



# Enabling Open API on Azure Functions for Power Platforms

Global Automation Bootcamp 2021





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Global Automation Bootcamp 2021



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Developer Relations  
Microsoft



@justinchronicle



@justinyoo



[aka.ms/gatmb21/slides](https://aka.ms/gatmb21/slides)



# Last Year...

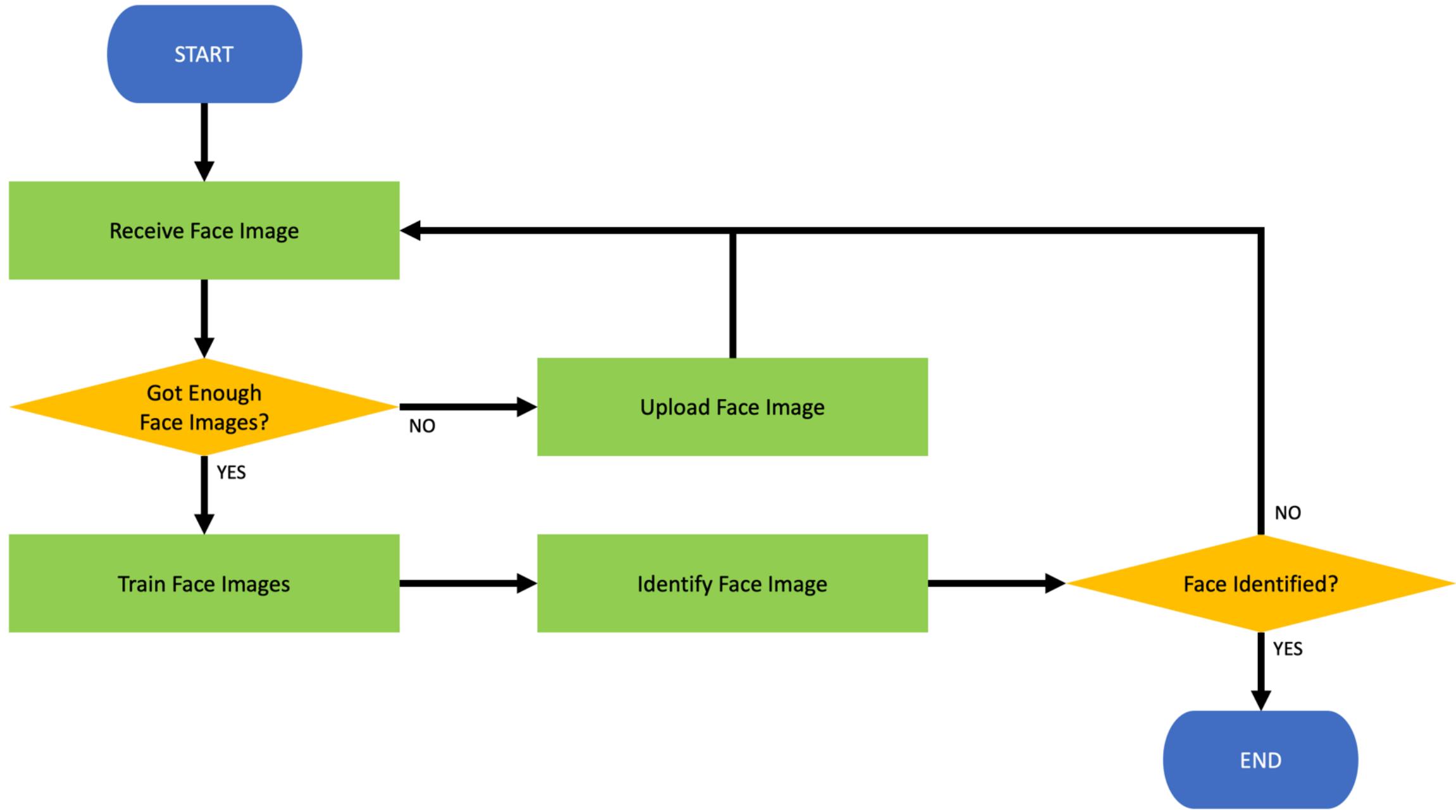


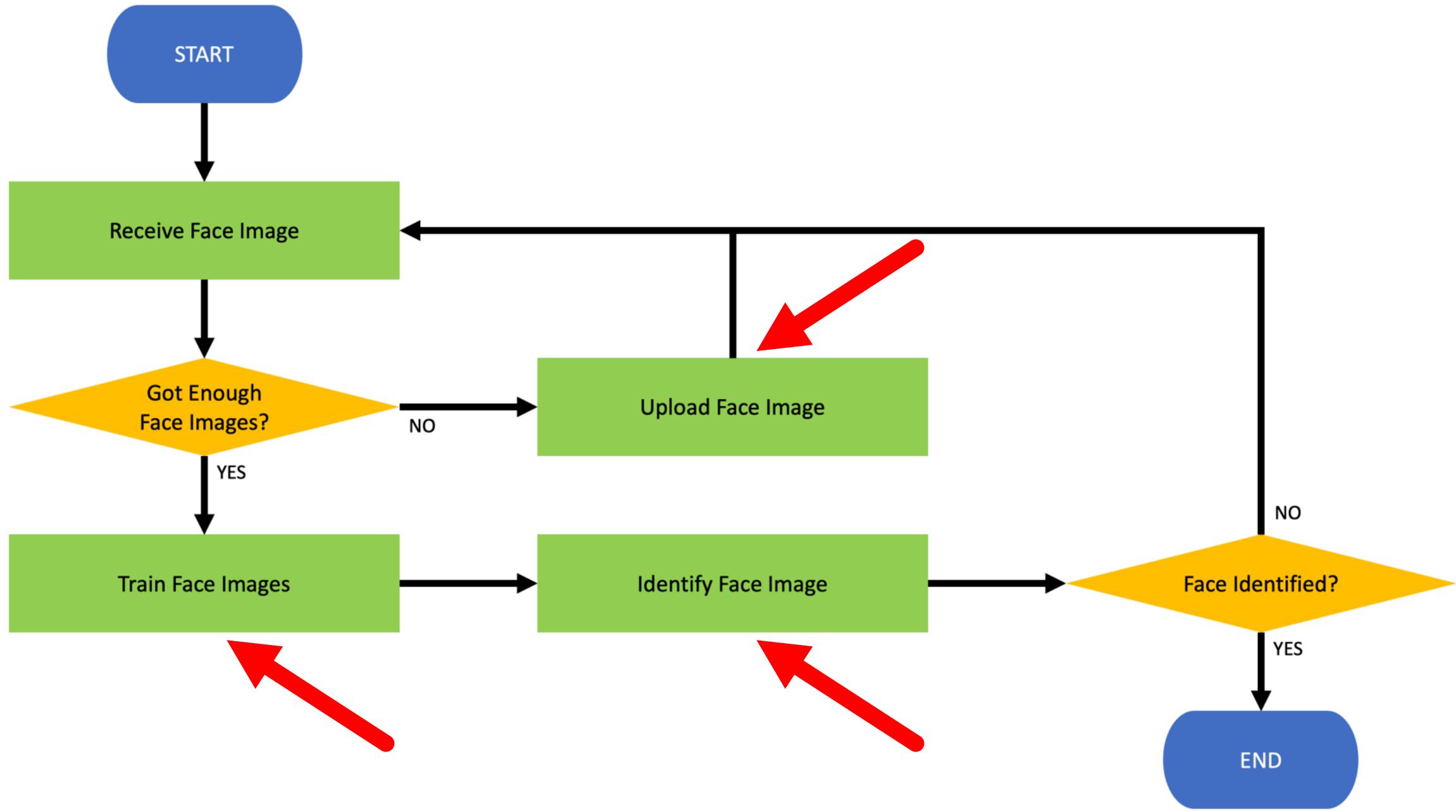
Teacher wanted a face detection app  
for her class students

But she didn't know how to make it

# Face Recognition App







# One API endpoint rules them all

# Build a backend API

# Why Serverless API?



# No need for plumbing

# Focused on domain logic

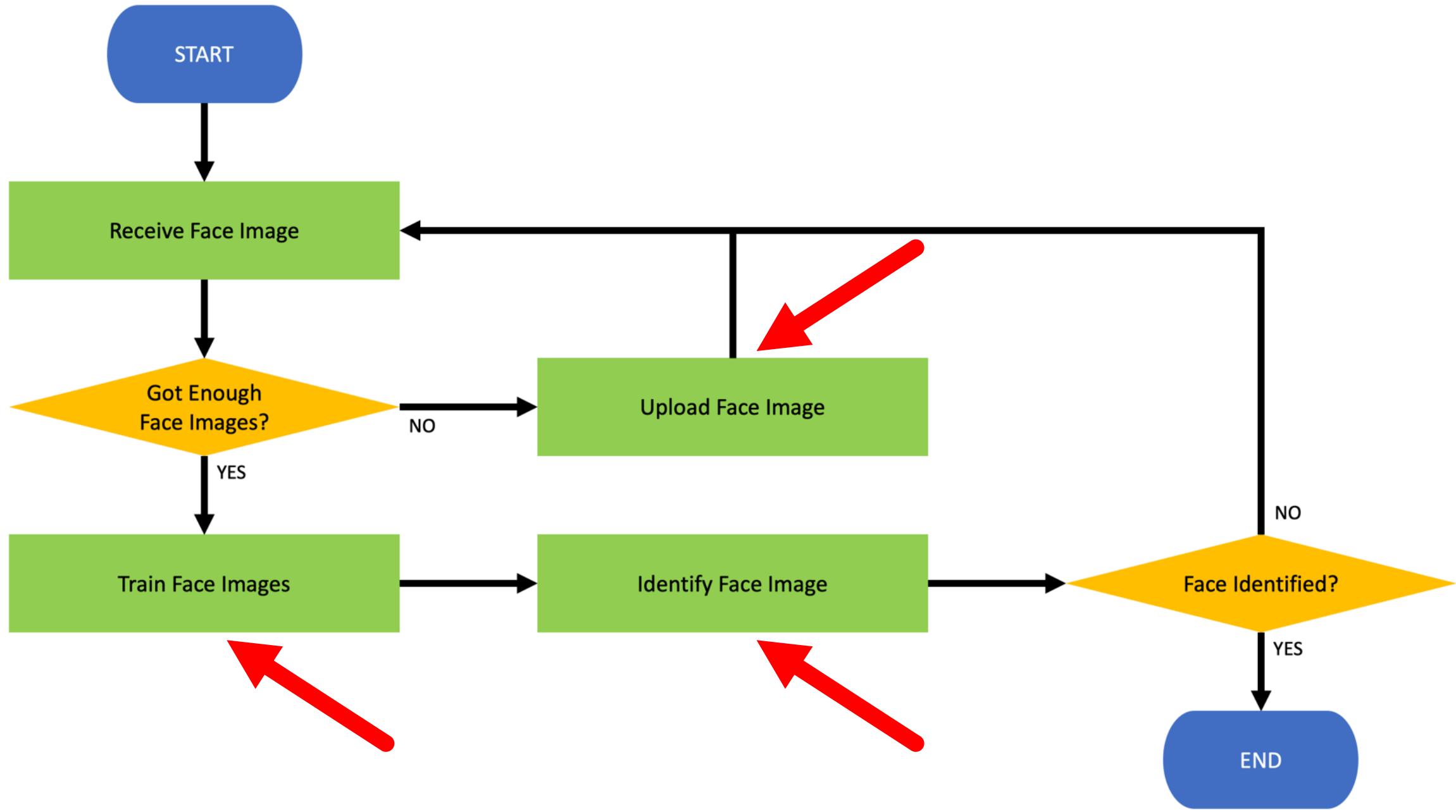
# Optimised to MSA

# Azure Functions as Serverless API

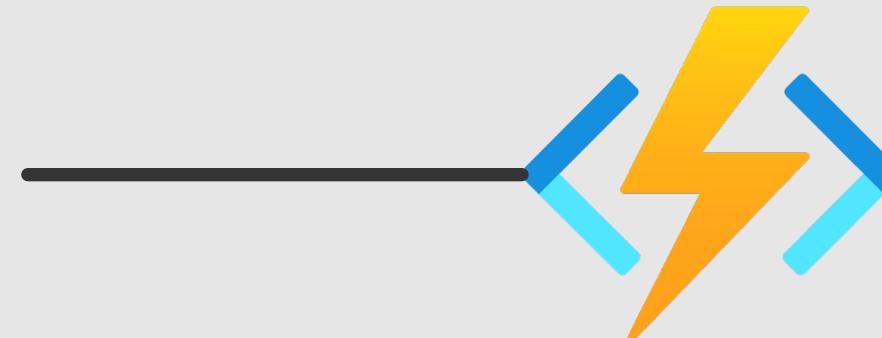
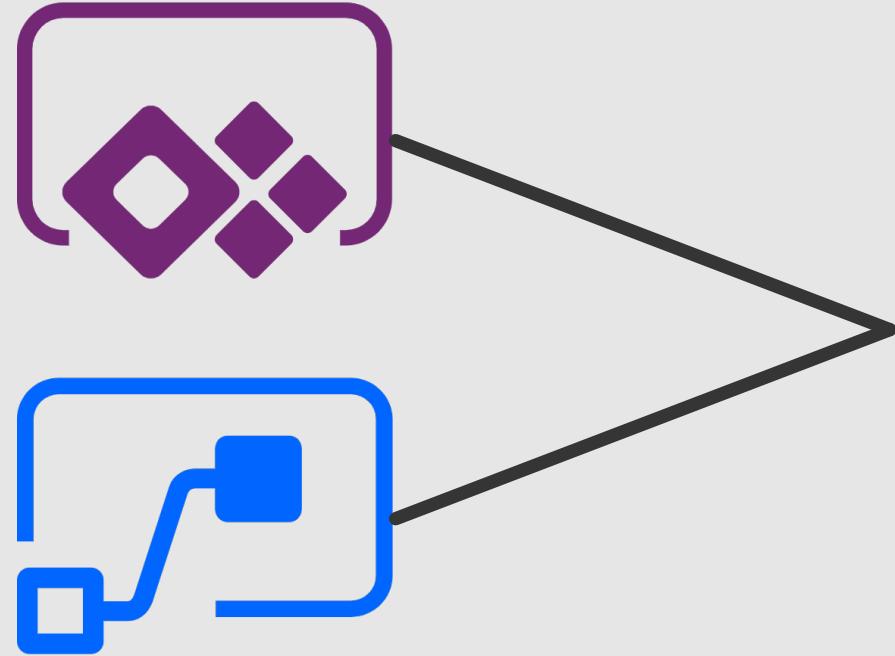
# Sounds good? Let's build the API!

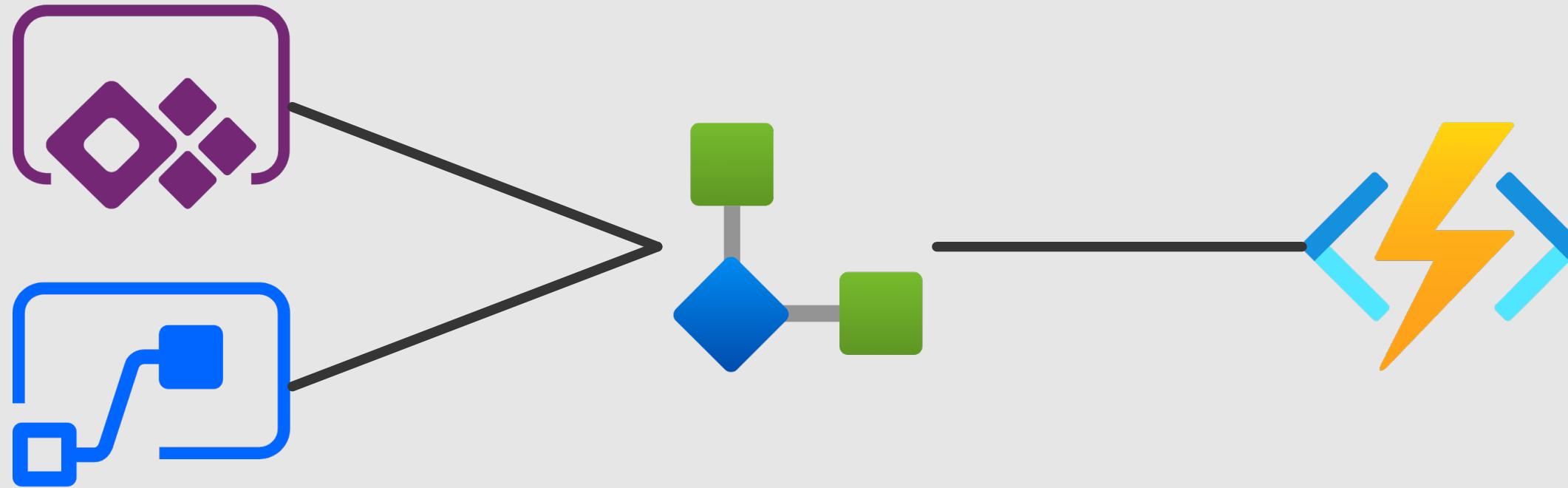
# Serverless API Demo





# API needs to be connected to Power Platform







## Data ^

Tables

Choices

Dataflows

Export to data lake

Connections

Custom Connectors

Gateways

## Custom connectors

+ New custom connector ▾

Create from blank

Create from Azure Service (Preview)

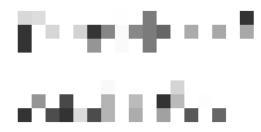
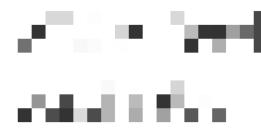
Import an OpenAPI file

Import an OpenAPI from URL

Import a Postman collection

Import from Github

...





Data



Tables

Choices

Dataflows

Export to data lake

Connections

Custom Connectors

Gateways

Flows

Chatbots



Create

List

AI Builder



Build

Custom connectors

+ New custom connector

## Create from Azure Service (Preview)

Connector name

Add a name

Azure subscription

Azure service

Choose a service

Choose a service

API Management

Functions

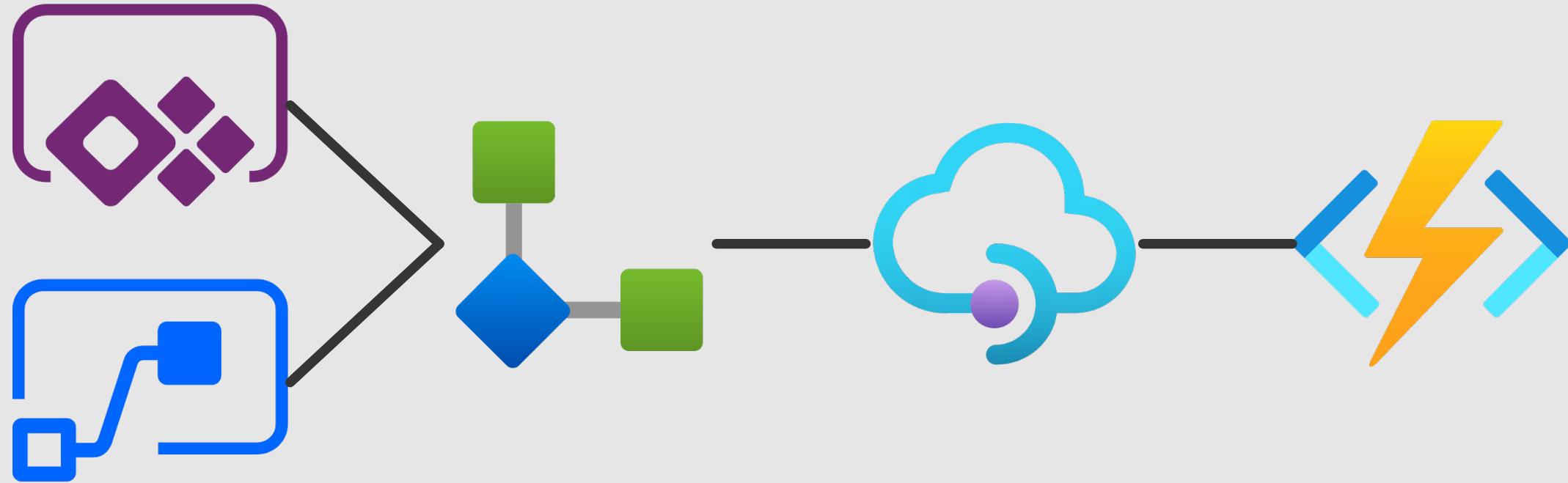
Logic Apps

Continue

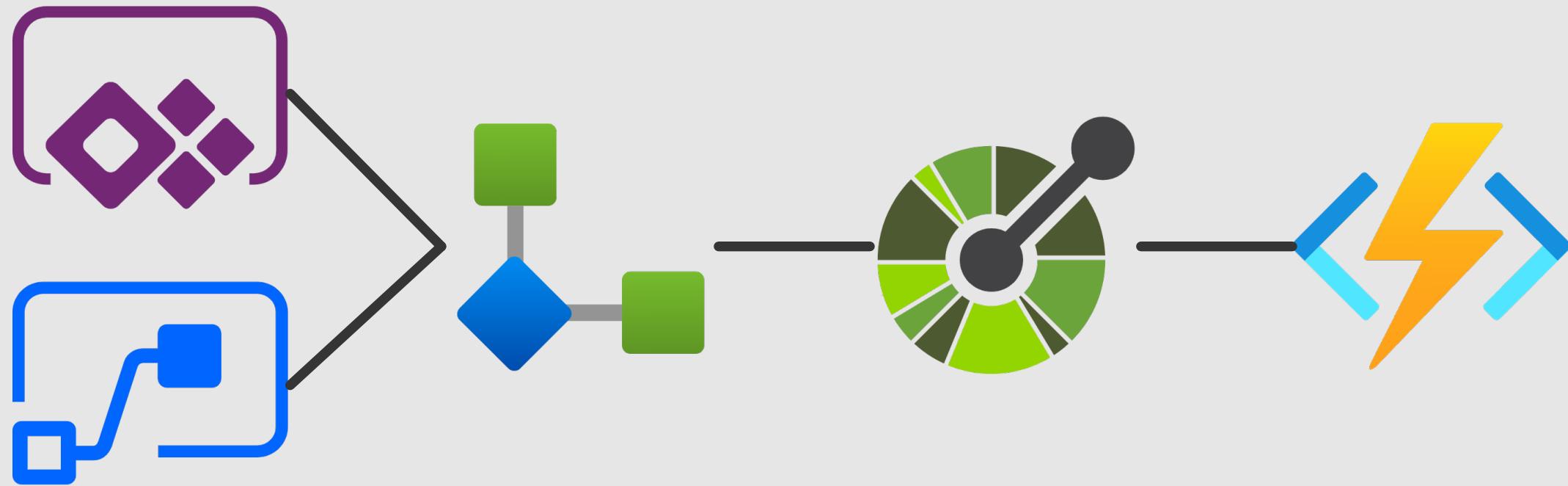
Cancel

# Direct connection to Functions/Logic Apps

# Direct connection to API Management



# Connection through Open API document



# API app needs to be discovered

# API Discovery





# API Management

# API Management + Manual Integration

# Manual Integration API Management + Direct Function Integration

# API Management + Direct Function Integration

## Manual Integration

## Open API Integration



Wait, can we enable Open API  
onto my Azure Functions app?





YES,  
WE CAN!

# Azure Functions Open API Extension

[Code](#)[Issues 13](#)[Pull requests](#)[Actions](#)[Projects](#)[Wiki](#)[Security](#)[Insights](#)[Settings](#)[main](#) ▾[1 branch](#)[0 tags](#)

aka.ms/azfunc-openapi

[Add file](#) ▾[Code](#) ▾

## About



This extension provides an Azure Functions app with Open API capability for better discoverability to consuming parties

[www.nuget.org/packages/microsoft.azure.functions.openapi-extension/](http://www.nuget.org/packages/microsoft.azure.functions.openapi-extension/)

[azure-functions](#) [swagger-ui](#) [open-api](#)

[Readme](#)

[MIT License](#)

## Releases

No releases published

[Create a new release](#)

## Used by 5



```
dotnet add package Microsoft.Azure.WebJobs.Extensions.OpenApi
```

```
[FunctionName(nameof(IdentifyFaceHttpTrigger.Identify))]
```

1 reference

```
public async Task<IActionResult> Identify(  
    [HttpTrigger(AuthorizationLevel.Function, "post", Route = "api/faces/identify")] HttpRequest r  
{
```

```
[FunctionName(nameof(IdentifyFaceHttpTrigger.Identify))]  
[OpenApiOperation(operationId: "Identify", tags: new[] { "identify" }, Summary = "Identify face",  
[OpenApiSecurity("function_key", SecuritySchemeType.ApiKey, Name = "x-functions-key", In = OpenApi  
[OpenApiRequestBody(contentType: "application/json", bodyType: typeof(EmbeddedRequest), Description = "The request body contains an EmbeddedRequest object.", Required = true)  
[OpenApiResponseWithBody(statusCode: HttpStatusCode.OK, contentType: "application/json", bodyType: typeof(EmbeddedResponse), Description = "The response body contains an EmbeddedResponse object.")]
```

1 reference

```
public async Task<IActionResult> Identify(  
    [HttpTrigger(AuthorizationLevel.Function, "post", Route = "api/faces/identify")] HttpRequest r  
{
```

# Open API Integration Demo





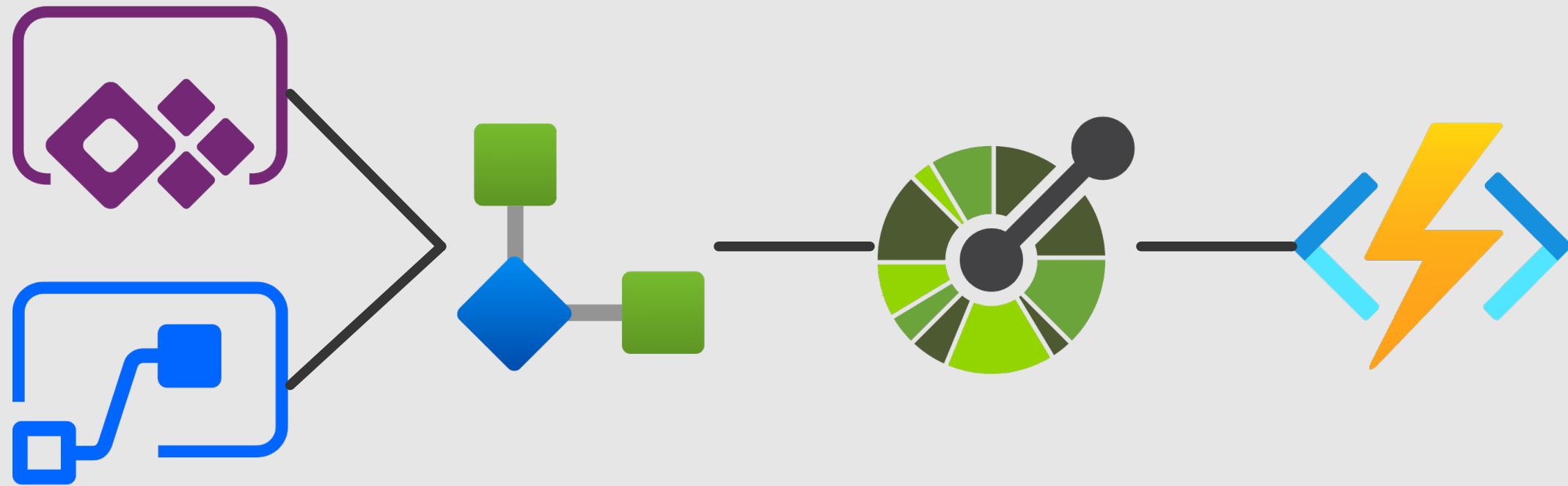
# API Management is too big!

Need more security  
Need more complex communication



Use API Management

If you need a simple connection...



# Custom Connector Demo



# Putting Altogether



# Summary



# Why Serverless API

# Why Serverless API Azure Functions API

# Why Serverless API Azure Functions API API Discovery

# Why Serverless API Azure Functions API API Discovery Power App Build

GUIDANCE FROM EXPERTS

# Microsoft Docs

Explore overviews, tutorials,  
code samples, and more.

[aka.ms/gatmb21/docs](https://aka.ms/gatmb21/docs)

The screenshot shows the Microsoft Docs homepage. At the top, there's a navigation bar with the Microsoft logo, a 'Docs' button, and links for 'Documentation', 'Learn', 'Q&A', and 'Code Samples'. Below the header, the URL 'docs.microsoft.com' is displayed, followed by a tagline: 'The home for Microsoft documentation and learning for developers and technology professionals.' A search bar with the placeholder 'Search for articles, training, and code samples...' and a 'Search' button are present. Three main call-to-action boxes are shown: 'Documentation' (with a book icon), 'Learn' (with a computer monitor icon), and 'Q&A' (with a speech bubble icon). Below these, a 'FEATURED' section highlights 'Microsoft Learn' with the text: 'Whether you're just starting or an experienced professional, our hands-on approach helps you arrive at your goals faster, with more confidence and at your own pace.' To the right, a small blue cartoon character is holding a selfie stick.

KEEP ON WITH

# Microsoft Learn

Complete interactive learning exercises, watch videos, and apply your new skills.

[aka.ms/gatmb21/learn](https://aka.ms/gatmb21/learn)

The screenshot shows the Microsoft Learn website on a tablet device. The top navigation bar includes the Microsoft logo, Docs, Documentation, Learn (which is underlined), Q&A, and Code Samples. Below the navigation are links for Learn, Products, Roles, Learn TV, Certifications, and FAQ & Help. A large central callout box says "WELCOME TO MICROSOFT LEARN" and "Discover your path". It states: "Whether you're just starting or an experienced professional, our hands-on approach helps you arrive at your goals faster, with more confidence and at your own pace." A blue button labeled "Customize my path" is at the bottom of this box. To the right, there's a stylized map of the word "LEARN" where each letter is formed by a winding path of colored lines (purple, blue, green, yellow). Below the main box are two sections: "LEARNING PATHS" with a "Learn on your own schedule" card and "CERTIFICATIONS" with a "Become Microsoft certified" card. Both cards have small icons and descriptive text.

# Questions?





# Thank you!

## Enabling Open API on Azure Functions for Power Platform

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 @justinyoo

