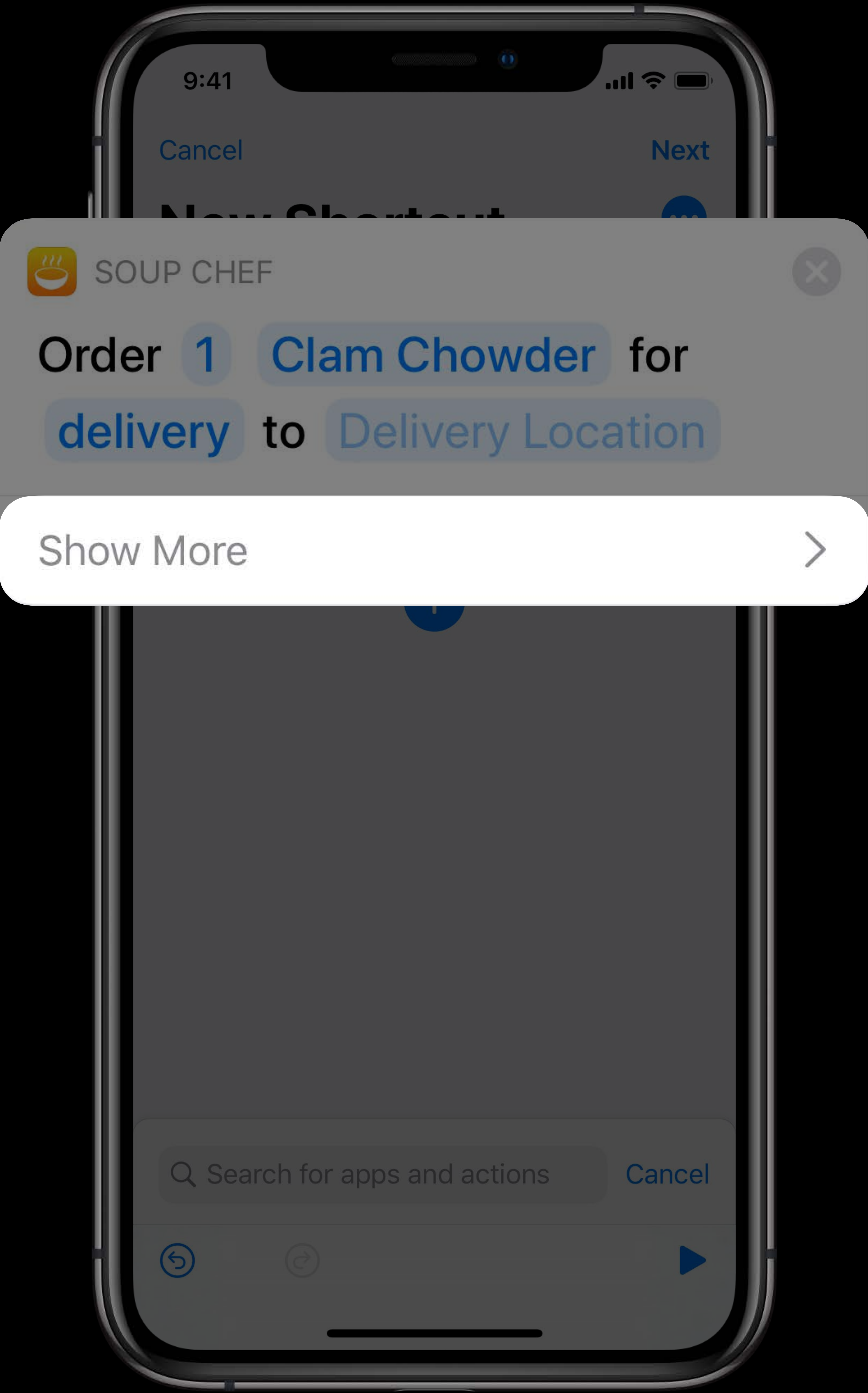
Show More



Search for apps and actions

Cancel





 SOUP CHEF



Order 1 Clam Chowder for  
delivery to Delivery Location

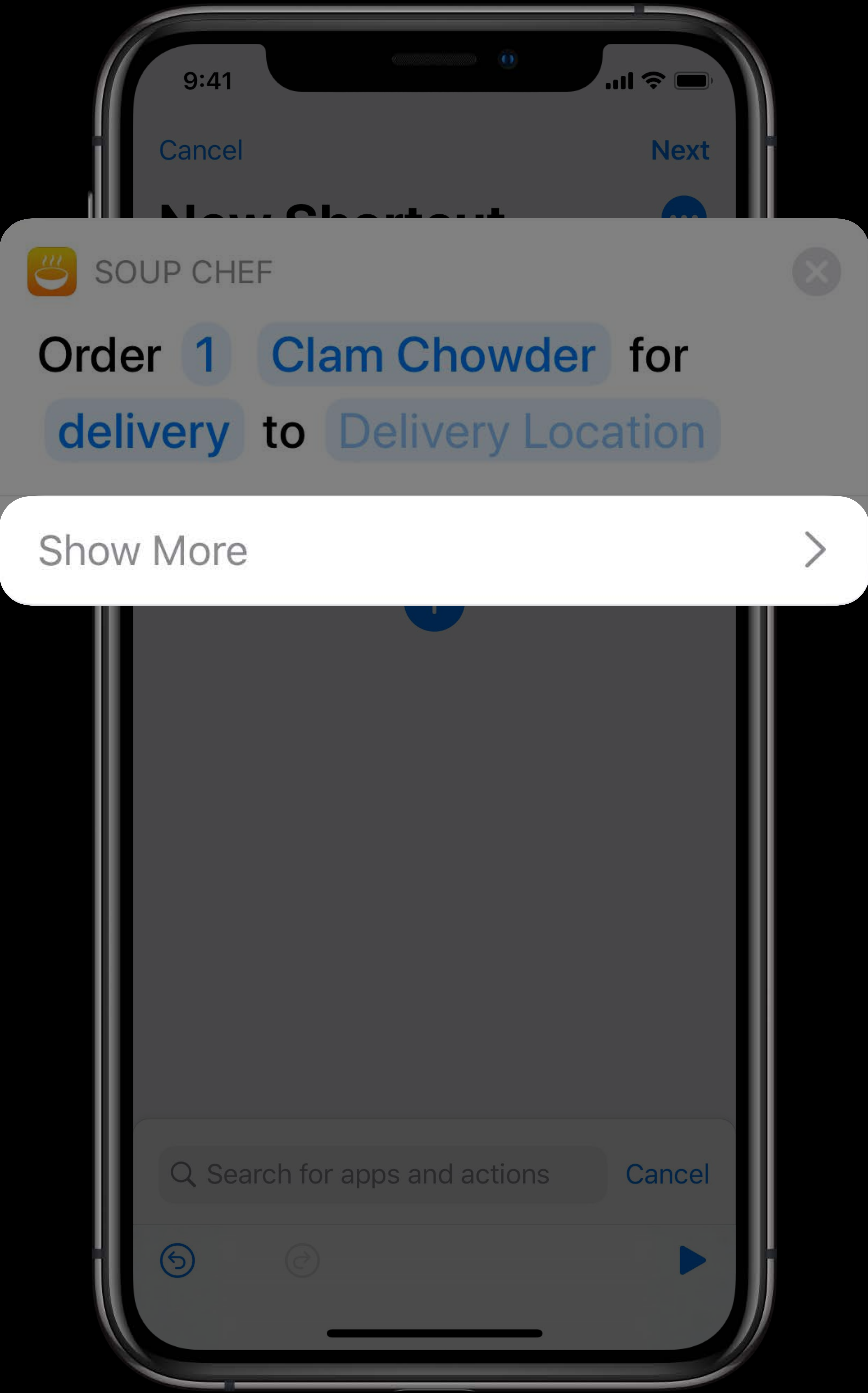
Show More



Search for apps and actions Cancel







 SOUP CHEF



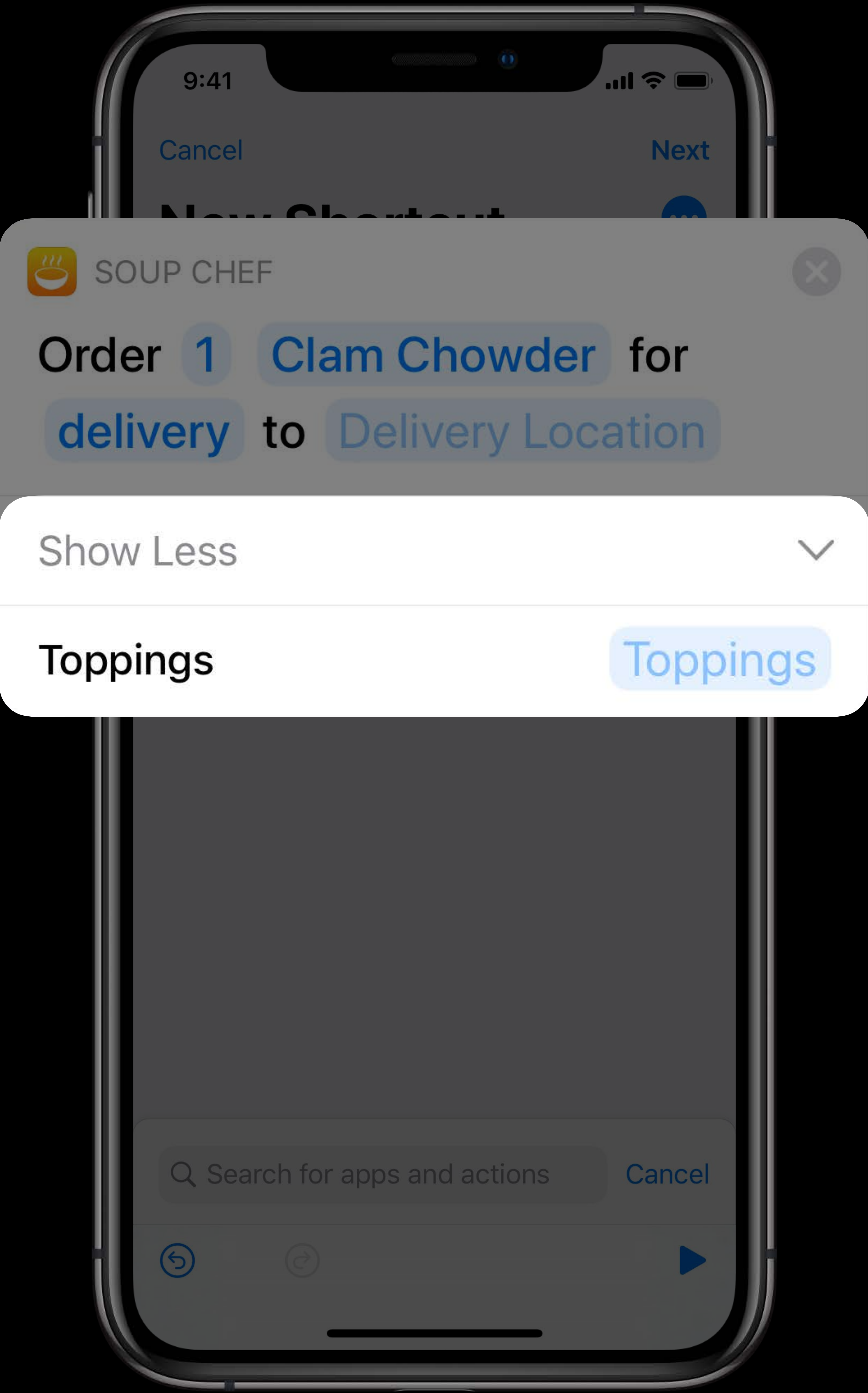
Order **1** **Clam Chowder** for  
**delivery** to **Delivery Location**

Show More



Search for apps and actions Cancel





 SOUP CHEF



Order 1 Clam Chowder for  
delivery to Delivery Location

Show Less



Toppings

Toppings

Search for apps and actions Cancel





- CUSTOM INTENTS
  - I** OrderSoup
  - R** Response
- ENUMS
  - E** Soup
  - E** OrderType
- TYPES
  - T** OrderDetails

Shortcuts app

Intent is user-configurable

Define how this intent appears in the Shortcuts app and Add to Siri.

Input Parameter **None**

If compatible, the output of the preceding action will be filled into this parameter.

Key Parameter **soup**

Defines which parameter to show suggestions for in the "Add Action" sheet.

Supported Combinations

soup, quantity, toppings, orderType, delive...  
soup, quantity, toppings, orderType, storeL...  
soup, quantity, toppings, orderType

Summary **Order quantity soup for orderType to deliveryLocation**

Parameters not included in the summary will be available to the user under "Show More".

Preview

APP NAME

**Order Quantity Soup for Order Type to Delivery Location**

More Options

Toppings



SoupChef | Build SoupChef: **Succeeded** | 5/31/19 at 1:15 PM

SoupChef > Shared > Intents.intentdefinition > Intents.intentdefinition (Base) > Custom Intents > OrderSoup

**CUSTOM INTENTS**

- OrderSoup
- Response

**Shortcuts app**

Intent is user-configurable

**ENUMS**

- Soup
- OrderType

**TYPES**

- OrderDetails

**Supported Combinations**

soup, quantity, toppings, orderType, delive...
soup, quantity, toppings, orderType, storeL...
soup, quantity, toppings, orderType

**Summary** Order quantity soup for orderType to deliveryLocation

Parameters not included in the summary will be available to the user under "Show More".

**Preview**

APP NAME

**Order Quantity Soup for Order Type to Delivery Location**

More Options

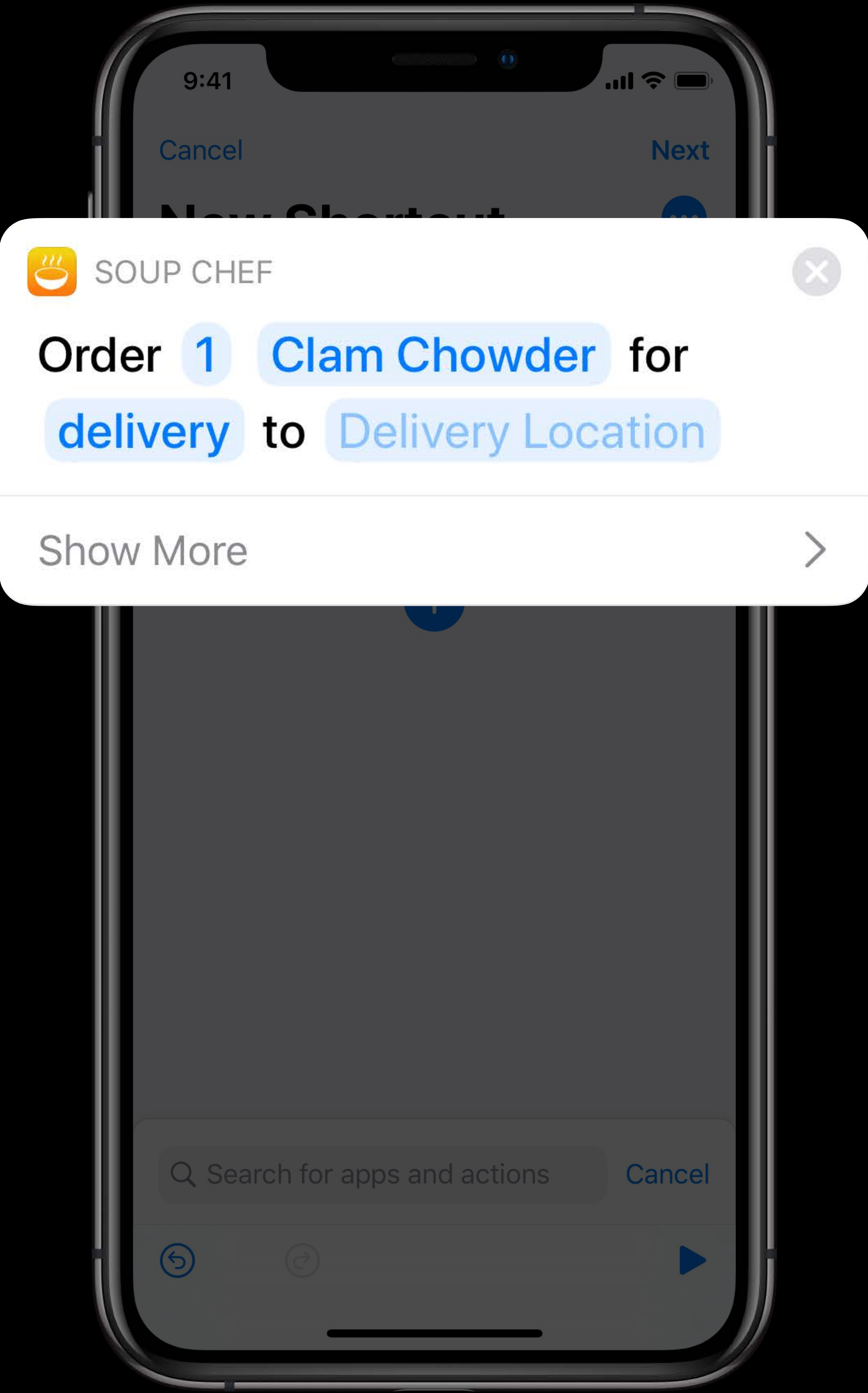
Toppings

More Options

Toppings

Filter





SOUP CHEF



Order 1 Clam Chowder for  
delivery to Delivery Location

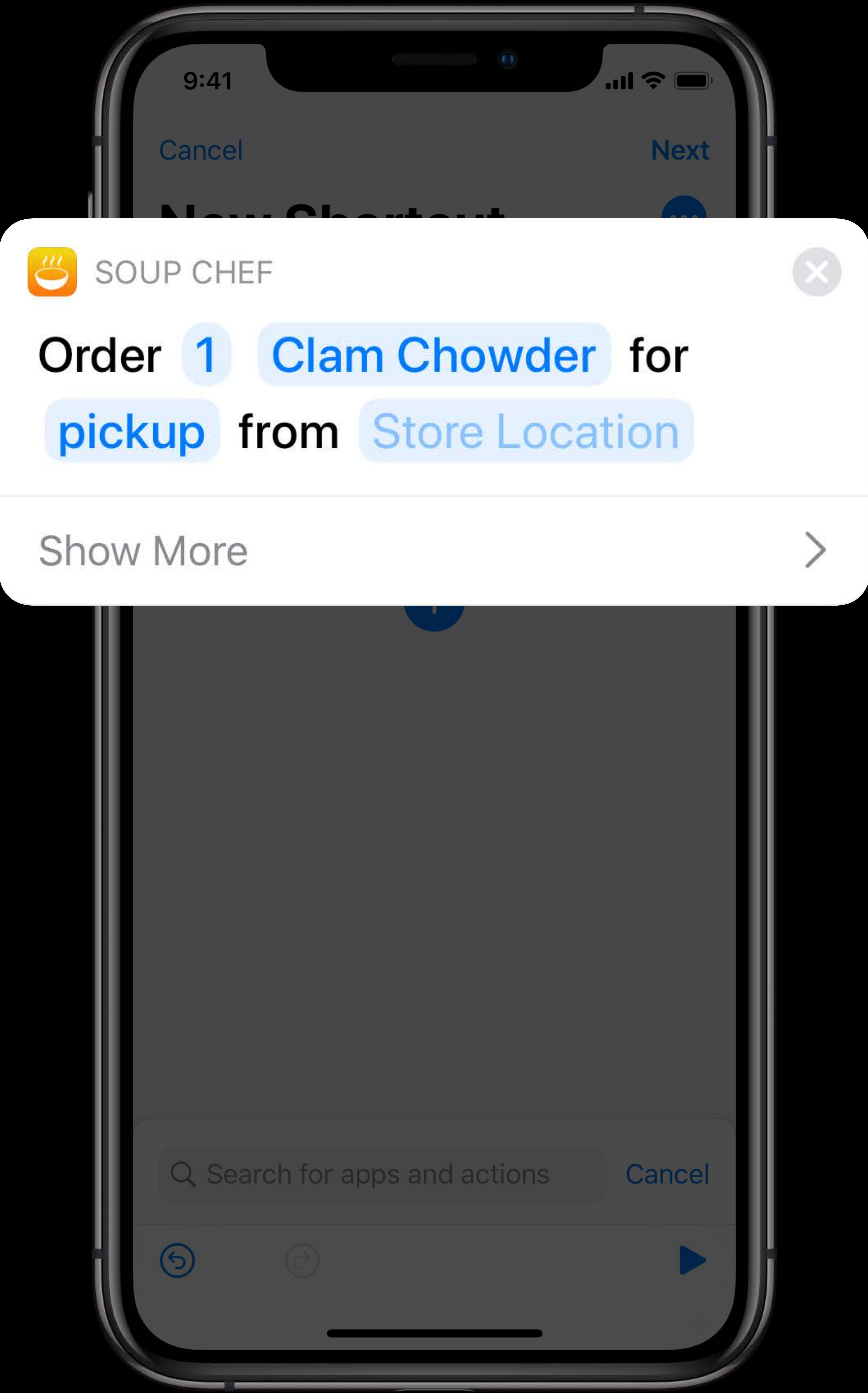
Show More



Search for apps and actions

Cancel





SOUP CHEF



Order 1 Clam Chowder for pickup from Store Location

Show More

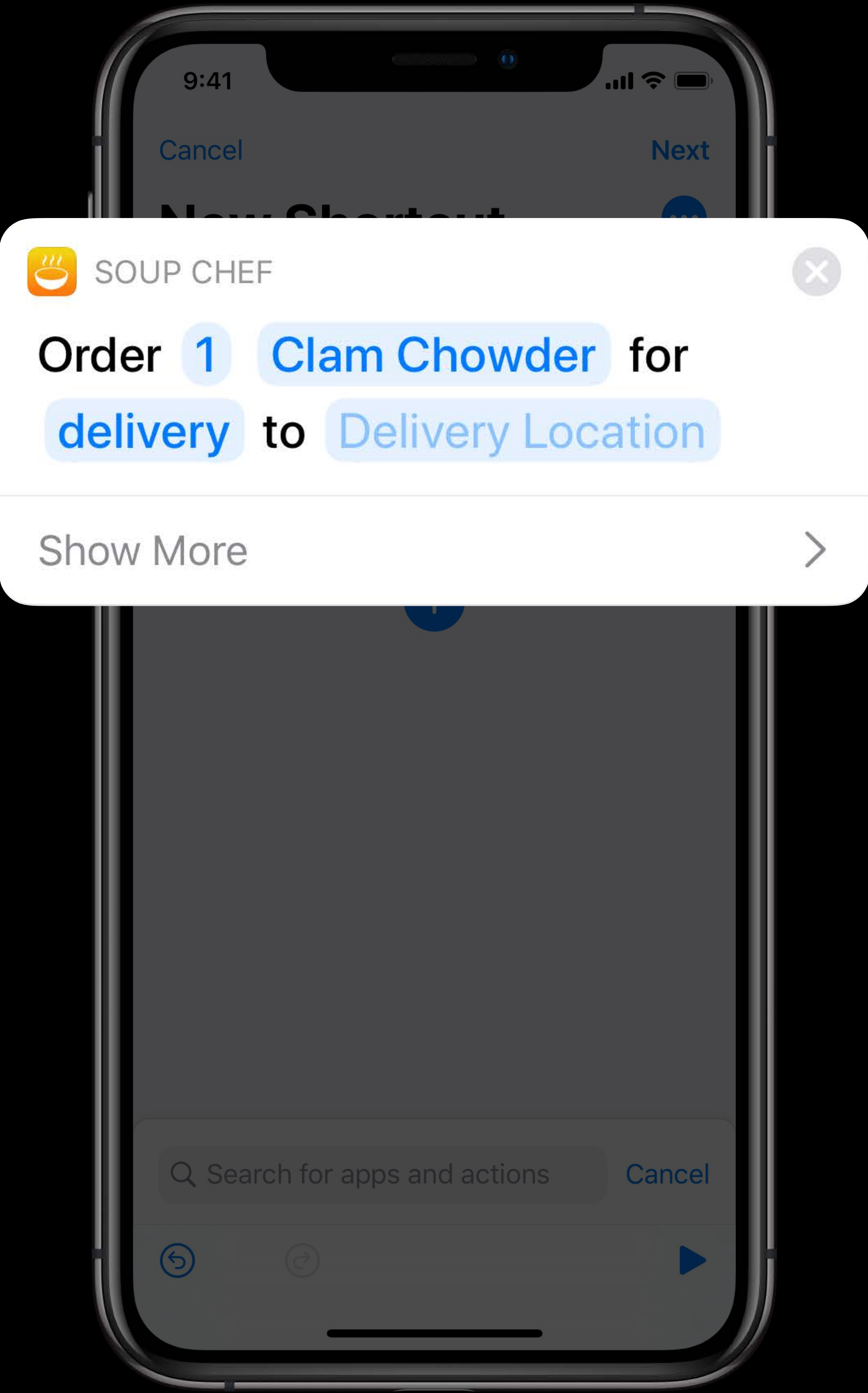


Search for apps and actions

Cancel







SOUP CHEF



Order 1 Clam Chowder for  
delivery to Delivery Location

Show More



Search for apps and actions

Cancel



9:41



Cancel

Next

# New Shortcut



 SOUP CHEF



Order **1** **Clam Chowder** for  
**delivery** to **Delivery Location**

Show More



Q Search for apps and actions

Cancel

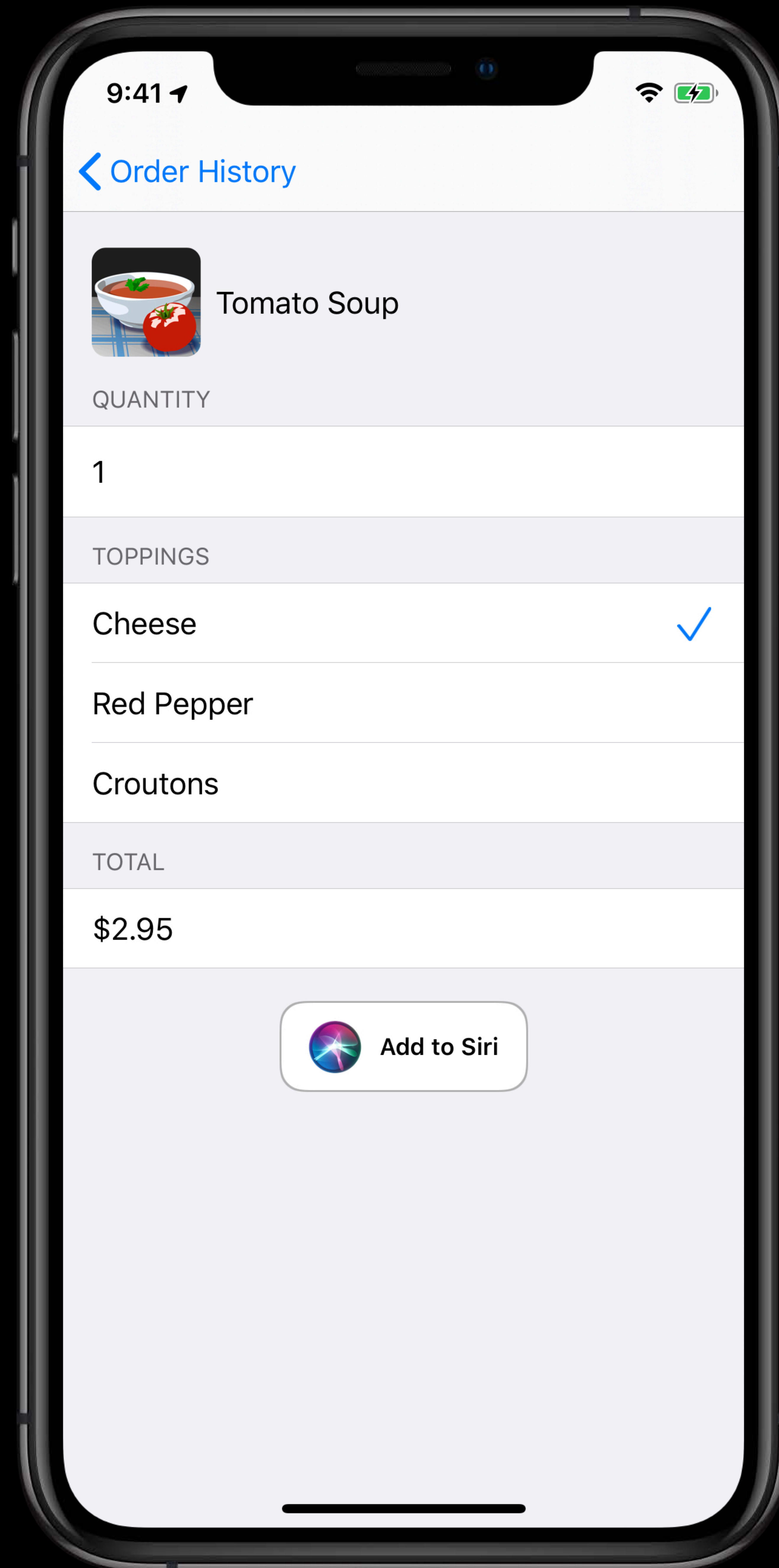


# Discoverability

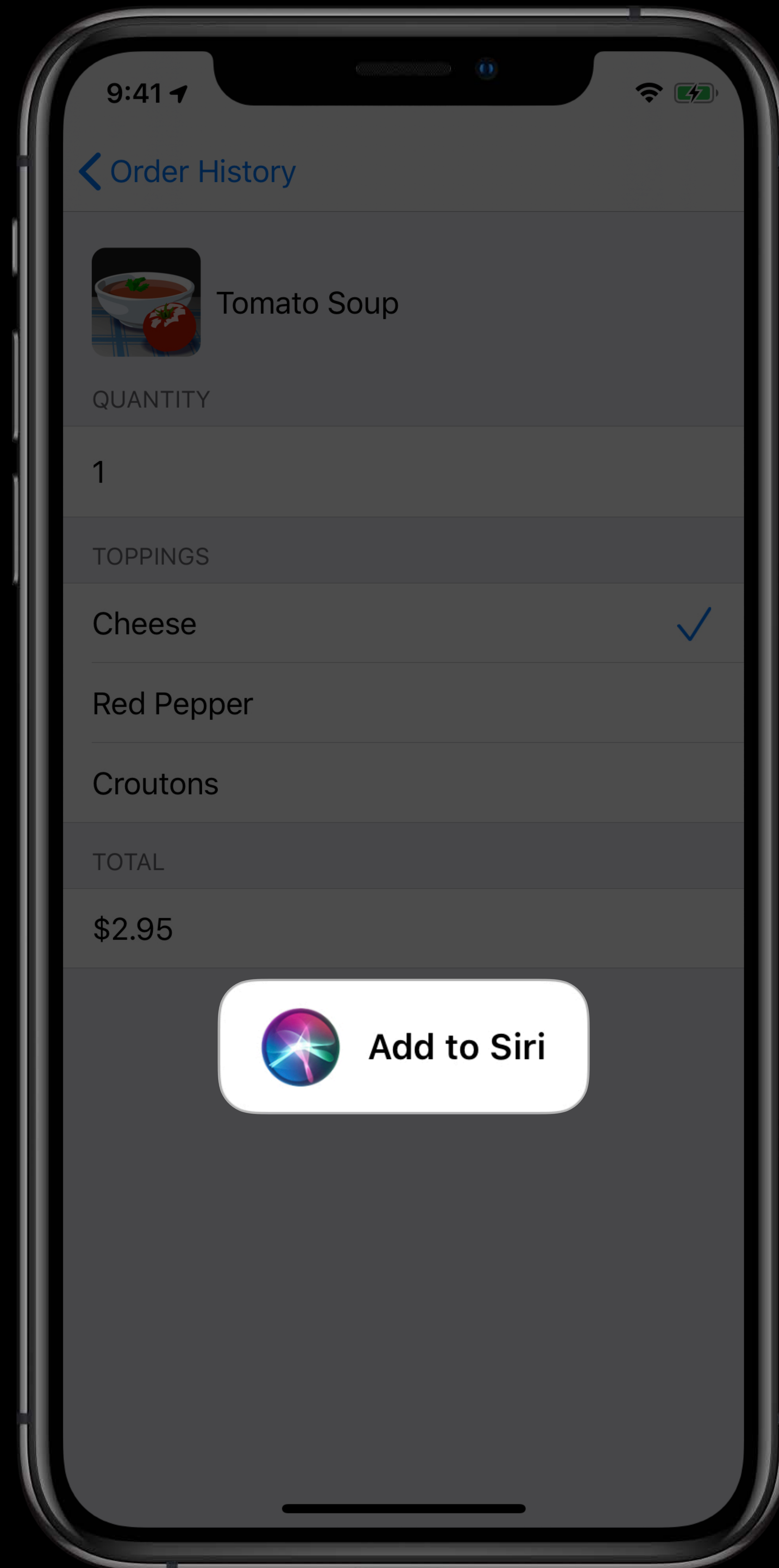
Your app



INUIAddVoiceShortcutButton



INUIAddVoiceShortcutButton



9:41



Cancel



## Add to Siri

Add a custom phrase Siri can use to tell Soup Chef to run this shortcut.

### When I say:

Order Soup



### Do:

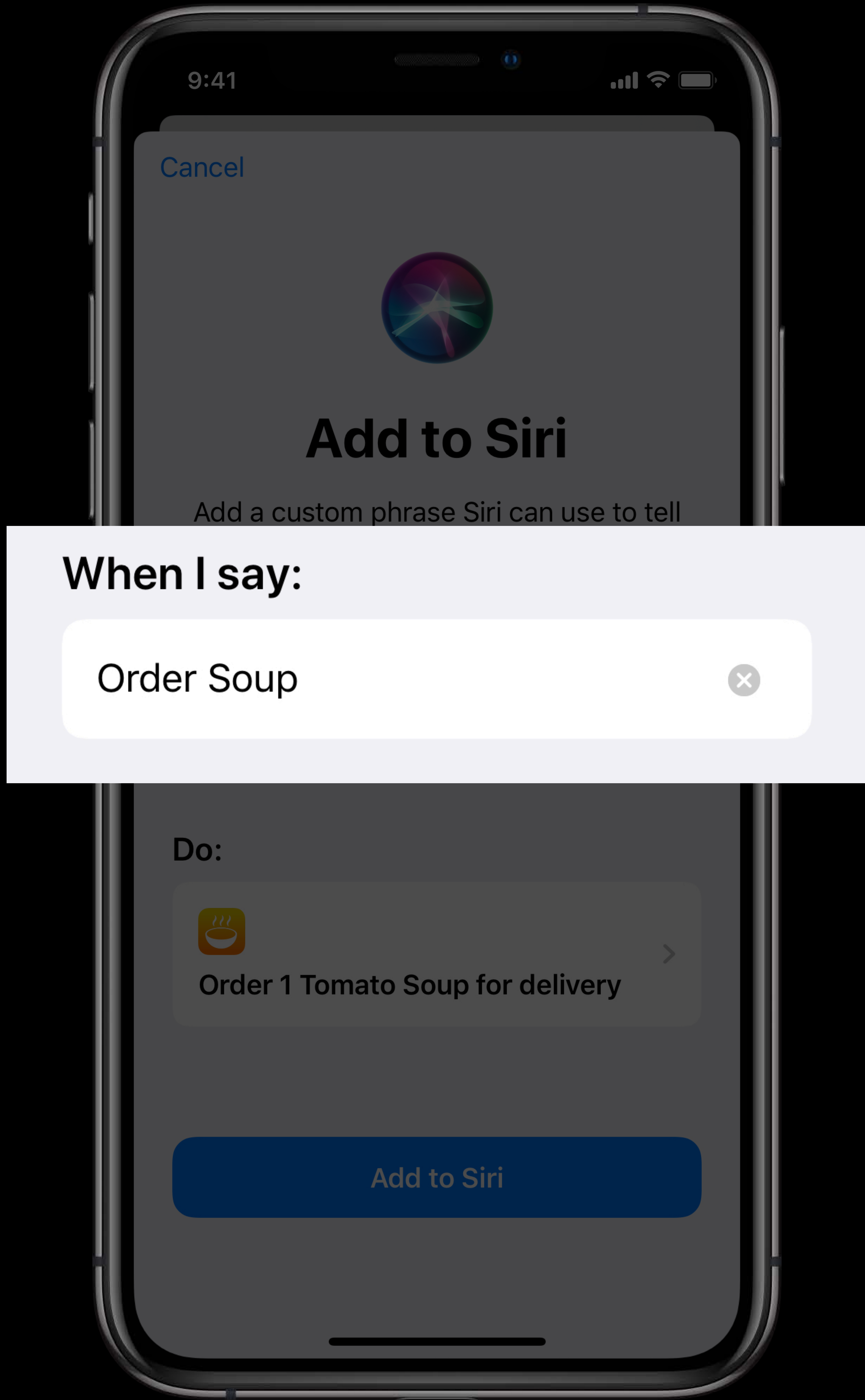


Order 1 Tomato Soup for delivery



Add to Siri





**When I say:**

Order Soup



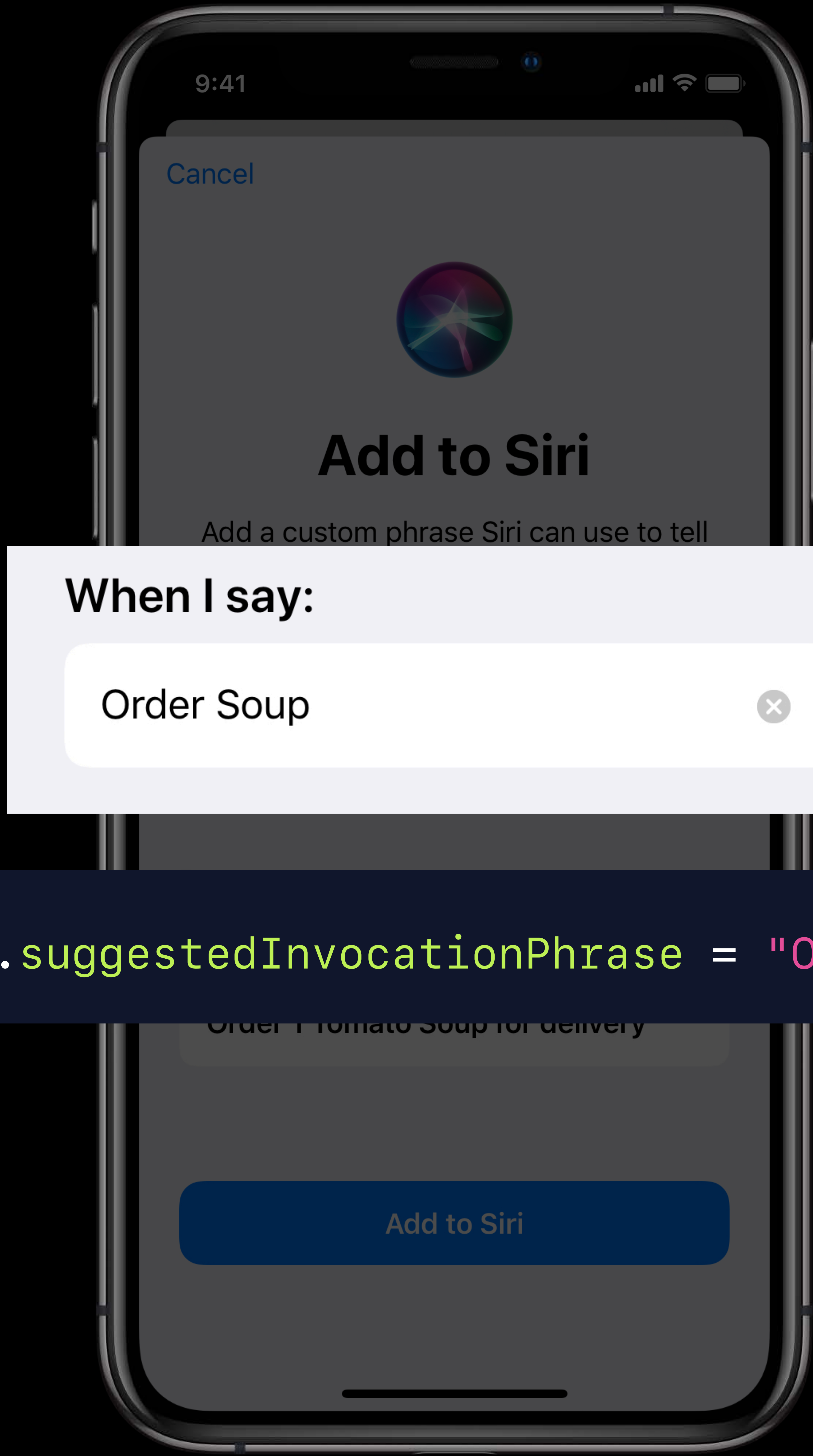
Do:



Order 1 Tomato Soup for delivery

Add to Siri

NEW



When I say:

Order Soup

```
intent.suggestedInvocationPhrase = "Order Soup"
```



9:41



Cancel



## Add to Siri

Add a custom phrase Siri can use to tell Soup Chef to run this shortcut.

### When I say:

Order Soup



### Do:



Order 1 Tomato Soup for delivery



Add to Siri

9:41



Cancel



## Add to Siri

Add a custom phrase Siri can use to tell Soup Chef to run this shortcut.

When I say:

Order Soup



Do:

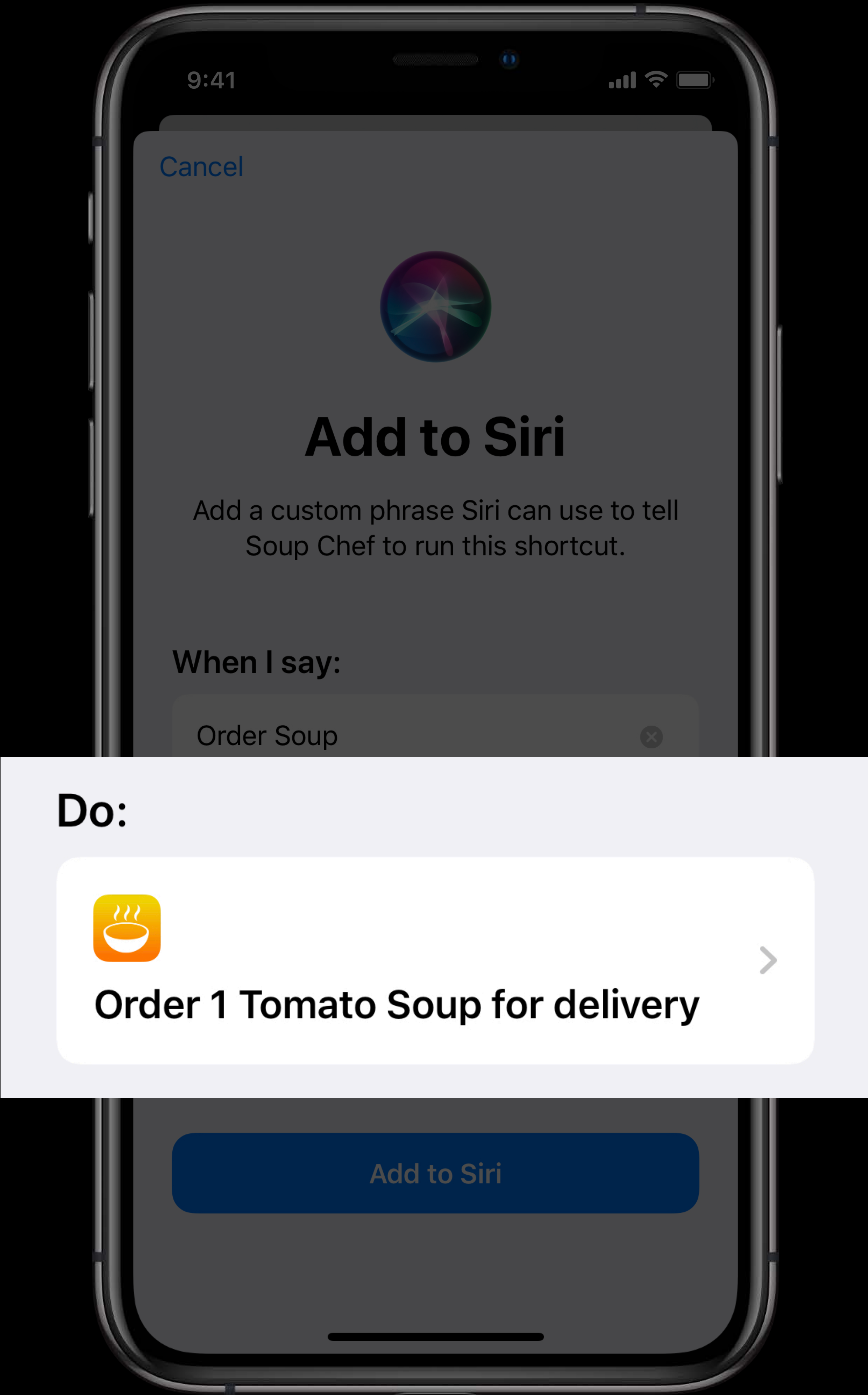


Order 1 Tomato Soup for delivery




Add to Siri

NEW



Do:

 Order 1 Tomato Soup for delivery >



NEW

Do:



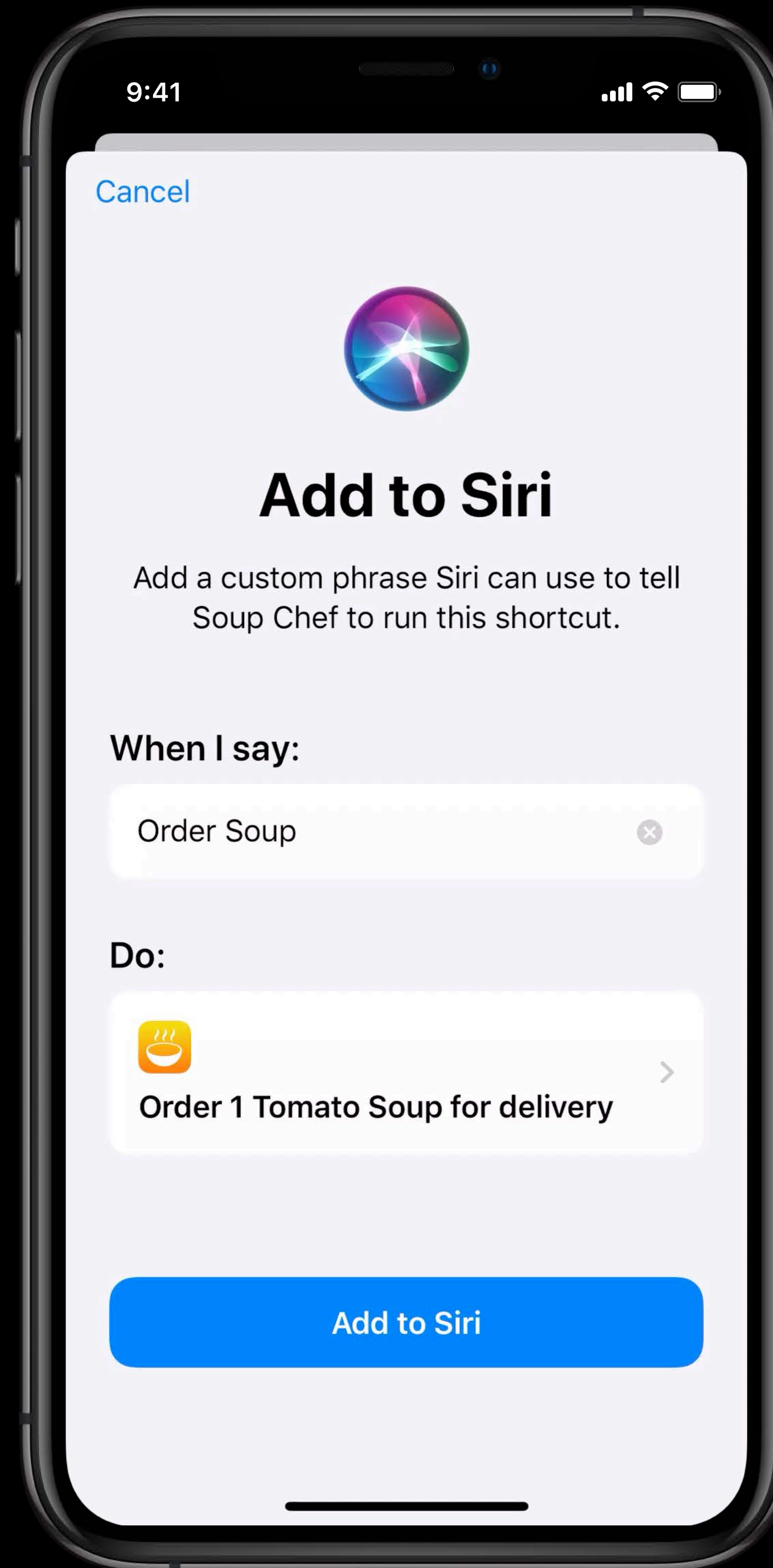
Order 1 Tomato Soup for delivery

```
intent.soup = .tomato  
intent.quantity = 1
```

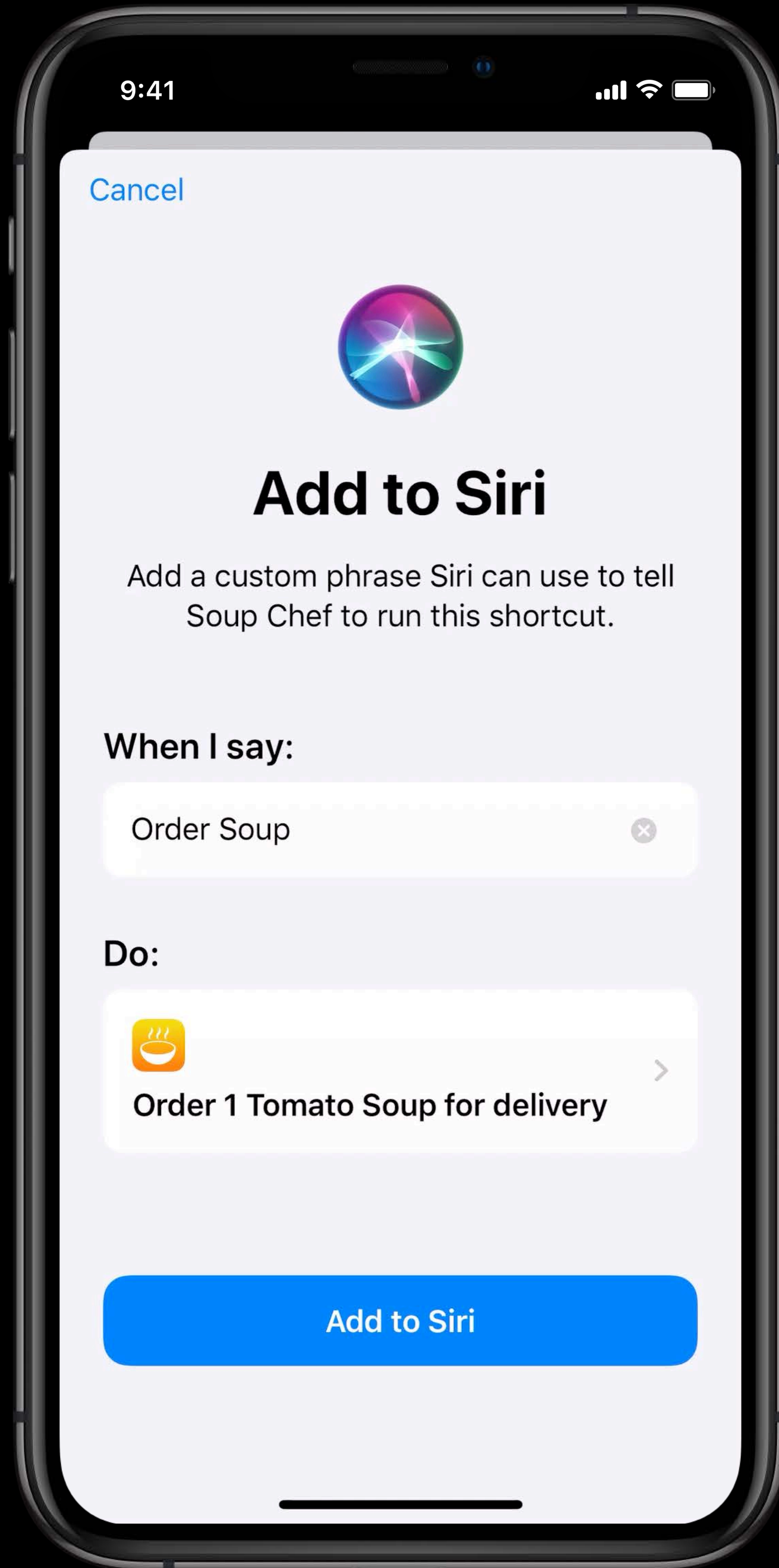
Add to Siri



NEW







NEW

9:41



[← Back](#)

Edit Action



SOUP CHEF

Order **2** **Tomato Soup** for  
**delivery** to **Delivery Location**

Show More





9:41



[← Back](#)

Edit Action

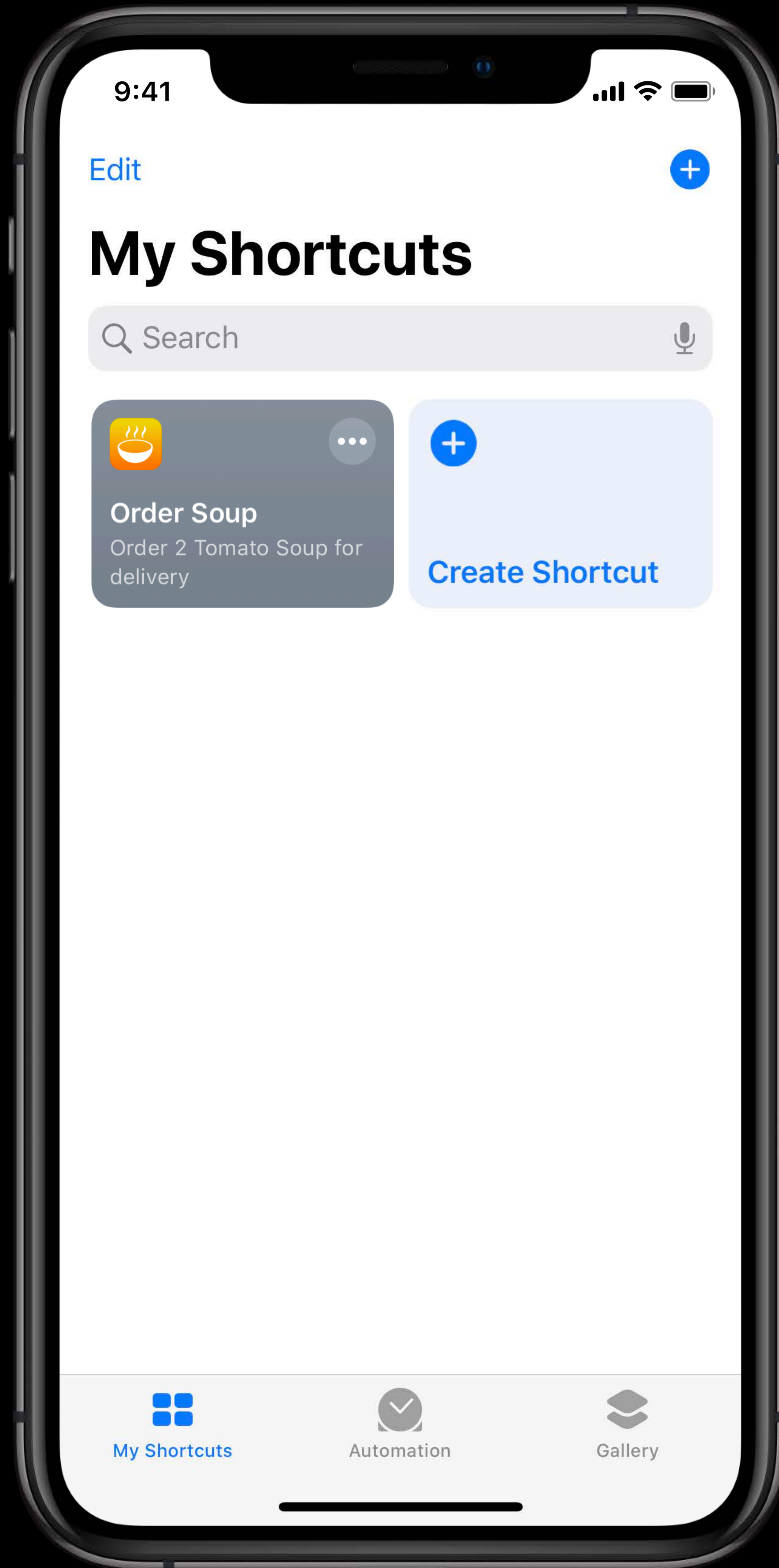


SOUP CHEF

Order **2** **Tomato Soup** for  
**delivery** to **Delivery Location**

Show More





NEW

# Discoverability

Shortcuts app



9:41



# Gallery

Search



Shortcuts for Accessibility

## Shortcuts from Your Apps [See All](#)



**Order 1 Clam Chowder**  
Get a tasty soup in minutes



**Add "Do laundry" to Reminders**



**Add to Instacart**  
Add item to grocery list



## Great Shortcuts for Siri [See All](#)

Add these shortcuts to Siri to get things done with your voice.



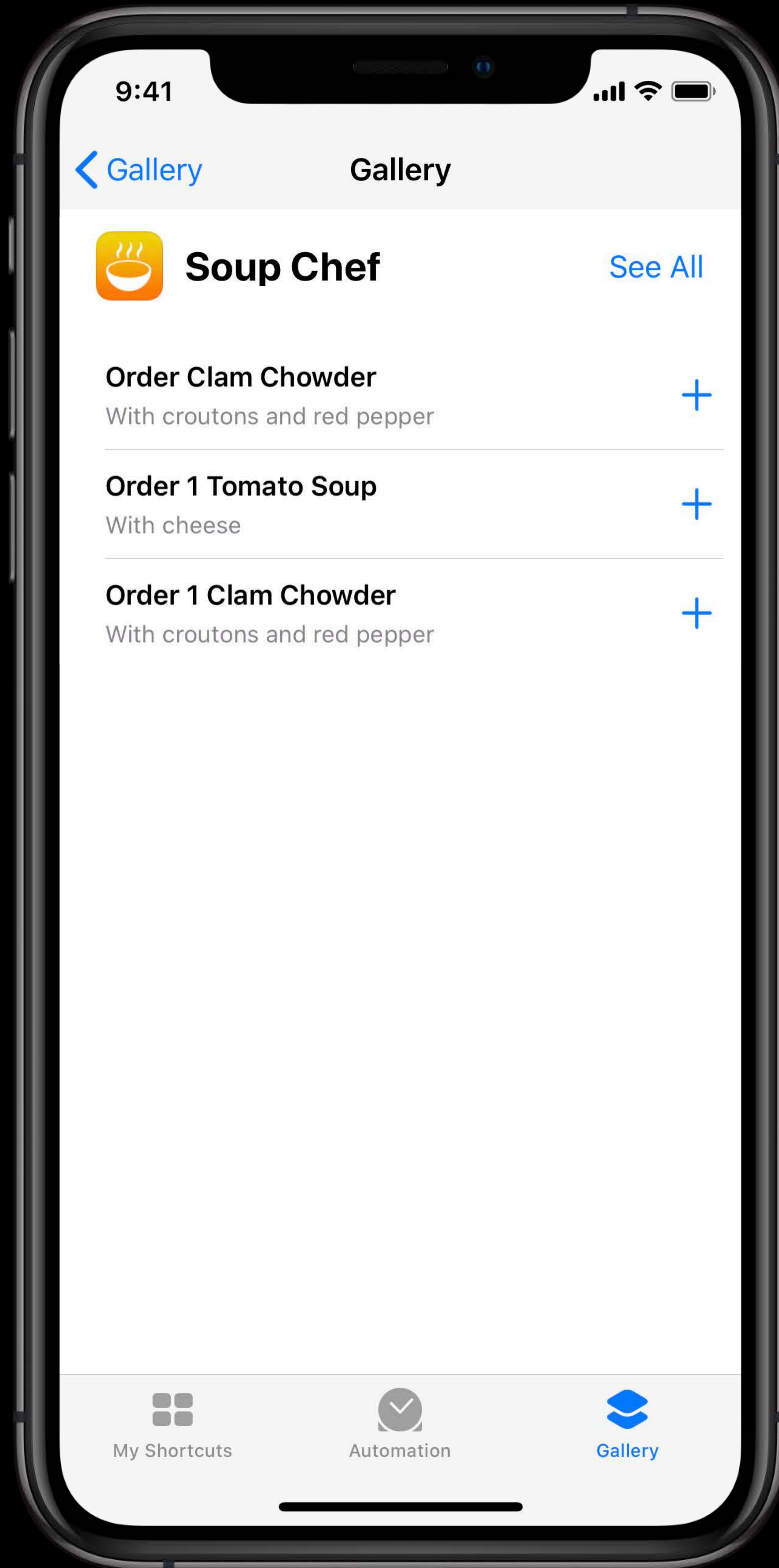
My Shortcuts



Automation



Gallery



NEW





## Soup Chef

[See All](#)

### Order Clam Chowder

With croutons and red pepper



### Order 1 Tomato Soup

With cheese



### Order 1 Clam Chowder

With croutons and red pepper



My Shortcuts

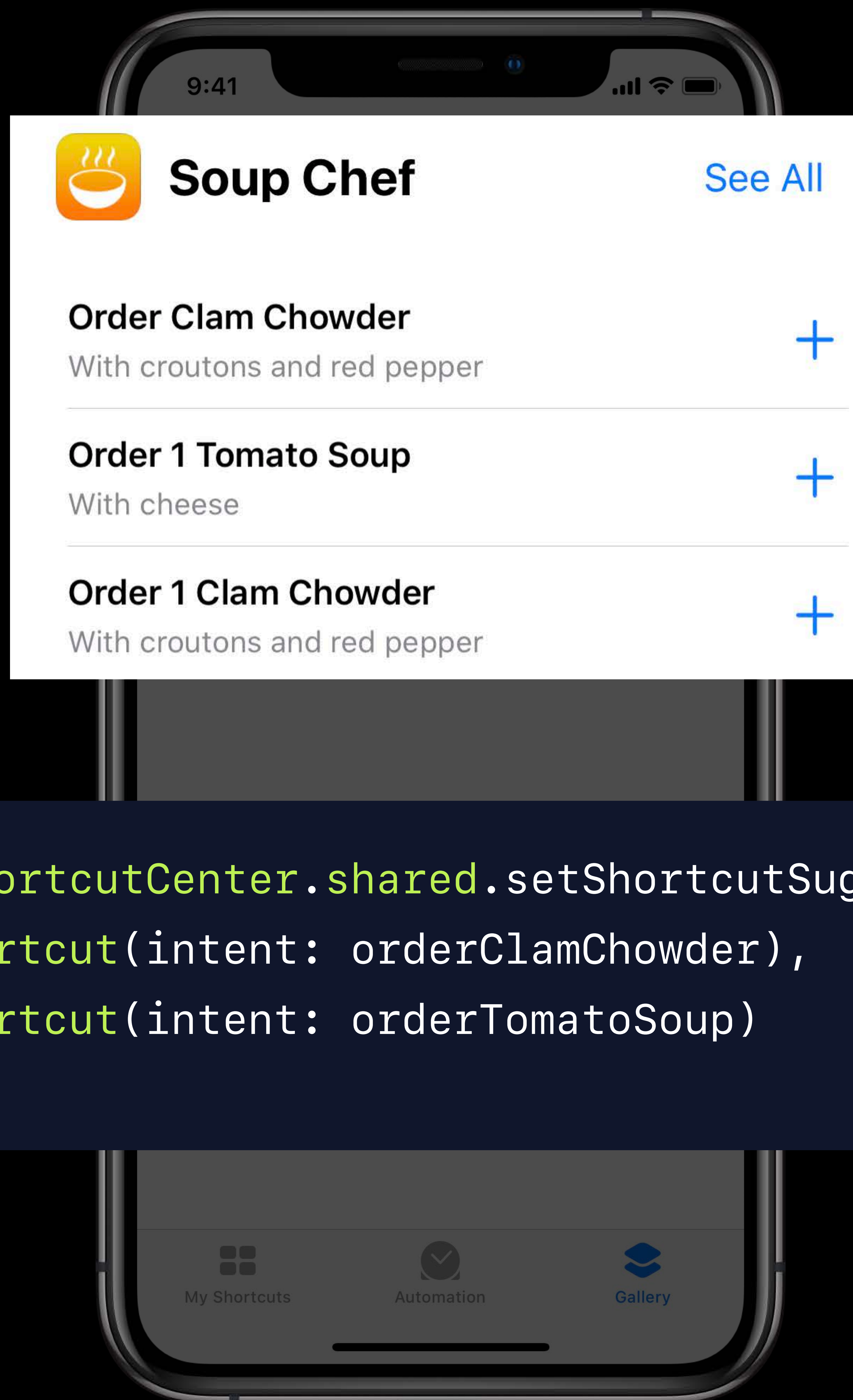


Automation

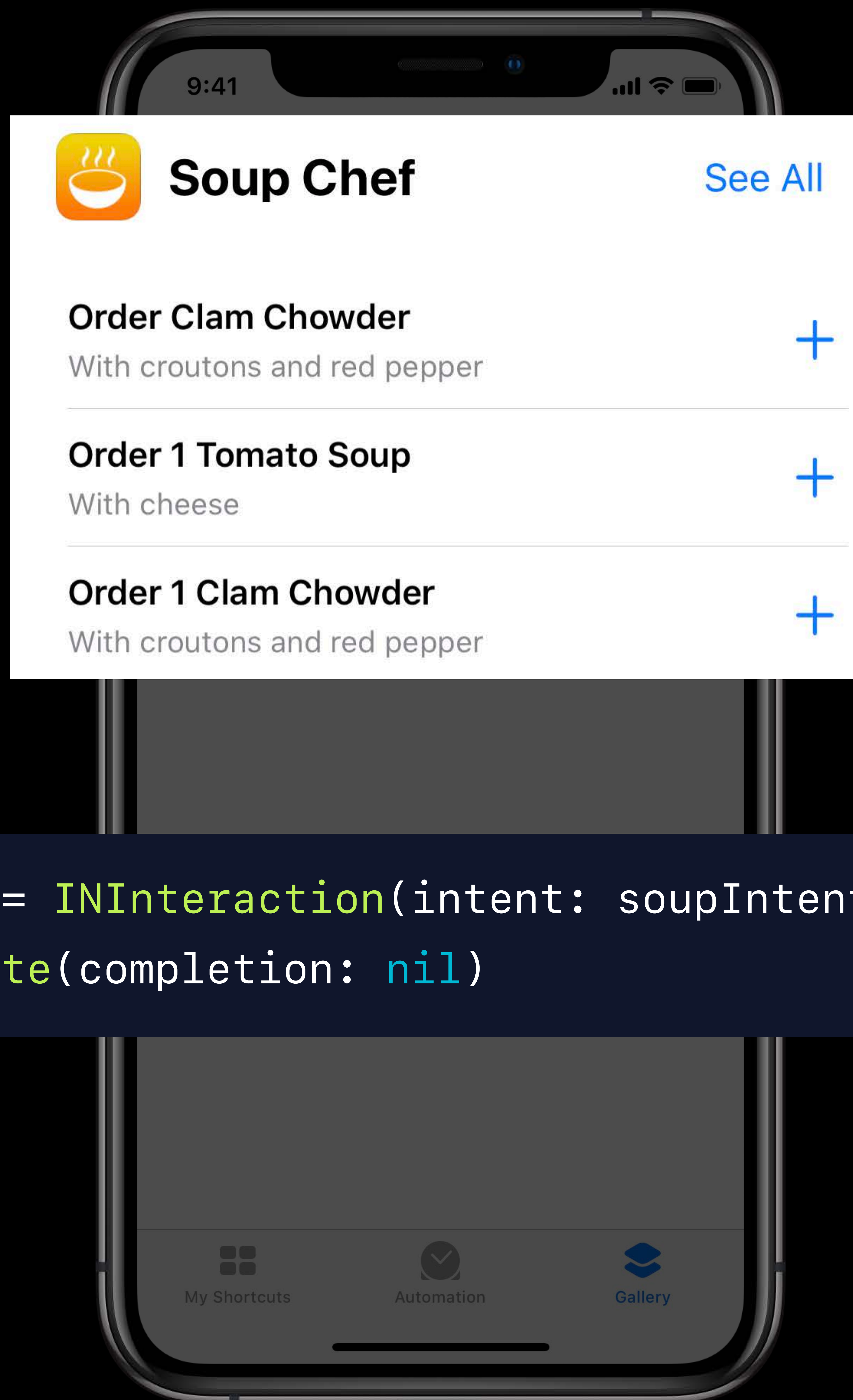


Gallery





```
INVoiceShortcutCenter.shared.setShortcutSuggestions([  
    INShortcut(intent: orderClamChowder),  
    INShortcut(intent: orderTomatoSoup)  
])
```



```
let interaction = INInteraction(intent: soupIntent, response: nil)
interaction.donate(completion: nil)
```

# Donation

Tell the system when the user does things, and what they did

```
let interaction = INInteraction(intent: myIntent, response: nil)
interaction.donate(completion: nil)
```

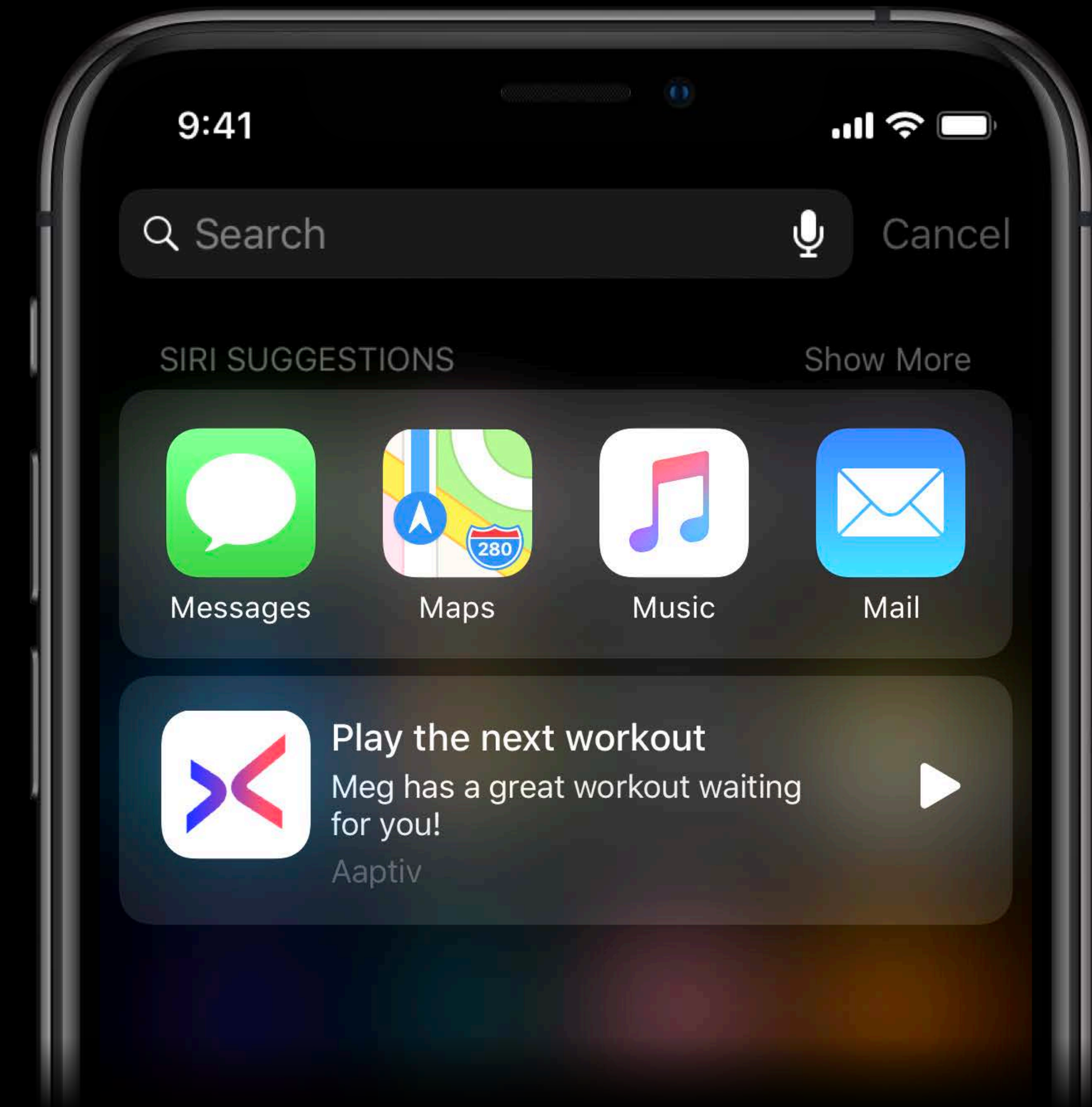


# Donation

Allows devices to make suggestions based on user activity

Private and on-device machine learning

Displayed on the Lock Screen, Search, and Shortcuts app



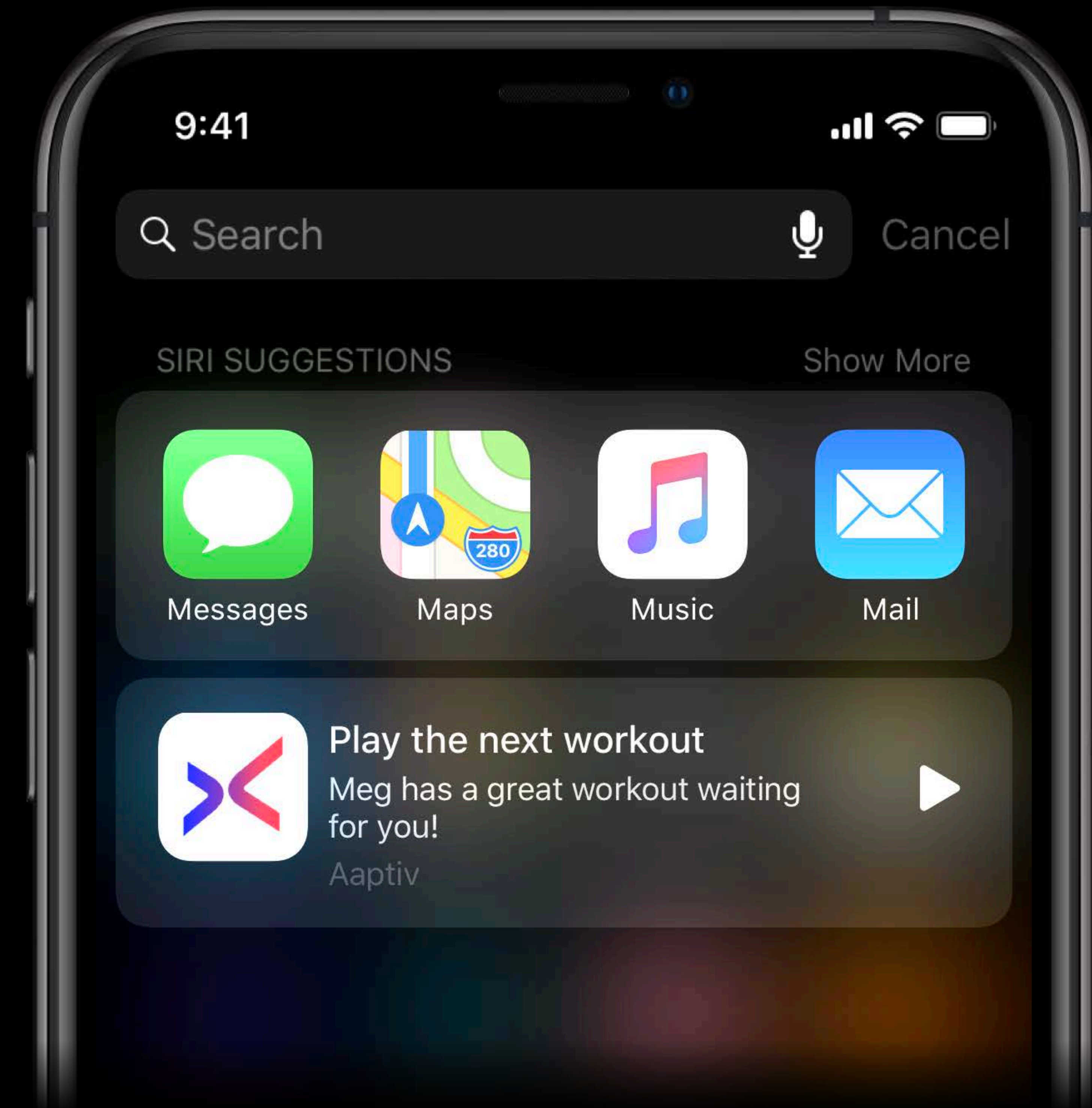


# Donation

Allows devices to make suggestions based on user activity

Private and on-device machine learning

Displayed on the Lock Screen, Search, and Shortcuts app



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Introduction to Siri Shortcuts

WWDC 2018

---

Siri Shortcuts on the Siri Watch Face

WWDC 2018

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9:41



Cancel

Next

# New Shortcut



Create a shortcut to actions you do in your apps every day.

 Add Action

Help


 Search for apps and actions













9:41



Q Search for apps and actions 

 Apps	 Favorites	 Scripting	 Media
 Location	 Documents	 Sharing	 Web

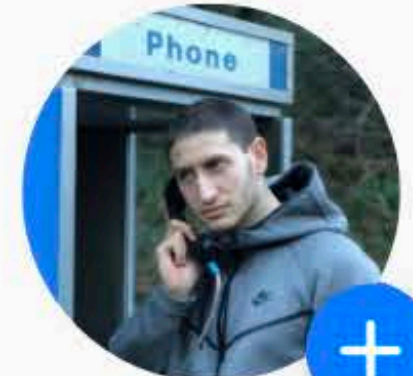

### Suggestions

Based on how you use your iPhone.

#### Order Soup

 Tomato Soup	 Clam Chowder	
---------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------

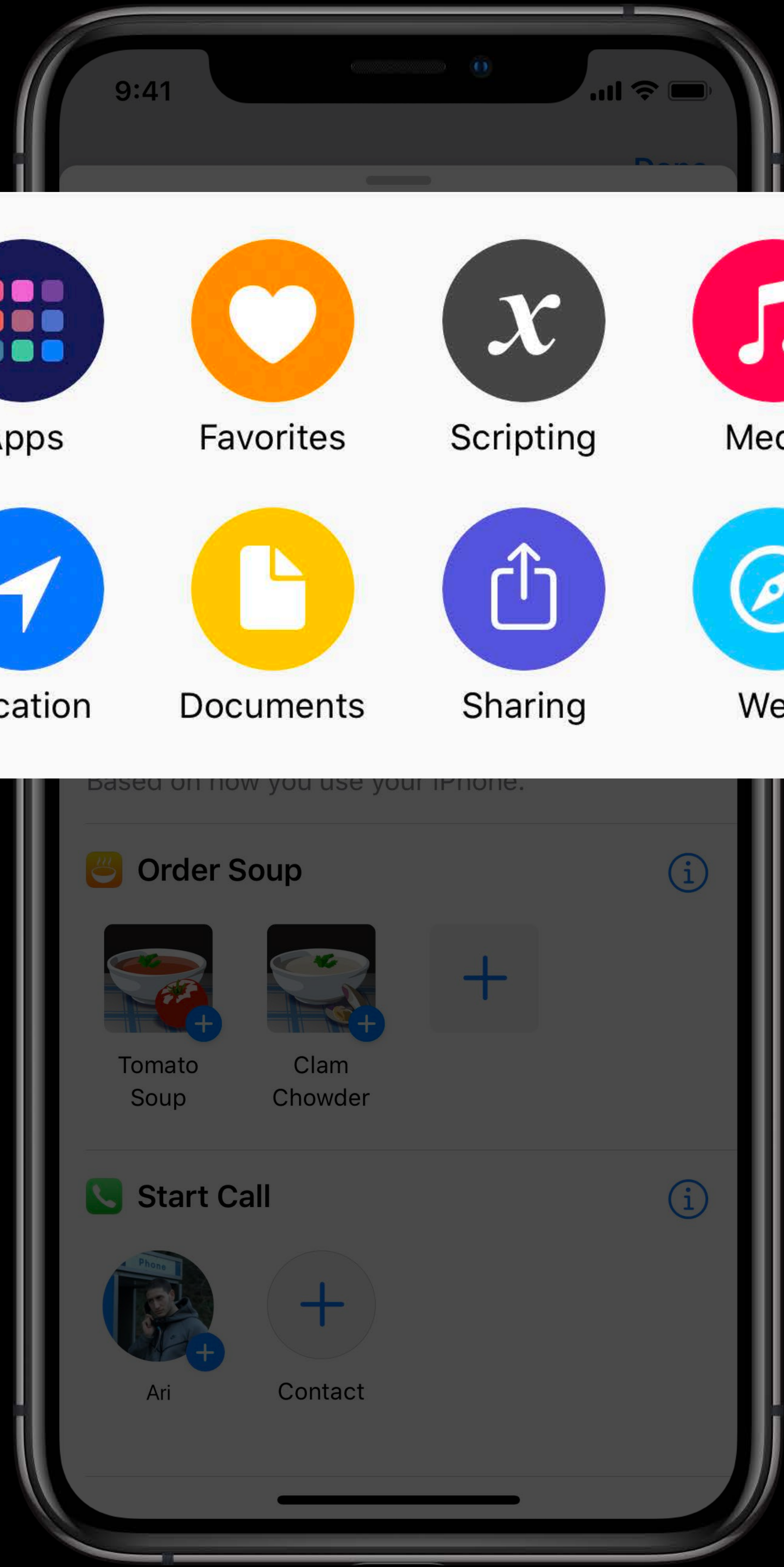
#### Start Call

 Ari	 Contact
----------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------

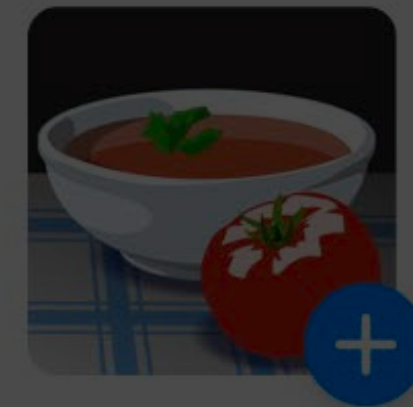


Apps Favorites Scripting Media

Location Documents Sharing Web



Order Soup



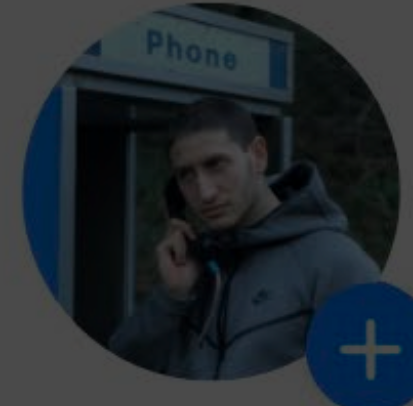
Tomato  
Soup



Clam  
Chowder



Start Call



Ari



Contact



9:41



Q Search for apps and actions



Apps



Favorites



Scripting



Media



Location



Documents



Sharing



Web

## Suggestions

Based on how you use your iPhone.



Order Soup



Tomato  
Soup



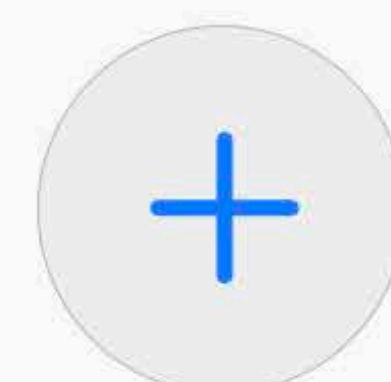
Clam  
Chowder



Start Call

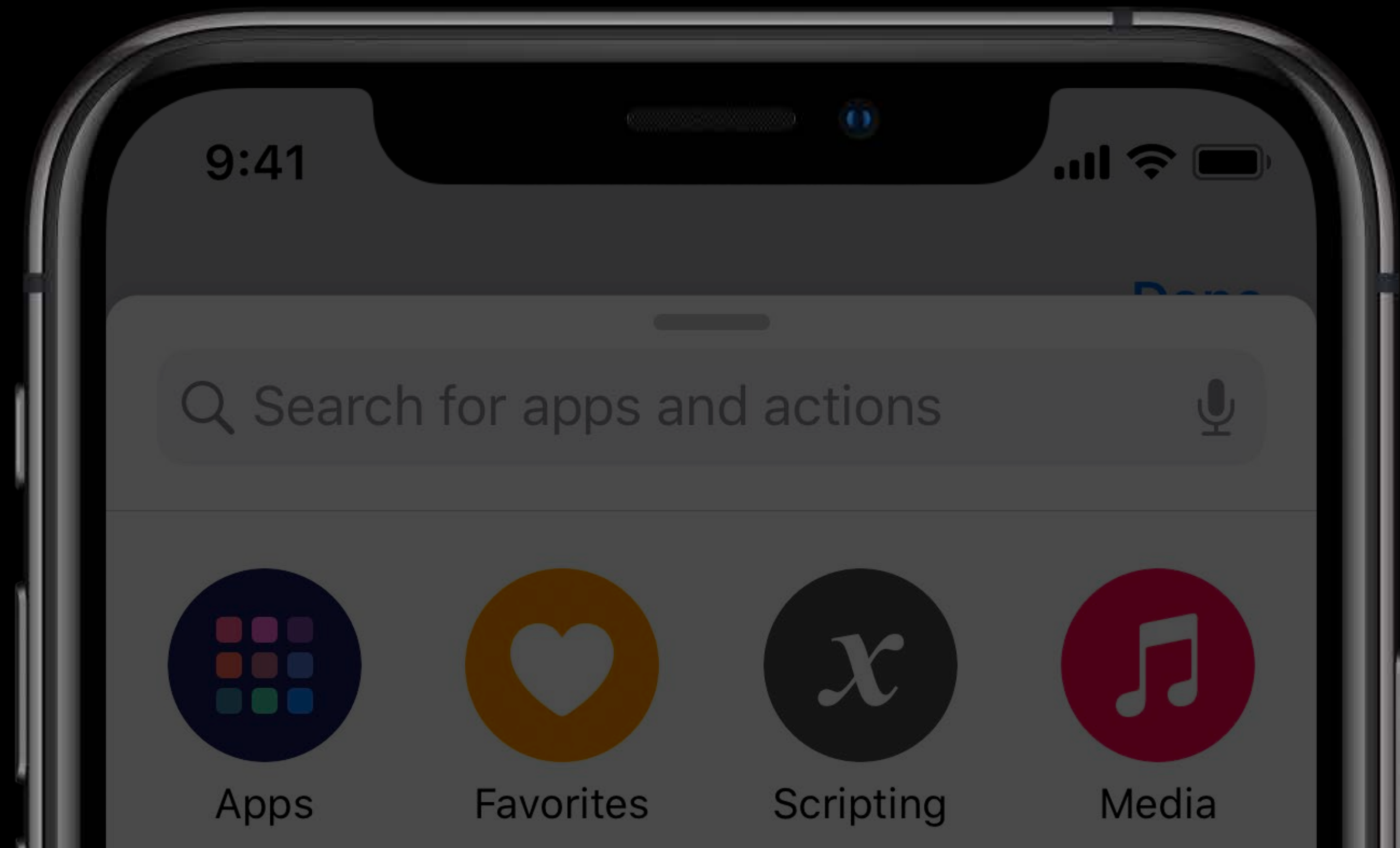


Ari



Contact





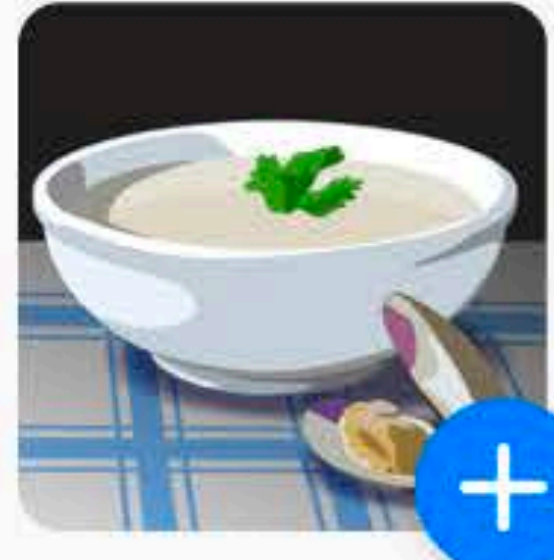
# Suggestions

Based on how you use your iPhone.

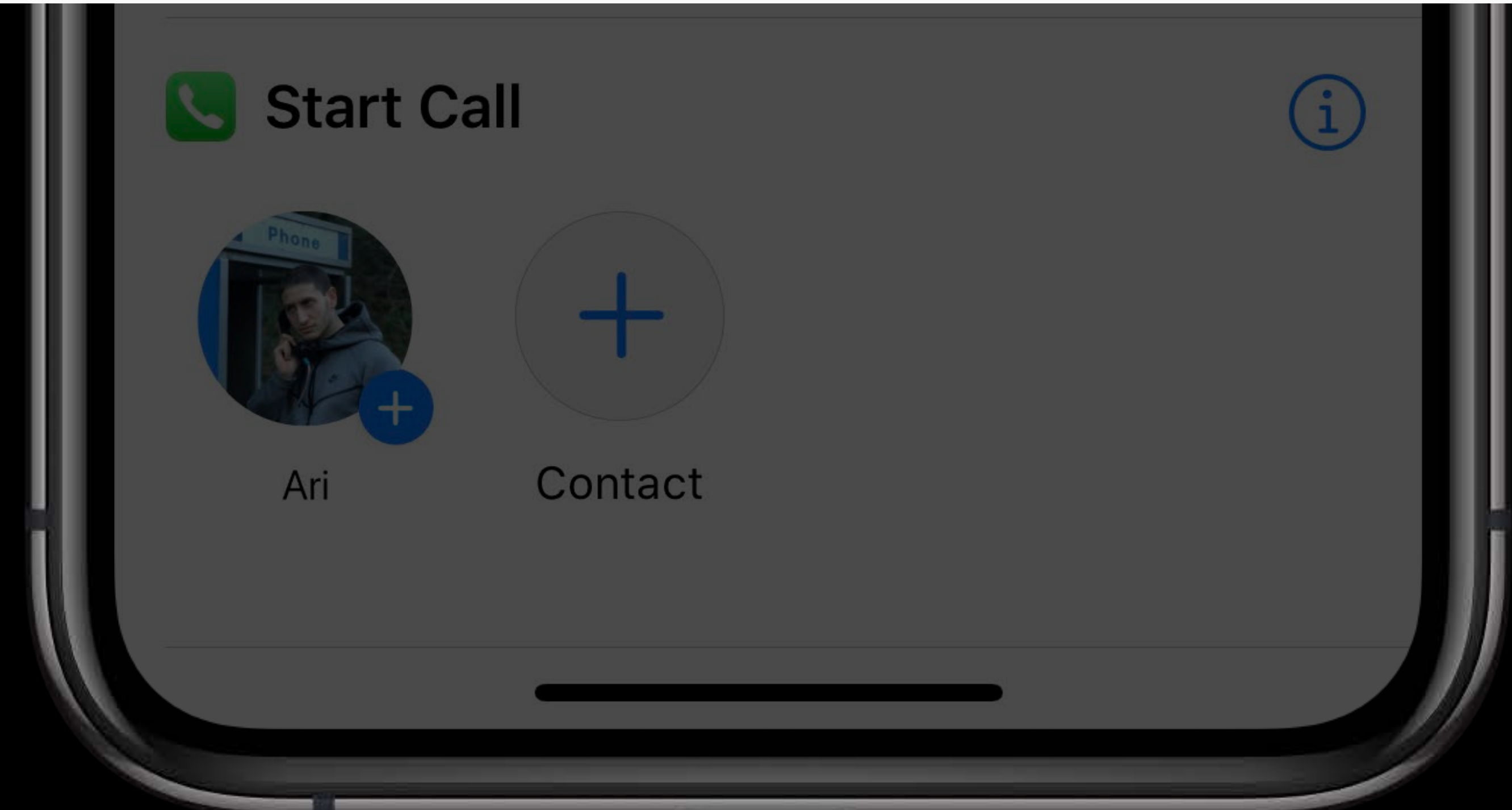
## Order Soup i



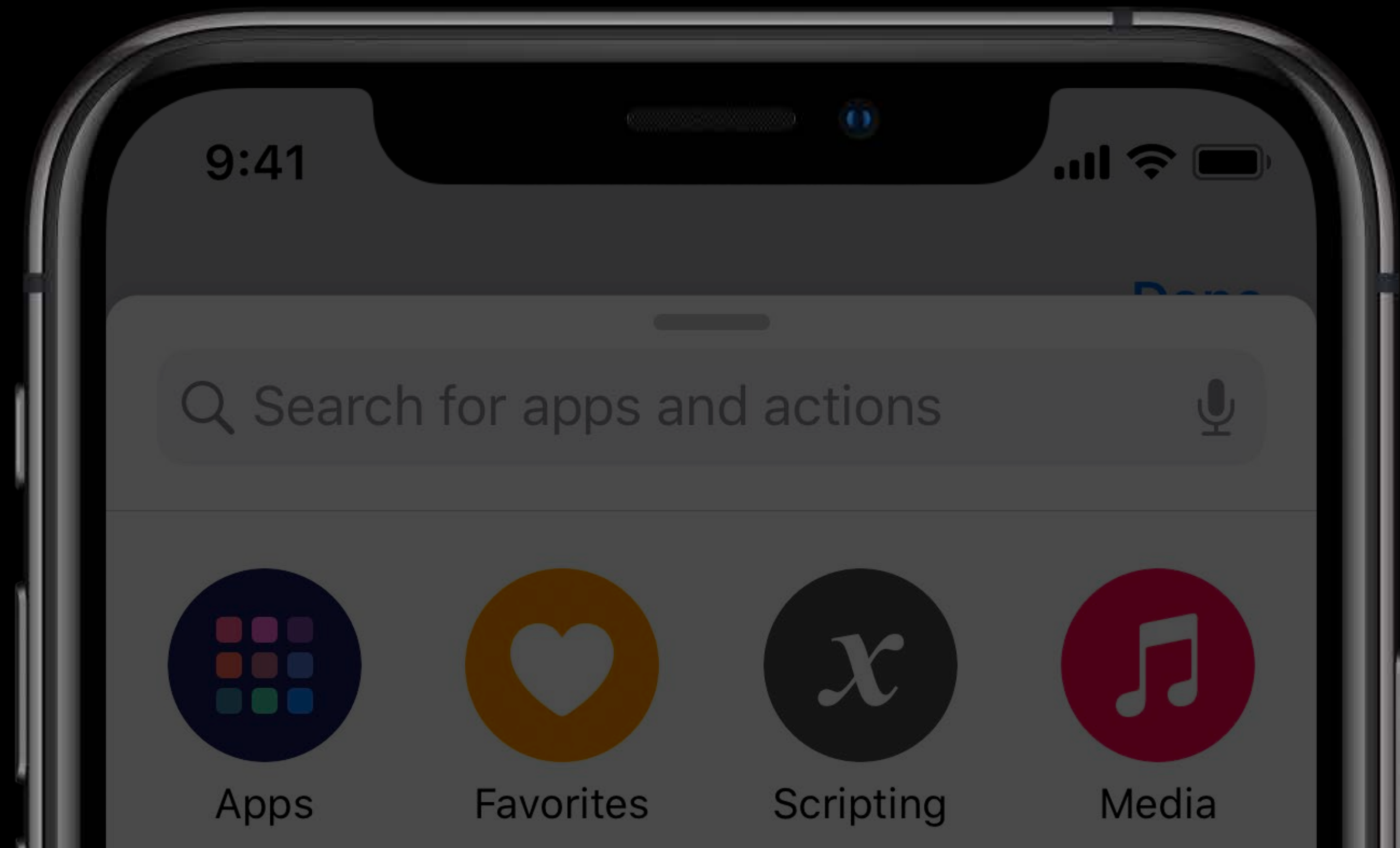
Tomato  
Soup



Clam  
Chowder







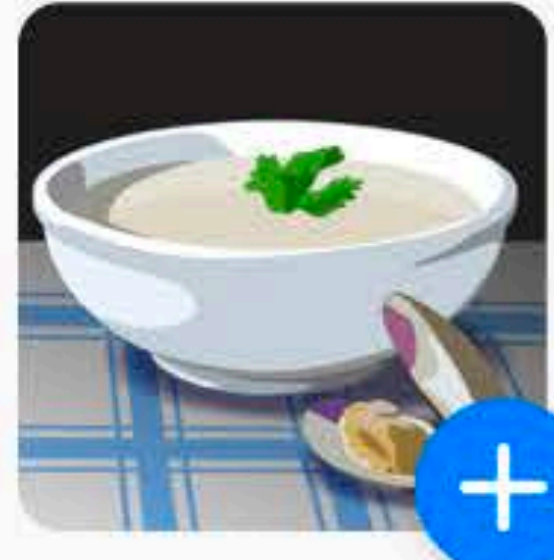
# Suggestions

Based on how you use your iPhone.

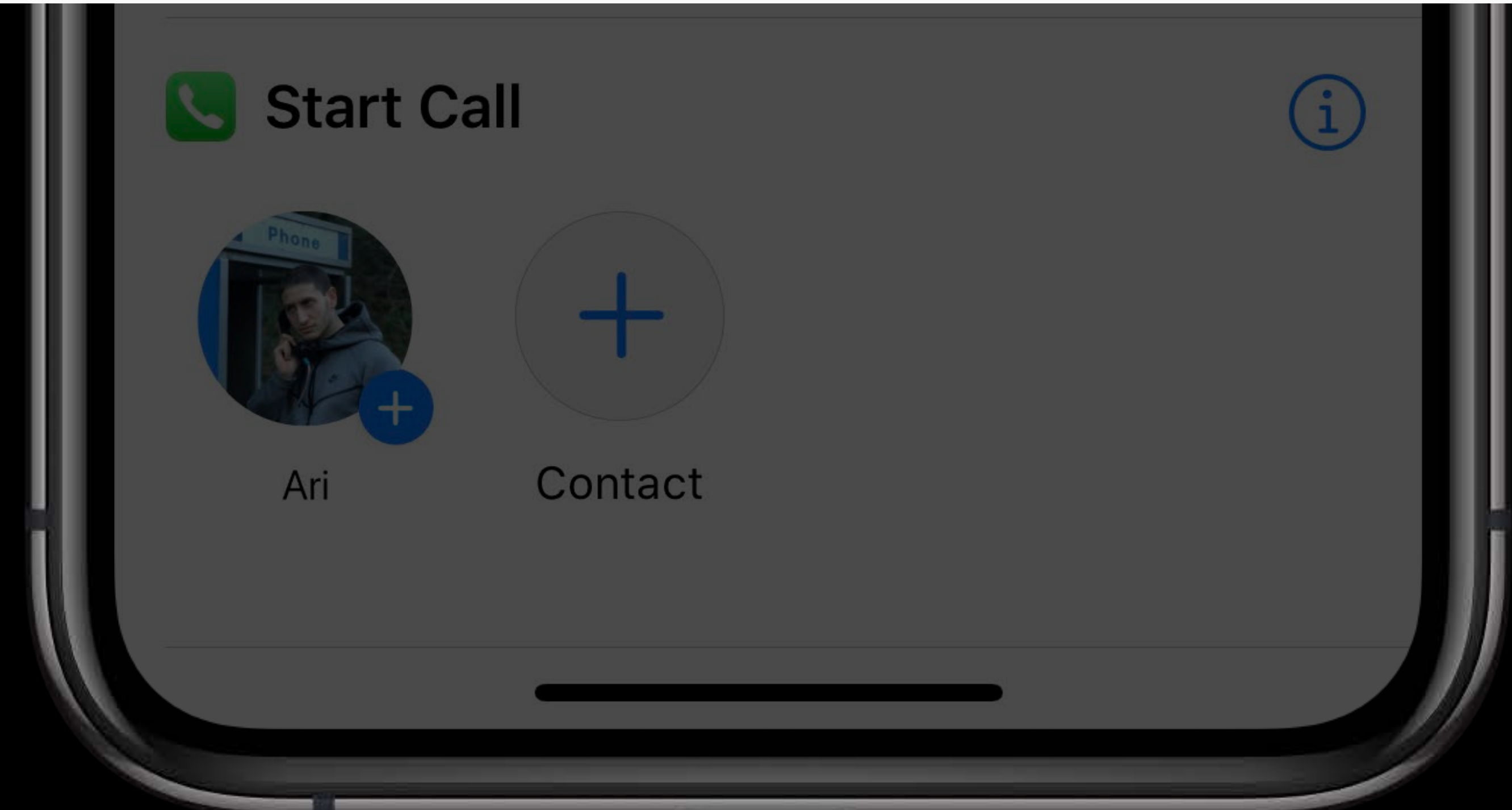
## Order Soup i



Tomato  
Soup



Clam  
Chowder





- CUSTOM INTENTS
  - I** OrderSoup
  - R** Response
- ENUMS
  - E** Soup
  - E** OrderType
- TYPES
  - T** OrderDetails

Shortcuts app

Intent is user-configurable

Define how this intent appears in the Shortcuts app and Add to Siri.

Input Parameter **None**

If compatible, the output of the preceding action will be filled into this parameter.

Key Parameter **soup**

Defines which parameter to show suggestions for in the "Add Action" sheet.

Supported Combinations

soup, quantity, toppings, orderType, delive...  
soup, quantity, toppings, orderType, storeL...  
soup, quantity, toppings, orderType

Summary **Order quantity soup for orderType to deliveryLocation**

Parameters not included in the summary will be available to the user under "Show More".

Preview

APP NAME

**Order Quantity Soup for Order Type to Delivery Location**

More Options

Toppings



CUSTOM INTENTS

OrderSoup

Response

ENUMS

Soup

OrderType

TYPES

OrderDetails

Shortcuts app

Intent is user-configurable

Define how this intent appears in the Shortcuts app and Add to Siri.

Input Parameter

If compatible, the output of the preceding action will be filled into this parameter.

Key Parameter

Defines which parameter to show suggestions for

Key Parameter

soup

Defines which parameter to show suggestions for in the "Add Action" sheet.

Preview

APP NAME

Order Quantity Soup for Order Type to Delivery Location

More Options

Toppings



## Suggestions

Based on how you use your iPhone.



Order Soup



Tomato  
Soup



Clam  
Chowder



```
let intent = OrderSoupIntent()  
intent.soup = .clamChowder  
  
let interaction = INInteraction(intent: intent, response: nil)  
interaction.donate(completion: nil)
```





```
let intent = OrderSoupIntent()
intent.soup = .clamChowder

let soupImage = INImage(uiImage: UIImage.clamChowder)
intent.setImage(soupImage, forParameterNamed: \.soup)

let interaction = INInteraction(intent: intent, response: nil)
interaction.donate(completion: nil)
```



9:41



Q Search for apps and actions



Apps



Favorites



Scripting



Media



Location



Documents



Sharing



Web

## Suggestions

Based on how you use your iPhone.

### Order Soup i



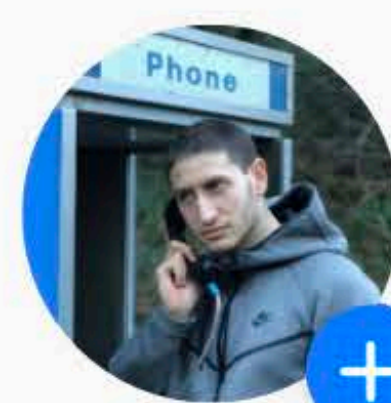
Tomato  
Soup



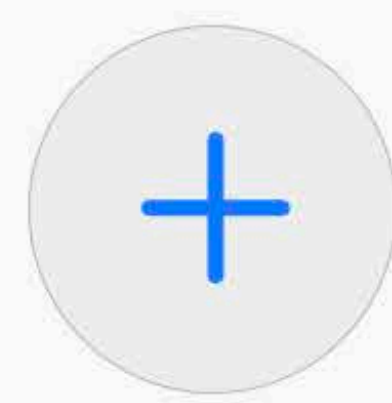
Clam  
Chowder



### Start Call i



Ari



Contact



9:41



Q Search for apps and actions



Apps



Favorites



Scripting



Media



Location



Documents



Sharing



Web

## Suggestions

Based on how you use your iPhone.



Order Soup



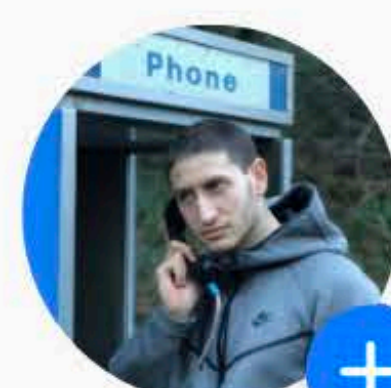
Tomato  
Soup



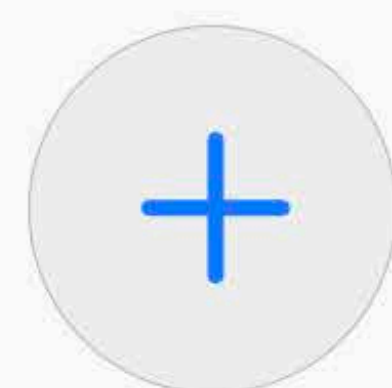
Clam  
Chowder



Start Call

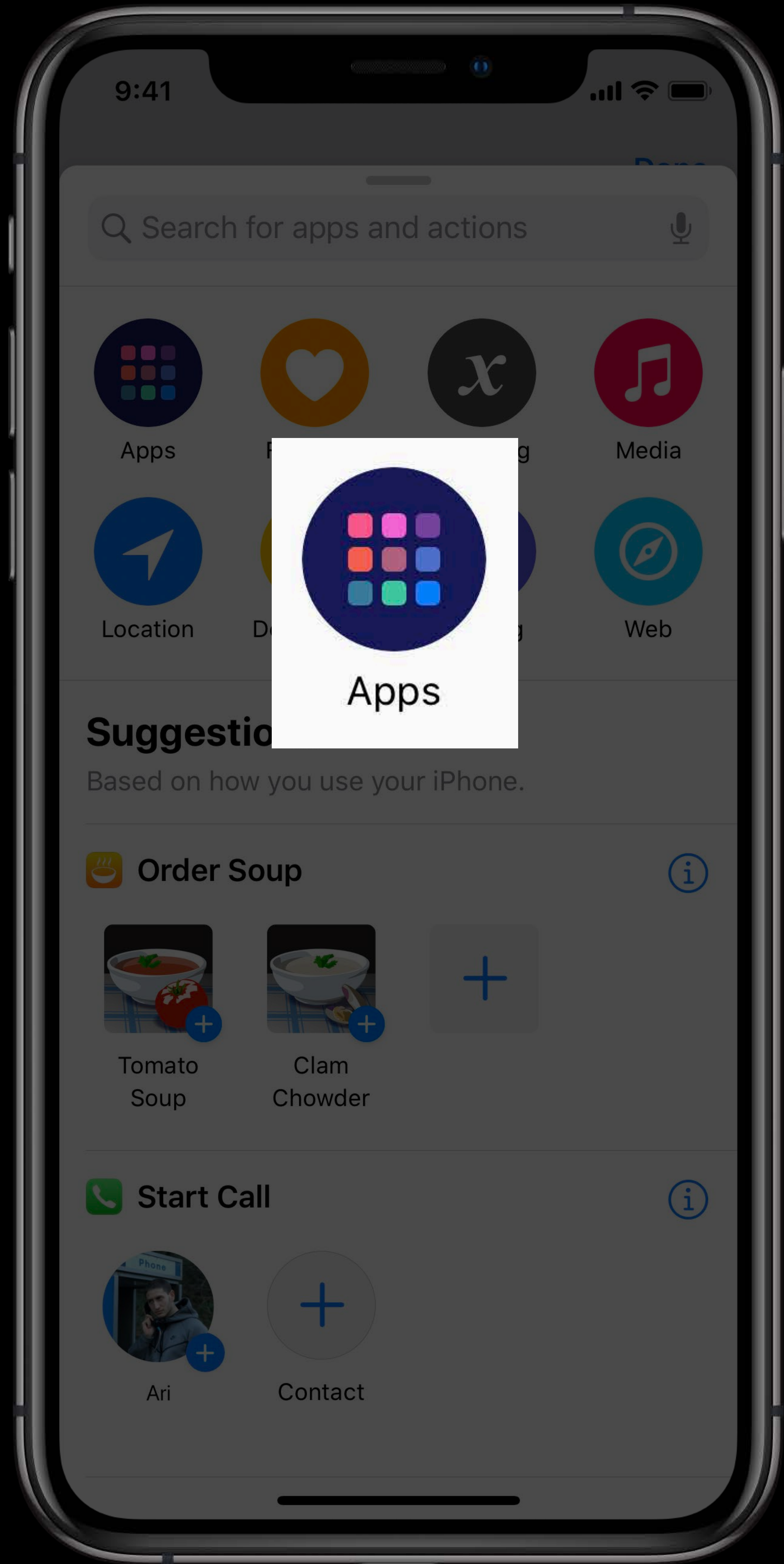


Ari



Contact





9:41



Search for apps and actions



Apps



Media



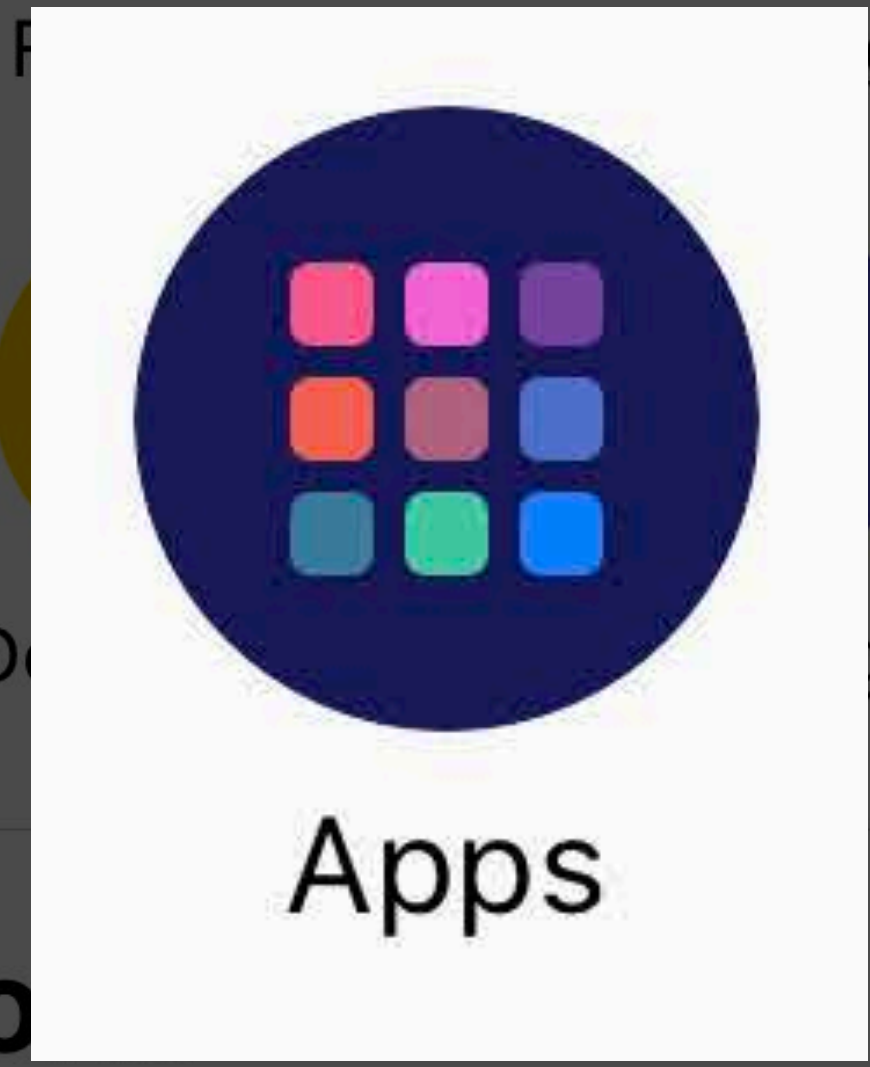
Location



D



Web



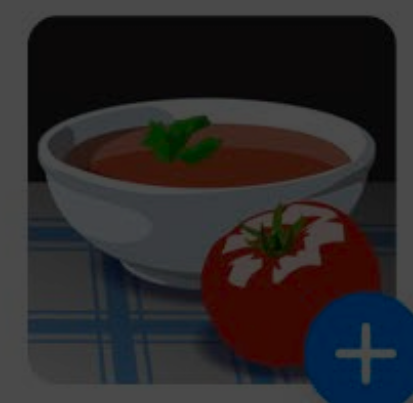
Apps

### Suggestions

Based on how you use your iPhone.



Order Soup



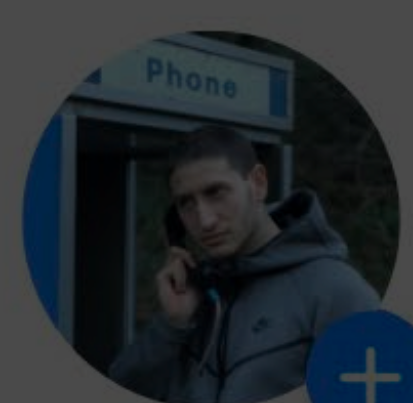
Tomato  
Soup



Clam  
Chowder



Start Call



Ari



Contact



# Input and Output



StickyNote





# StickyNote

STICKYNOTE ✕

Find sticky note named

---

Show More >



# StickyNote

STICKYNOTE ✕

Find sticky note named

Show More >

STICKYNOTE ✕

Add  to

Show More >

STICKYNOTE ✕

Delete

Show More >



STICKYNOTE

Find sticky note named

Show More >

**Sticky**  
identifier  
name  
content  
last modified date

9:41



Cancel

Next

# New Shortcut



STICKYNOTE



Find sticky note named WWDC

Show More



STICKYNOTE



Add Drink some soup to Note

Show More



Search for apps and actions

Cancel

















StickyNote | Build StickyNote: Succeeded | Today at 11:06 PM

StickyNote > StickyNoteIntents > Intents.intentdefinition > Types > Note

**CUSTOM INTENTS**

- FindStickies
  - Response
- AddText
  - Response
- Delete
  - Response

**TYPES**

- Note

**Type**

Display Name: Sticky Note

**Properties**

Property
identifier
displayString
content
lastModified

Display Name: Content

Type: String

Array:  Supports multiple values

+ -

+ - Filter



CUSTOM INTENTS

Type

**I** FindStickers  
**R** Response

Display Name Sticky Note

**R** Response

TYPES

**T** Note

Property
<b>S</b> identifier
<b>S</b> displayString
<b>S</b> content
<b>D</b> lastModified

Display Name Content

Type String

Array  Supports multiple values



StickyNote | Build StickyNote: Succeeded | Today at 11:06 PM

StickyNote > StickyNoteIntents > Intents.intentdefinition > Custom Intents > FindStickies > Response

**CUSTOM INTENTS**

- FindStickies
- Response**
- AddText
- Response
- Delete
- Response

**TYPES**

- Note

**Properties**

Property	Display Name	Type
note		Array

Output: note

**Response Templates**

Code	Error
success	
failure	

Output: Printed Dialog

**System Types**

- Decimal
- Integer
- Boolean
- String
- File
- Date Components
- Duration
- Measurement
- URL
- Location
- Person
- Currency Amount
- Payment Method

**Enums**

- Add Enum...

**Types**

- Sticky Note**
- Add Type...

Filter



StickyNote | Build StickyNote: Succeeded | Today at 11:06 PM

StickyNote > StickyNoteIntents > Intents.intentdefinition > Custom Intents > FindStickies > Response

**CUSTOM INTENTS**

- FindStickies
- Response**
- AddText
- Response
- Delete
- Response

**TYPES**

- Note

**Properties**

Property
note

Display Name: Note

Type: Sticky Note

Array:  Supports multiple values

Output

- None
- note**
- Add Type...

**Response Templates**

Code
success
failure

Error:  Is error response

Voice-Only Dialog:

Printed Dialog:

Filter

9:41



Cancel Select a Magic Variable

STICKYNOTE

Find sticky note named WWDC

Show More



Note

STICKYNOTE

Add Text to Choose Variable

Show More





9:41



Cancel

Next

# New Shortcut



STICKYNOTE



Find sticky note named **WWDC**

Show More



STICKYNOTE



Add **Text** to **Choose Variable**

Show More



Q Search for apps and actions

Cancel





- CUSTOM INTENTS**
- FindStickies
  - Response
  - AddText**
  - Response
  - Delete
  - Response
- TYPES**
- Note

Shortcuts app

Intent is user-configurable

Define how this intent appears in the Shortcuts app and Add to Siri.

Input Parameter

If compatible, the output of the preceding action will be filled into this parameter.

Key Parameter

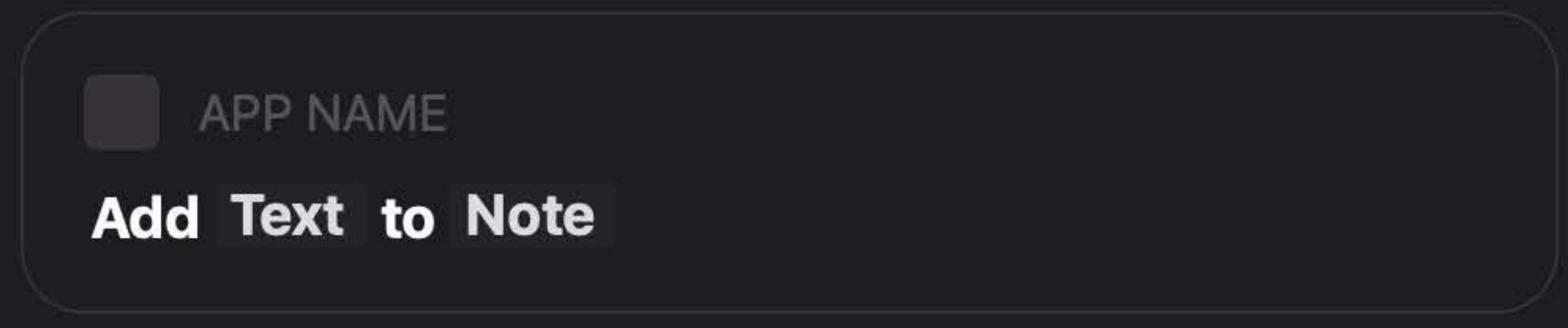
Defines which parameter to show suggestions for in the "Add Action" sheet.

Supported Combinations
text, note

Summary

Parameters not included in the summary will be available to the user under "Show More".

Preview



Suggestions




- CUSTOM INTENTS
- FindStickies
    - Response
  - AddText**
  - Response
  - Delete
    - Response

- TYPES
- Note

Shortcuts app

Intent is user-configurable  
Define how this intent appears in the Shortcuts app and Add to Siri.

**Input Parameter**  

If compatible, the output of the preceding action will be filled into this parameter.


Supported Combinations

text, note

Summary

Parameters not included in the summary will be available to the user under "Show More".

Preview

 APP NAME  
**Add Text to Note**

Suggestions



9:41



Cancel

Next

# New Shortcut



STICKYNOTE



Find sticky note named **WWDC**

Show More



STICKYNOTE



Add **Text** to **Note**

Show More



Q Search for apps and actions

Cancel





# Summary

Configuration

Discoverability

Input and output

# Summary

Configuration

Discoverability

Input and output



# Summary

Configuration

Discoverability

Input and output

# Summary

Configuration

Discoverability

Input and output



# More Information

[developer.apple.com/wwdc19/805](https://developer.apple.com/wwdc19/805)

 WWDC19