

Better API Governance with Azure API Center

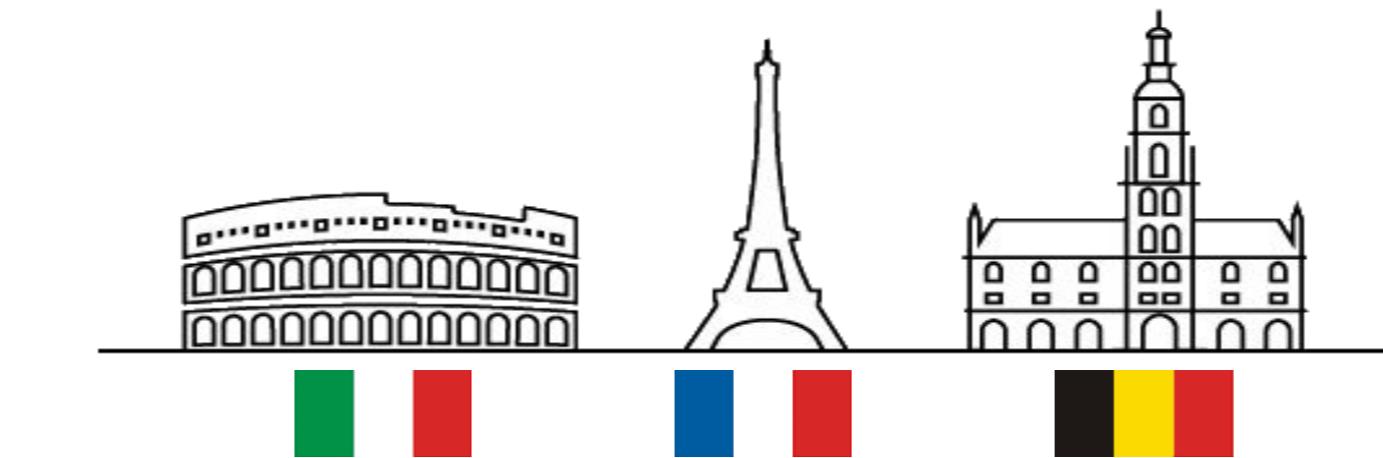
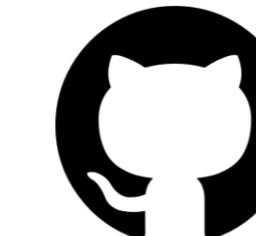
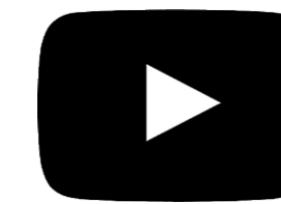
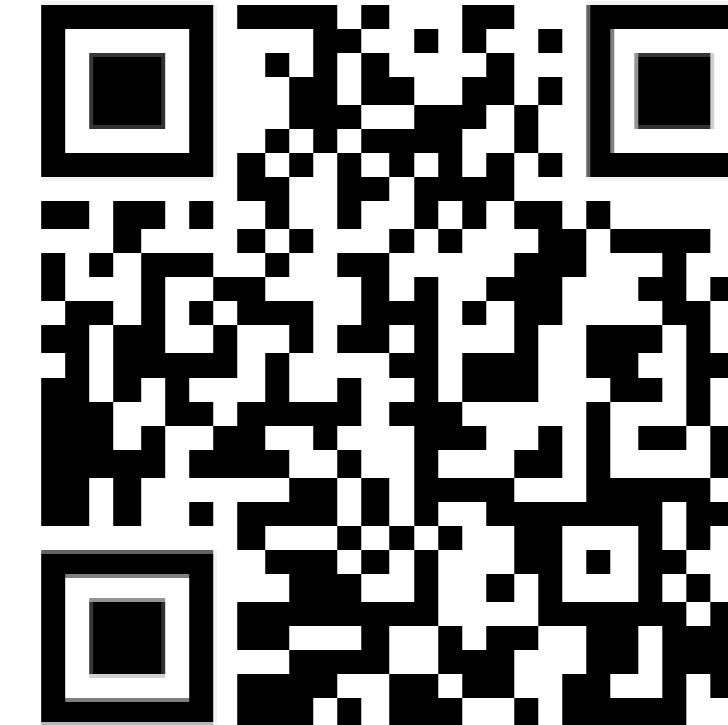


CLOUDBREW



Massimo Crippa

Lead Architect at **codit**
proximus NXT



Our journey

API Governance



Linda



Mark



Emma



Building an API program is complex

IDEA conception

API Strategy and Design

Scalability & Performance

Testing & QA

Observability & Analytics

Developer Experience

Delivery & Ops

Governance & Lifecycle Management

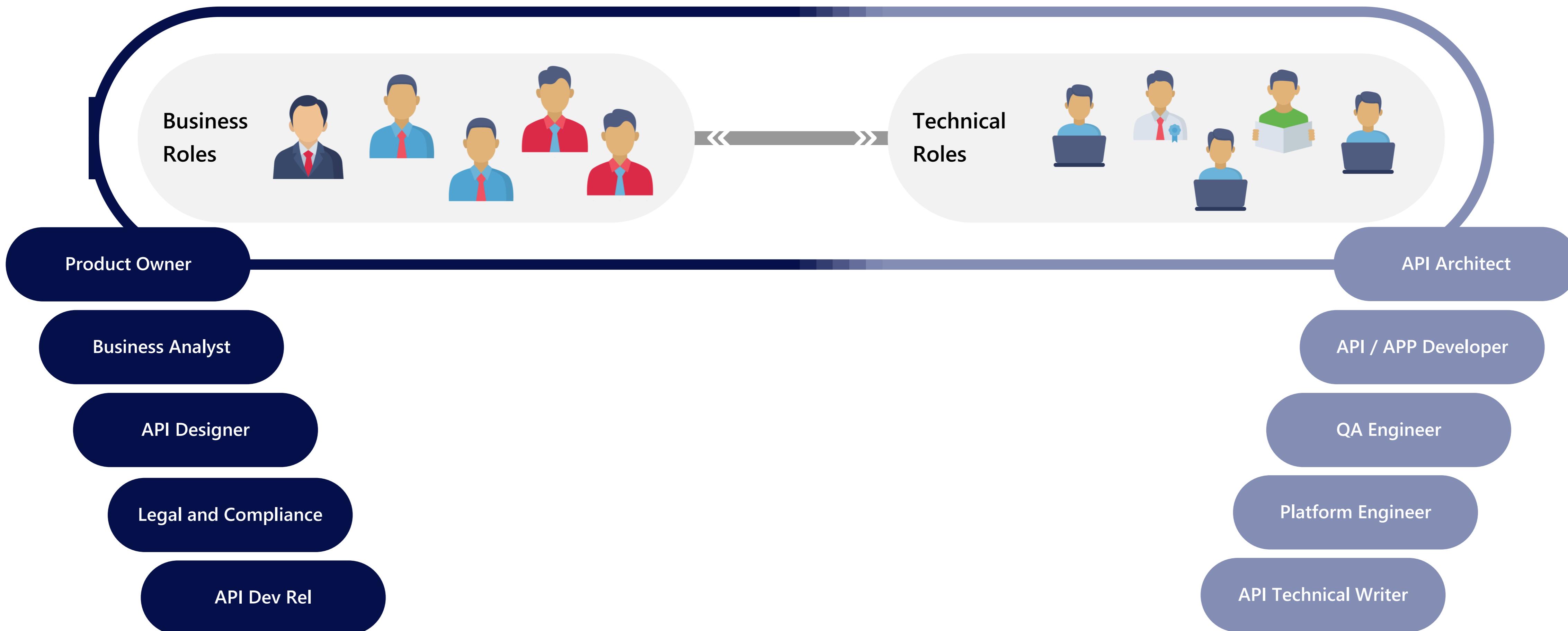
Compliance & Legal

Security

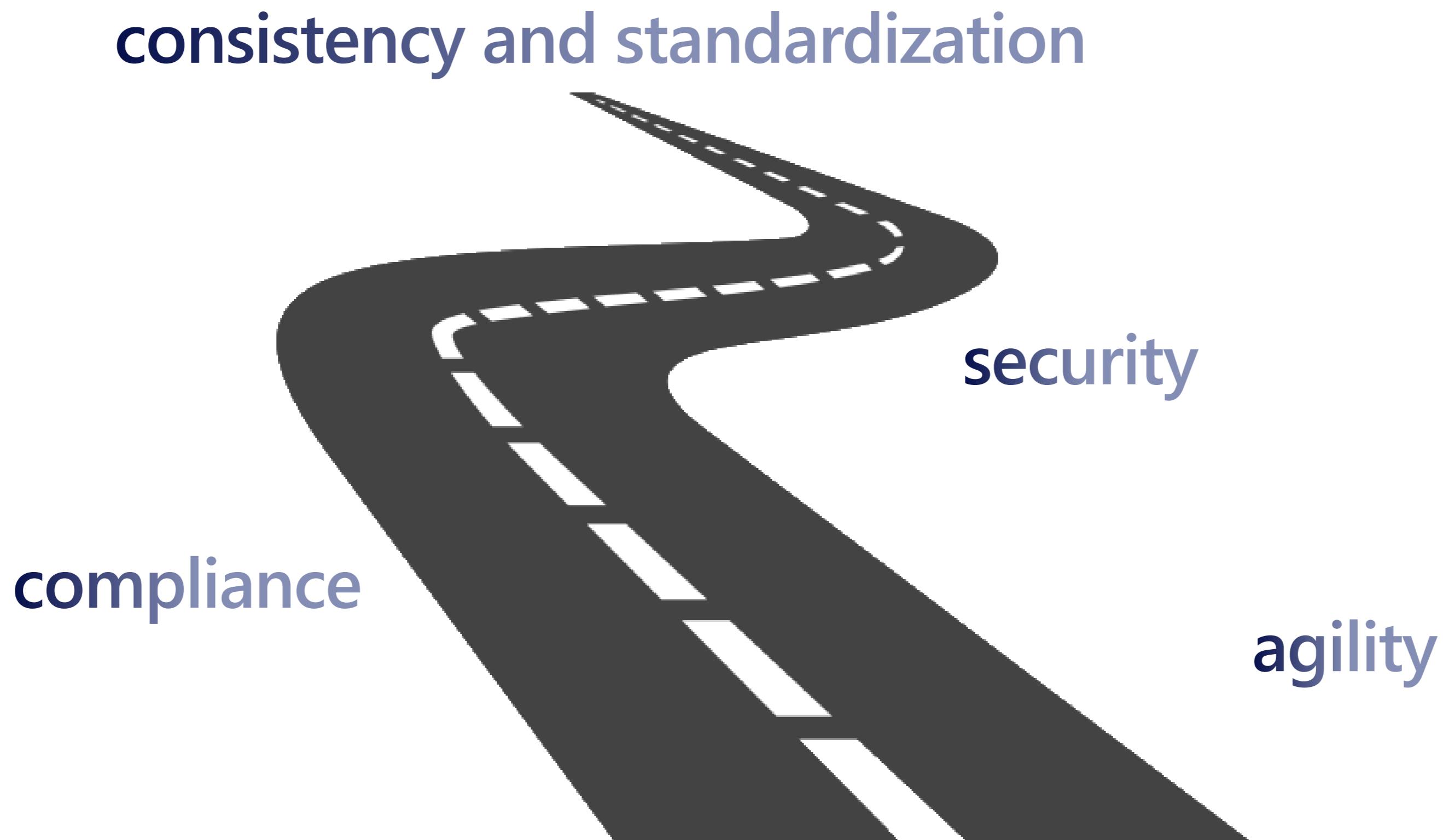


API program requires cross-functional cooperation

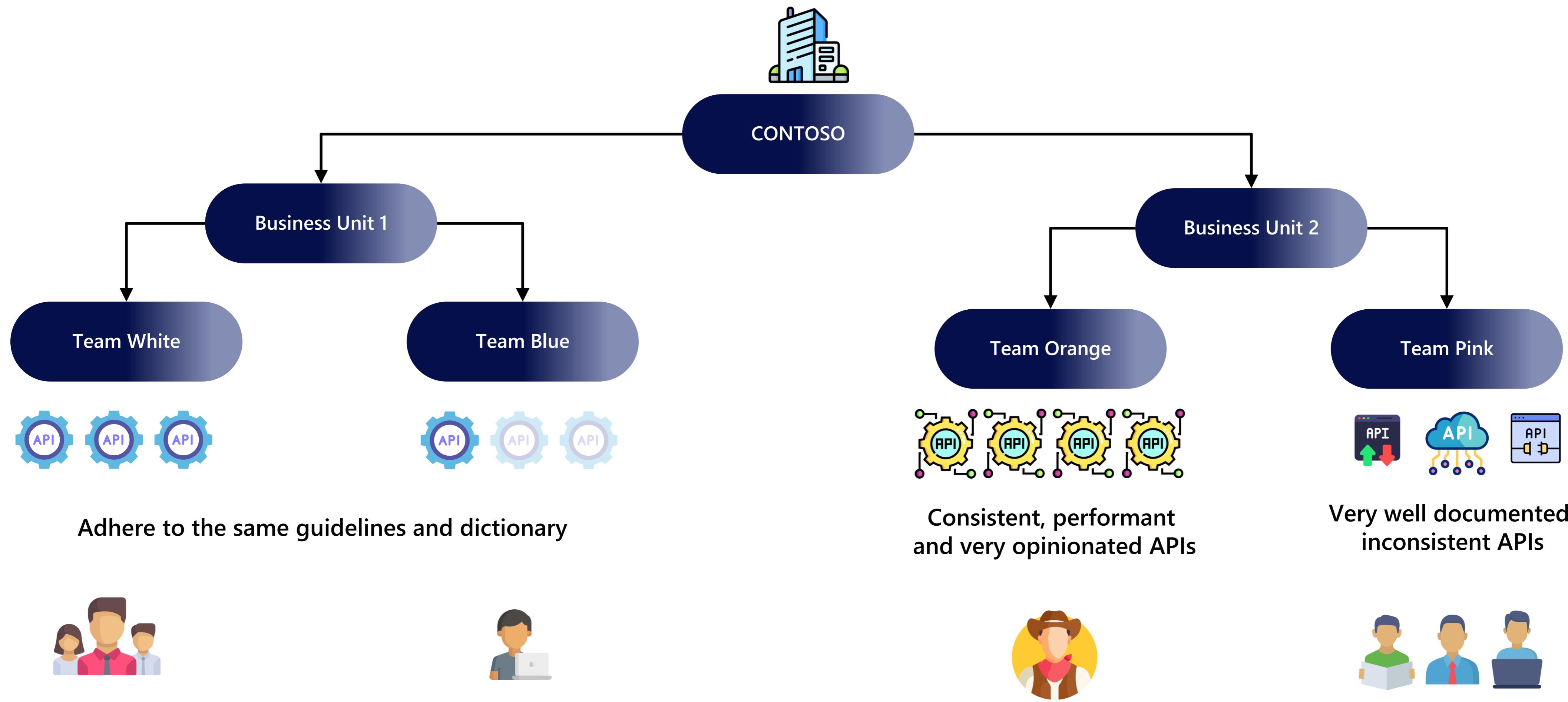
not just a focus on API design and delivery



Working towards a shared goal : a better API Governance



Enterprise ... reality check



API Sprawl OMG!

The Definitive Guide to API Sprawl

What Is API Sprawl and Why Is It Important?

Unmitigated API growth can bring negative consequences that could compromise the security of your organization's data and operations. By understanding what API sprawl is and how it can affect your organization, you can take steps to prevent it from becoming a major problem.

GLOSSARY: CYBERSECURITY TERMS & DEFINITIONS

What Is API Sprawl?

Home / Academy / What is API Sprawl?

What is API Sprawl?

What Is API Sprawl? How to Prevent API Sprawl?

“ API Sprawl is a term used to describe the uncontrolled proliferation of APIs within an organization. API Sprawl can occur when different departments or teams within an organization create their own APIs to meet their specific needs without proper oversight or governance.”

Negative impacts of API sprawl



CONTOSO



consistency and standardization

- disparate API styles
- inconsistent DEV Experience
- lack of documentation



agility

- more technical debt
- can't reuse if not supported / not documented
- unclear versioning timeline



security

- can't secure what you do not know
- insecure coding practices
- ad-hoc security policies

How to prevent API sprawl?

- Centralized API discovery
- Centralized Governance model
- Establish and enforce API standards
- Specification-driven development
- ...

It's all about ... People, Processes and Technology

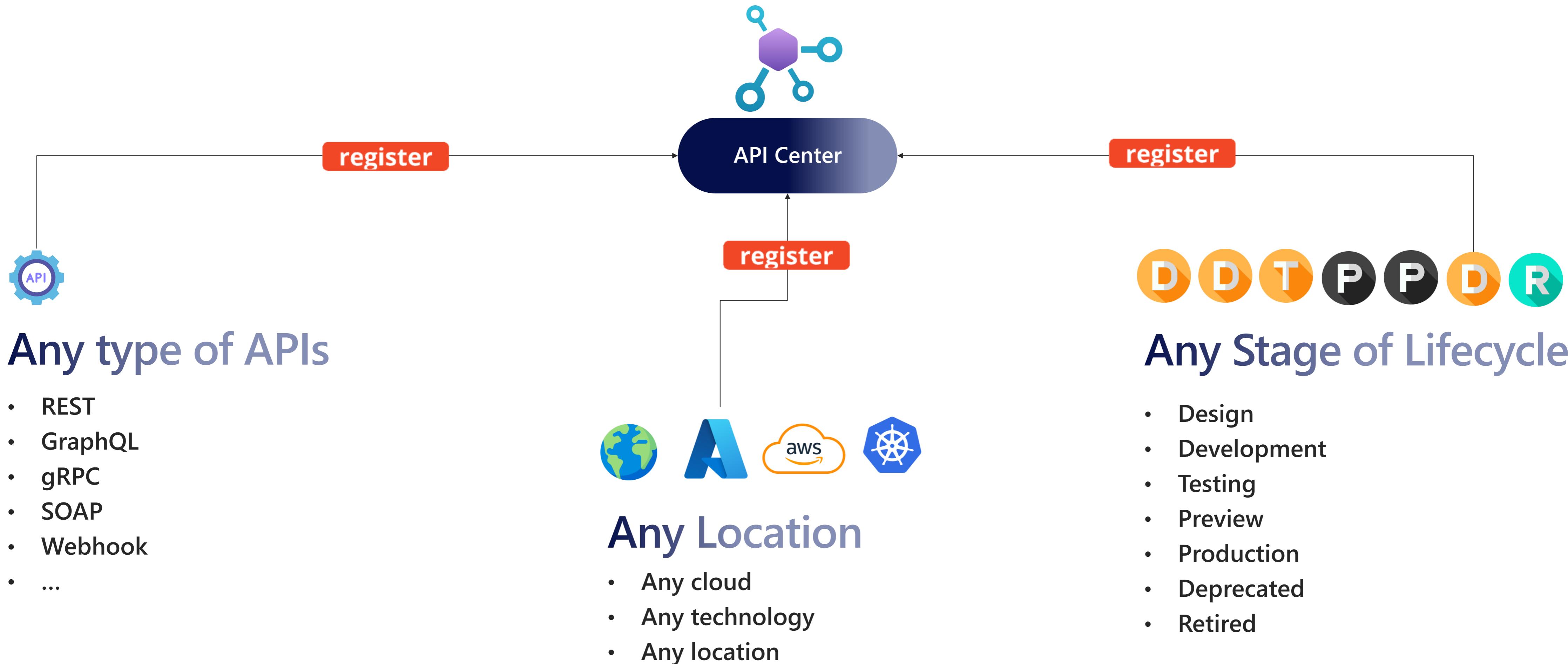


Welcome Azure API Center



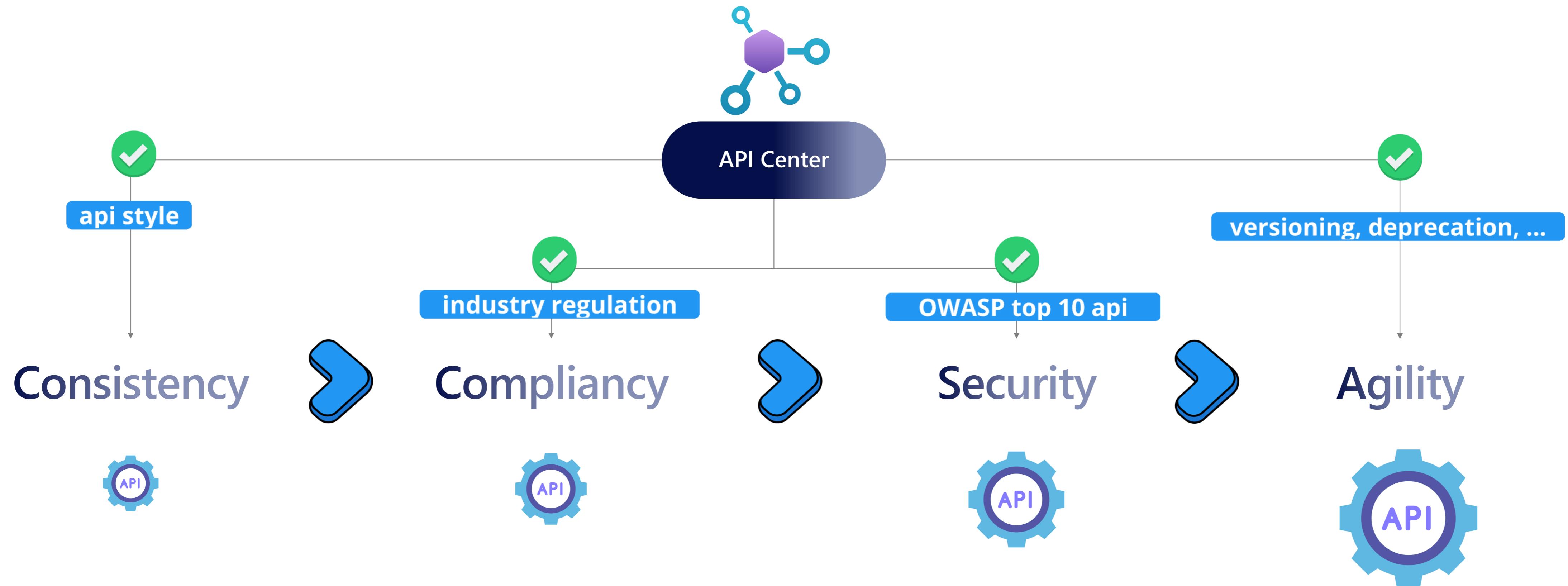
Centralized API Catalog

Create a centralized API Inventory no matter where are located



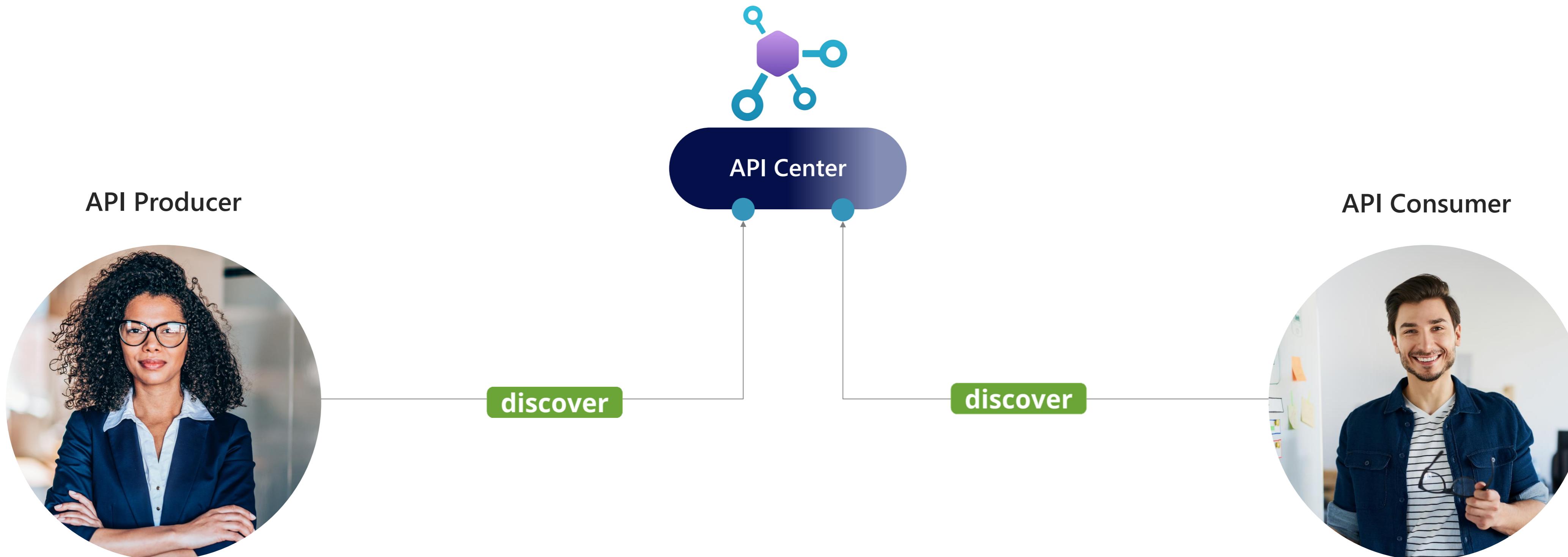
Centralized API Governance

Implement your API governance model



Centralized API Discovery

Foster reusability by swiftly discover and utilize the appropriate APIs





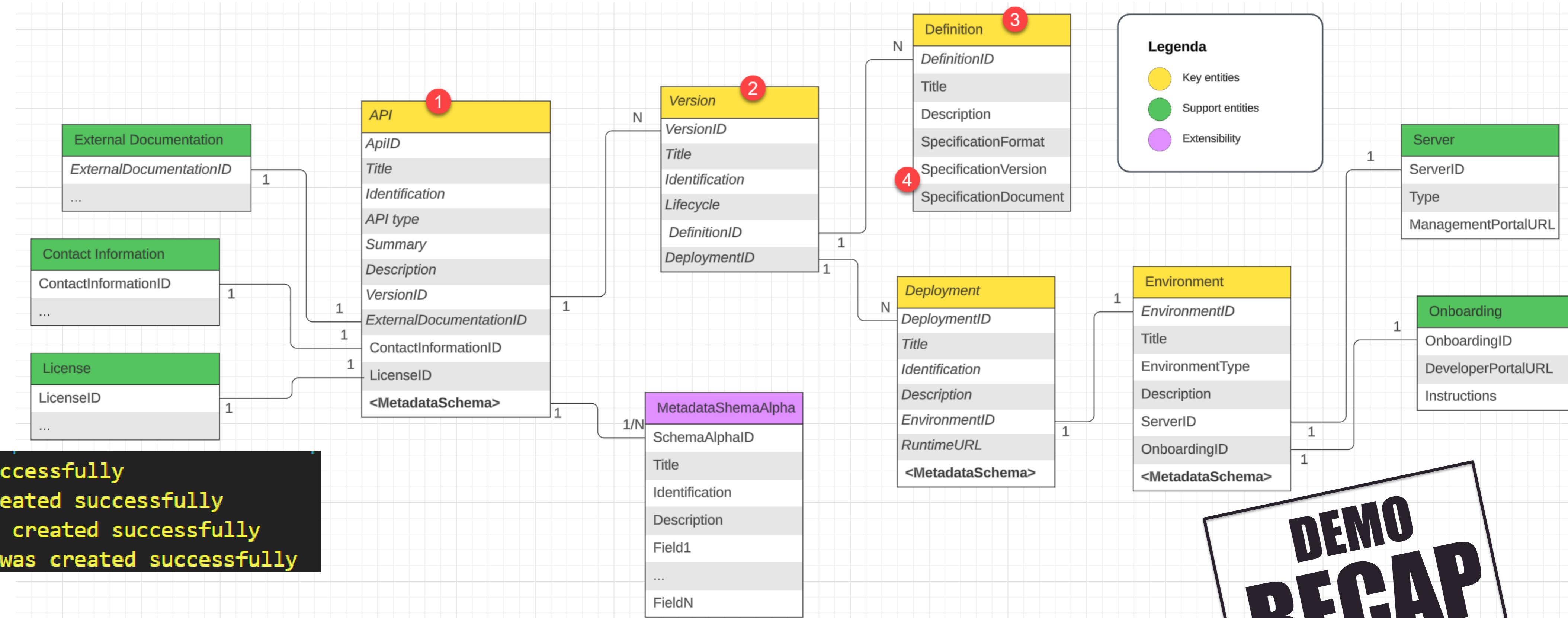
API Center first sight

Register an API and explore the API catalog



First look : az apic api register

```
massi ➜ api-sdlc-with-apicenter ➜ main ➜ +1 ~1 ➜ az apic api register
>> --api-location 'design\conferenceapi\openapi_conferenceapi.json'
>> --resource-group 'rg-apicenter'
>> --service 'myapicatalog'
```



1 API was created successfully
 2 API version was created successfully
 3 API definition was created successfully
 4 API specification was created successfully

Linda

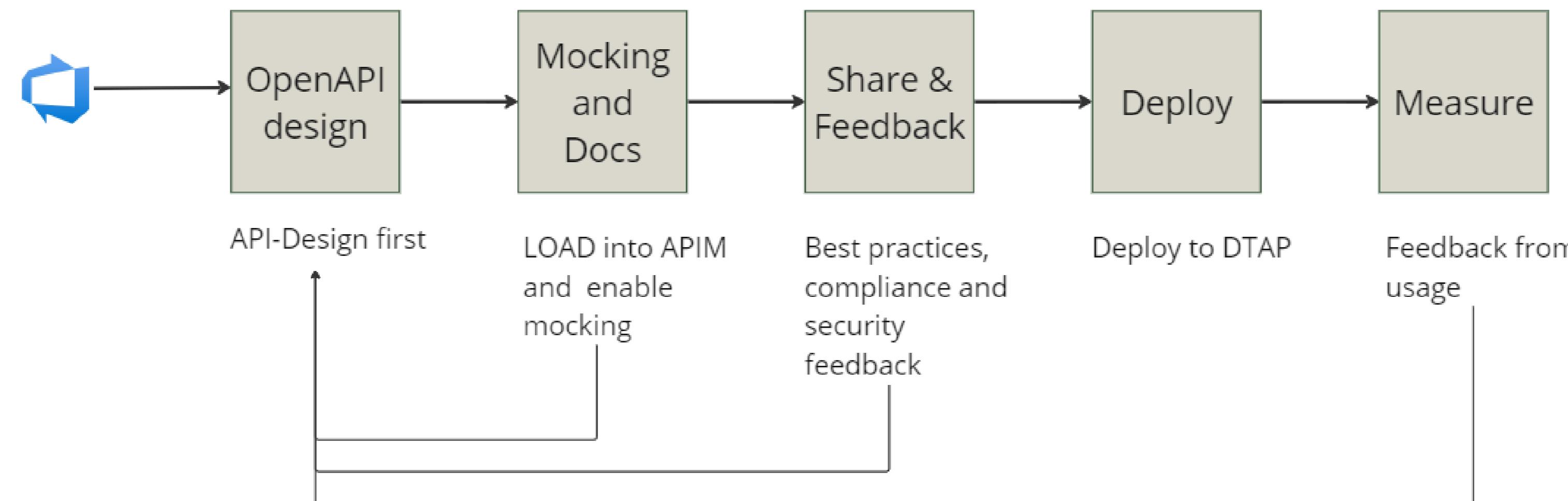
API Product Manager
(API producer)



"I want to make sure all the moving parts come together as expected."

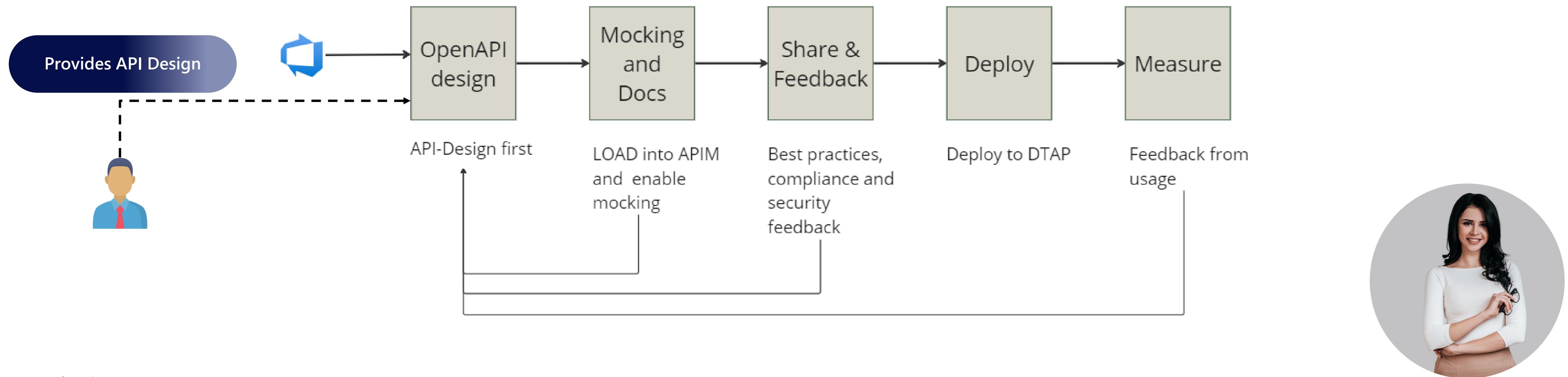
API Design-First workflow and API Center

Open API as source of truth (spec-driven) + API Center to govern the lifecycle



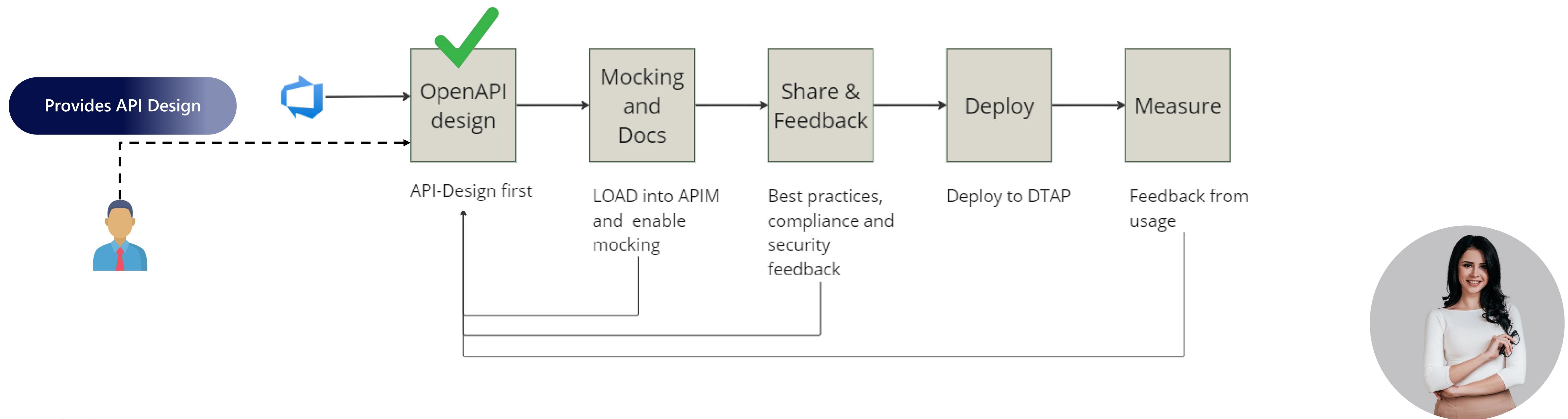
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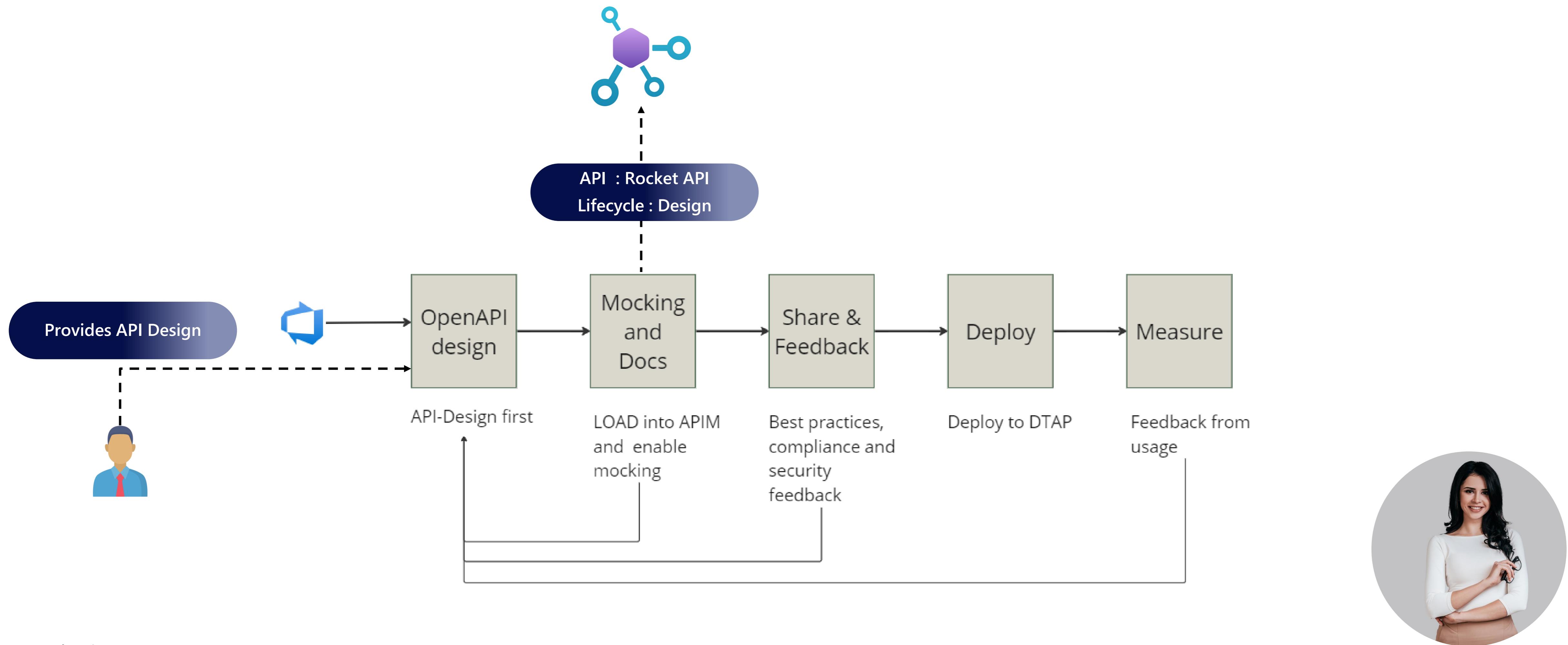
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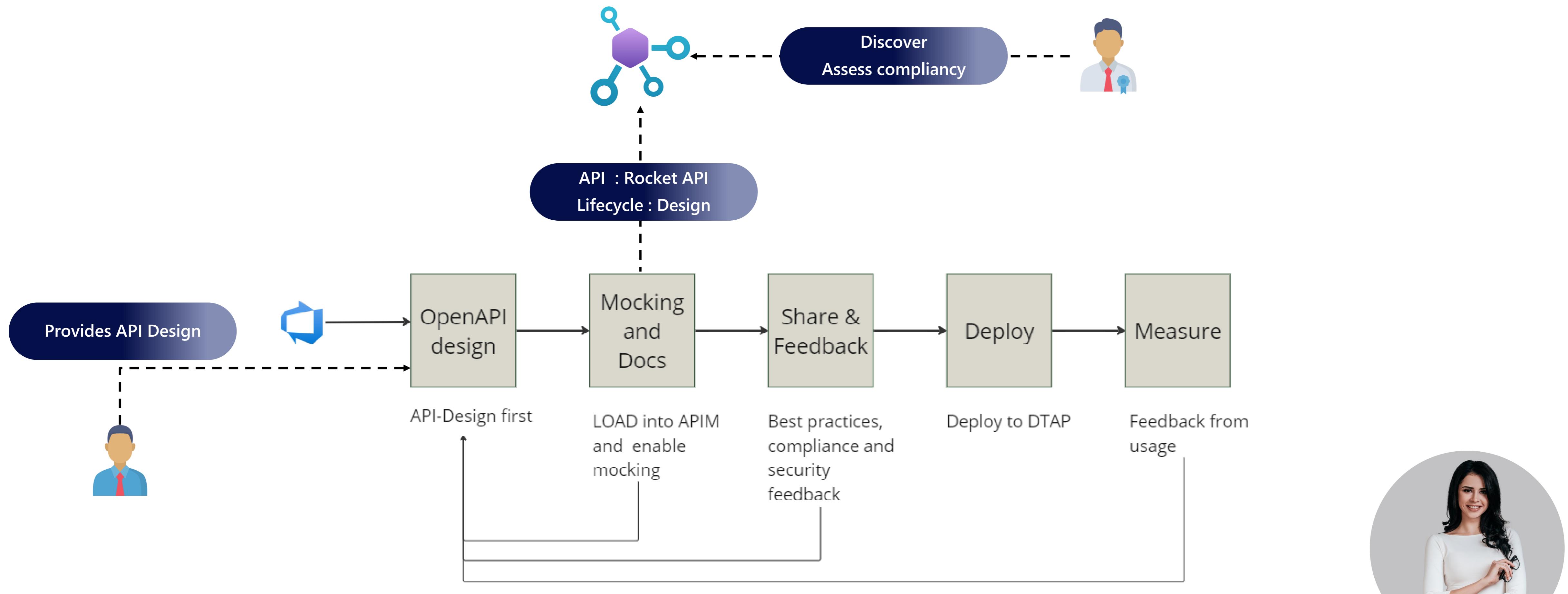
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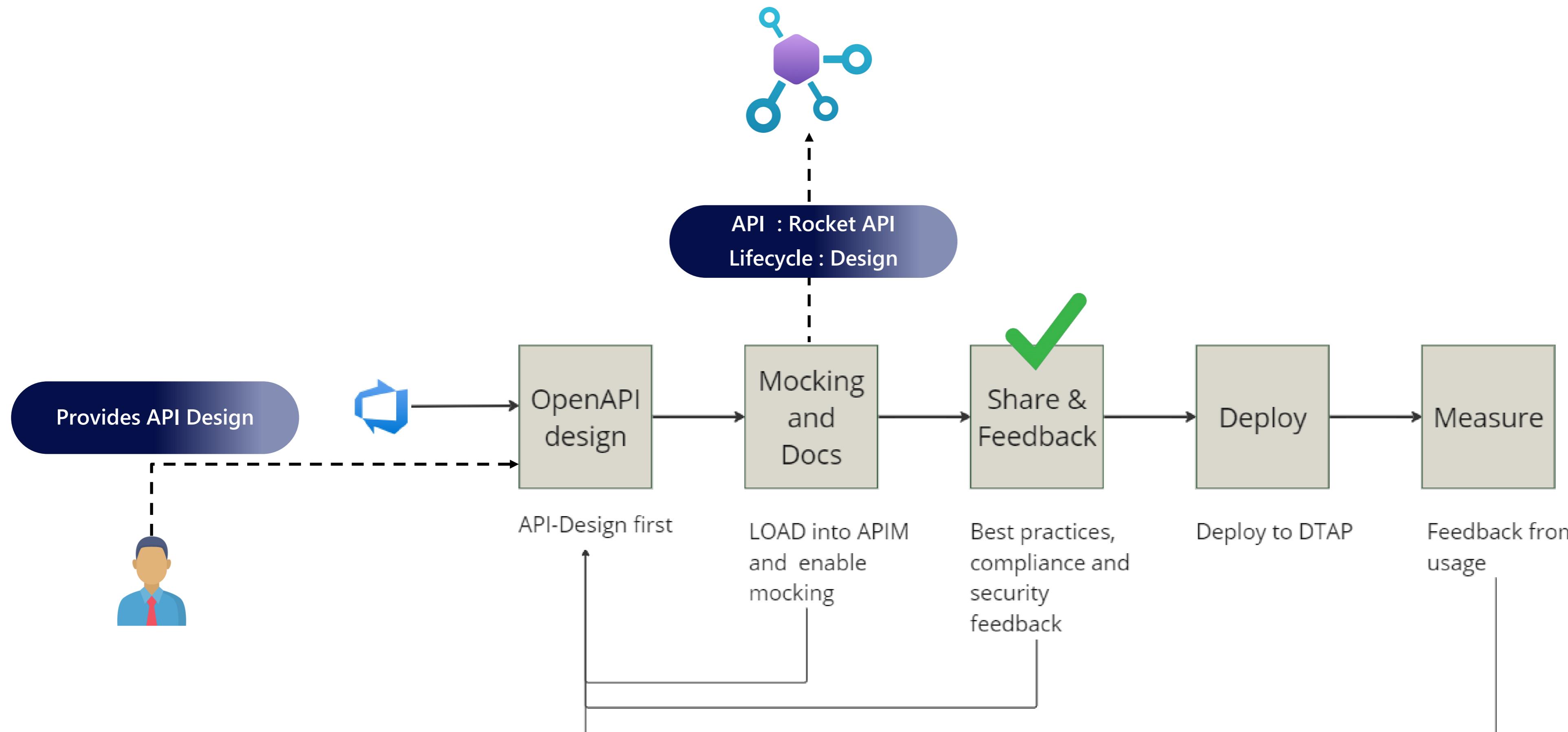
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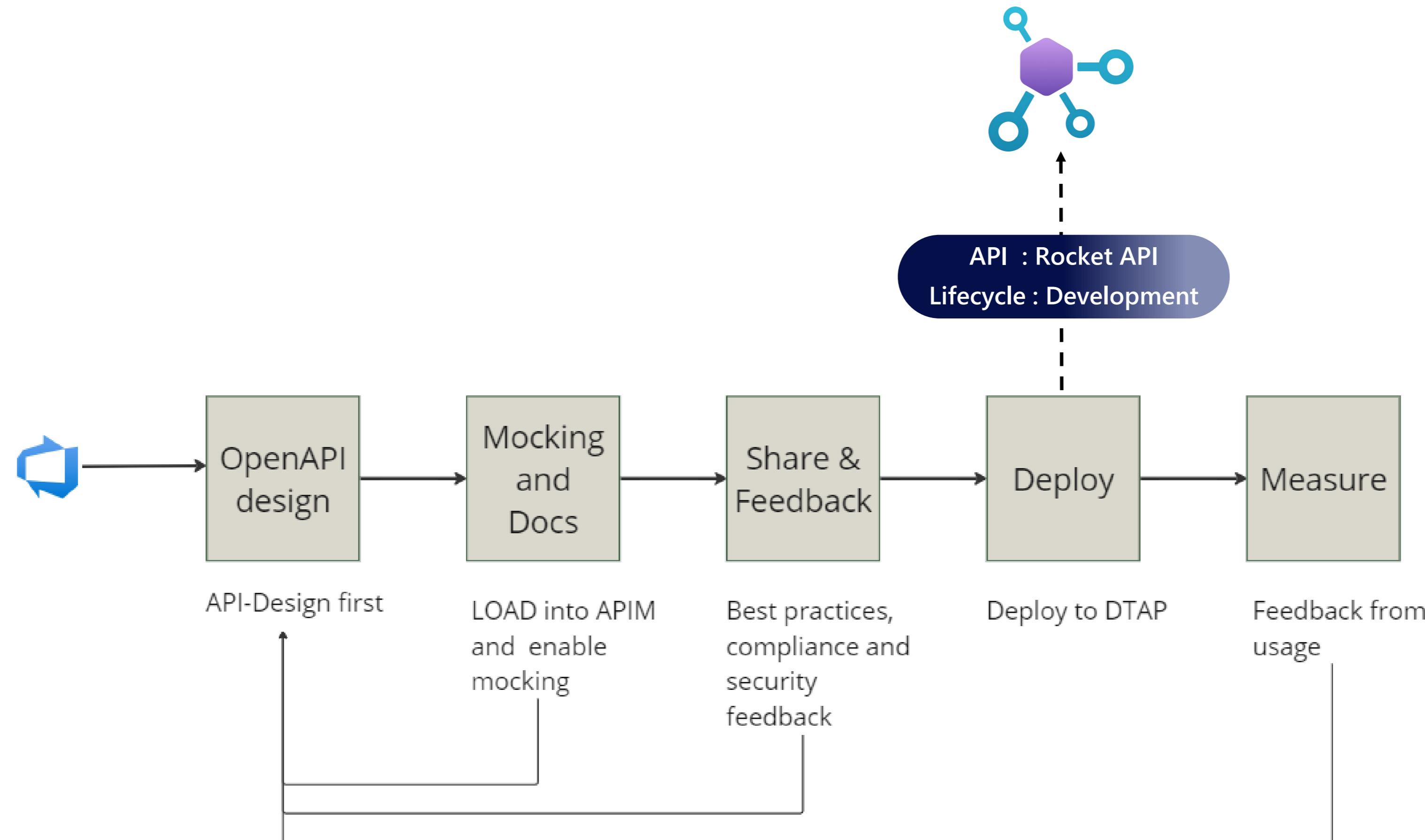
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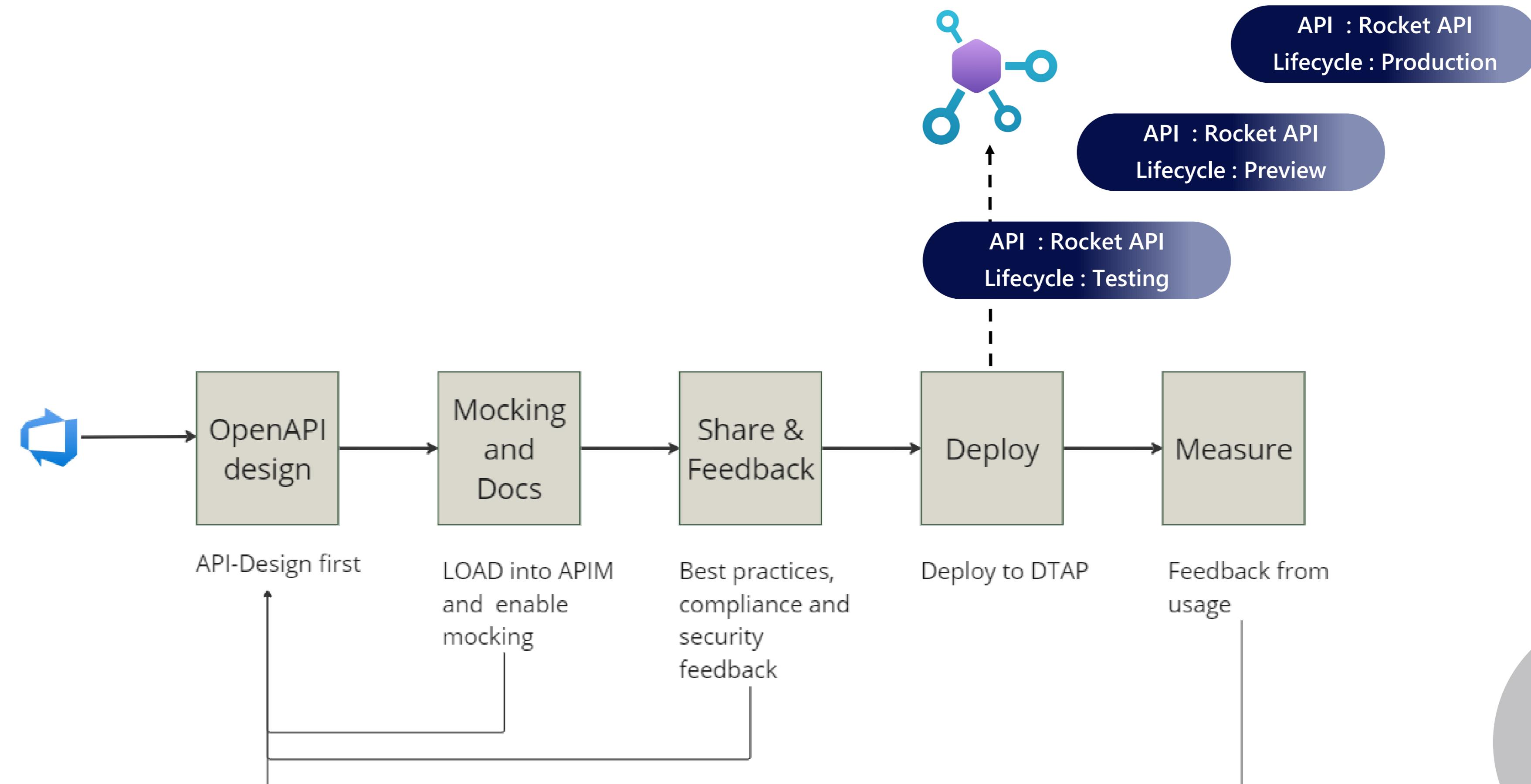
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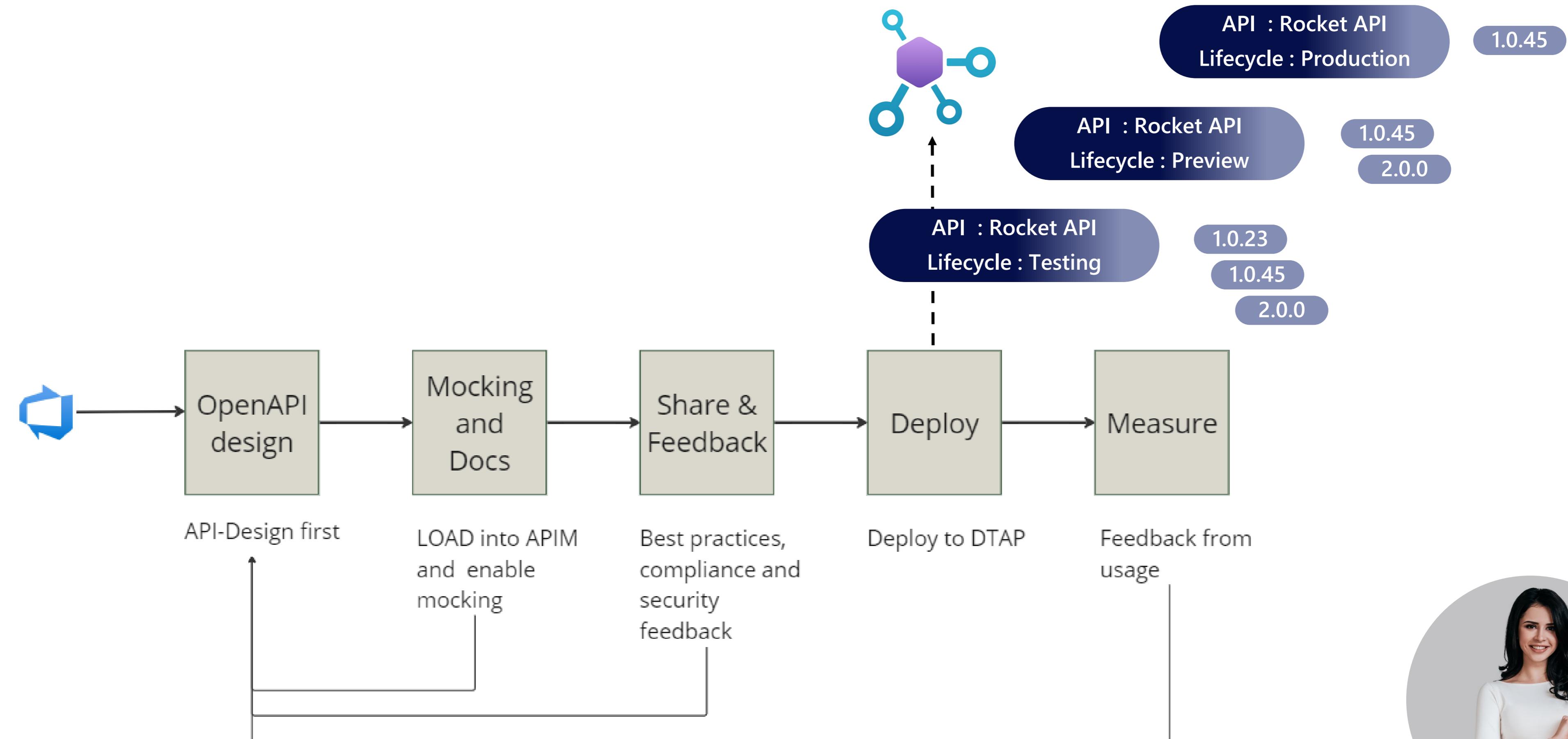
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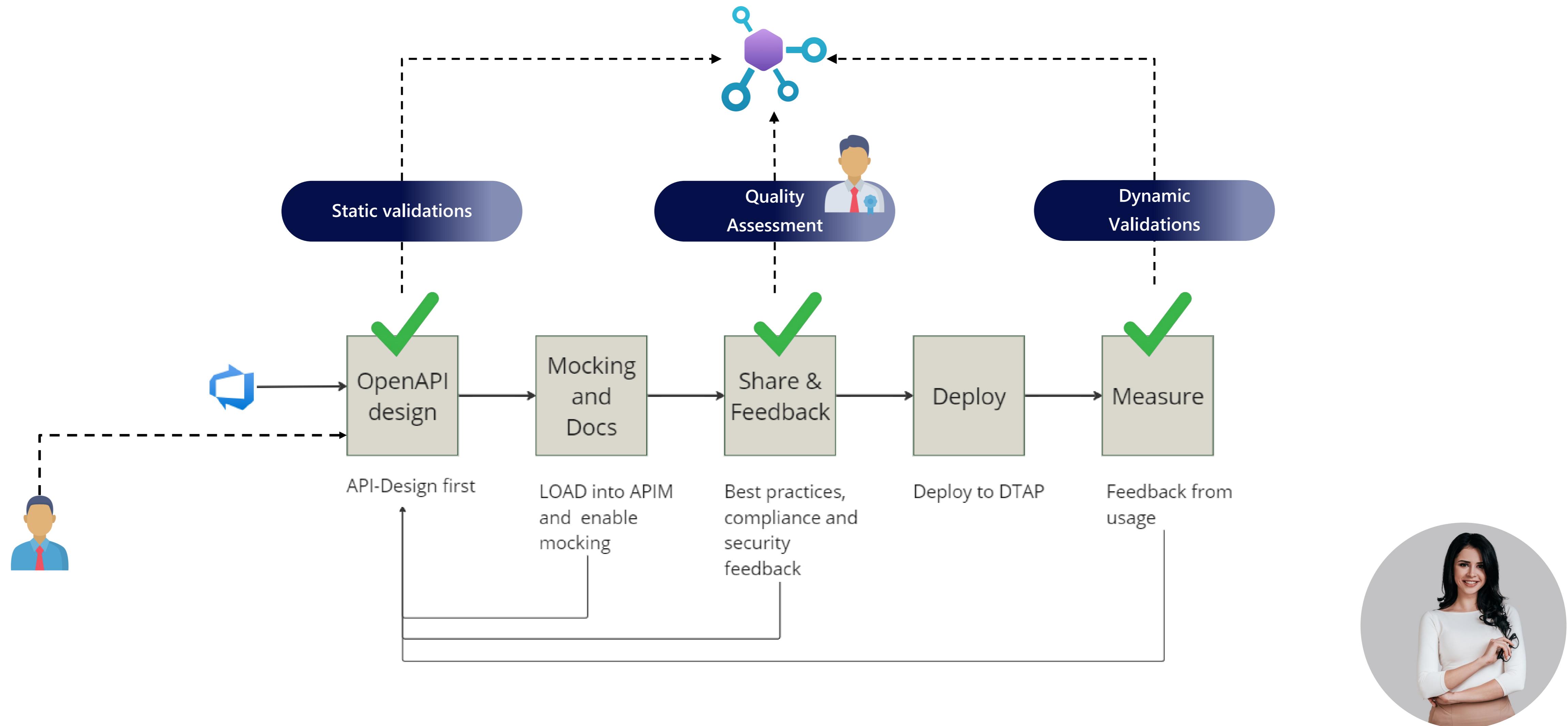


API Design-First workflow and API Center

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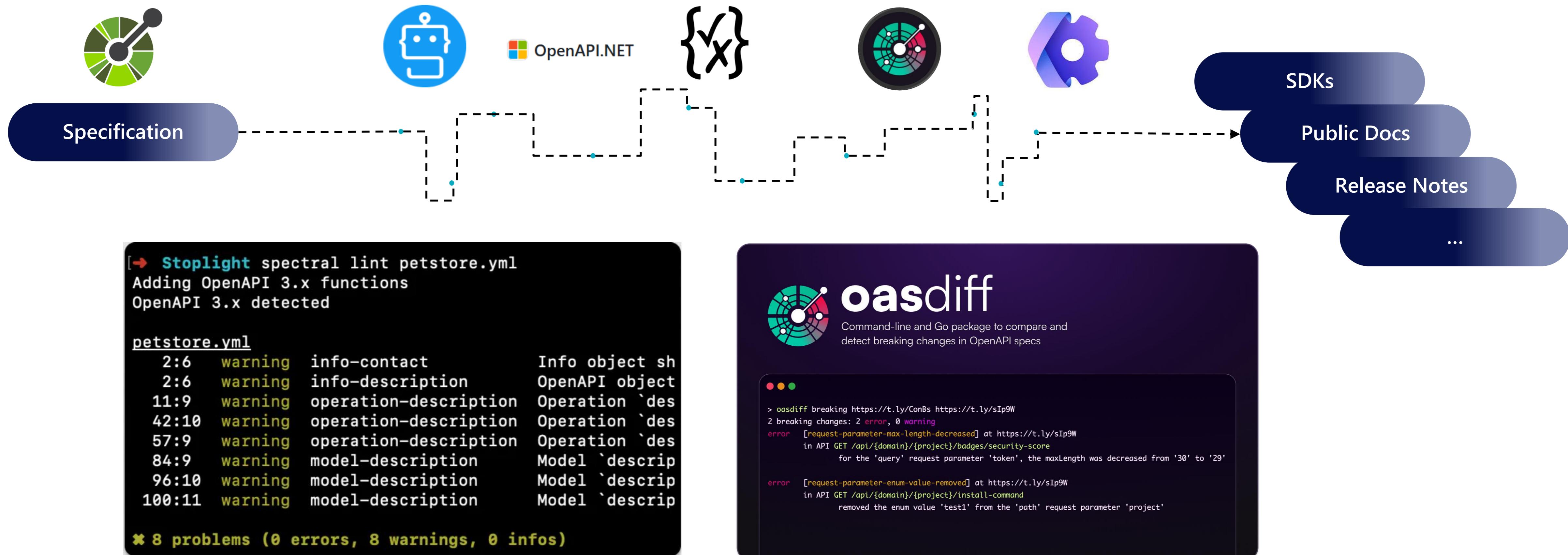


Quality checks and API Center



API-First and quality checks

spec-driven : the road from specification to automatically generated artifacts is not straightforward



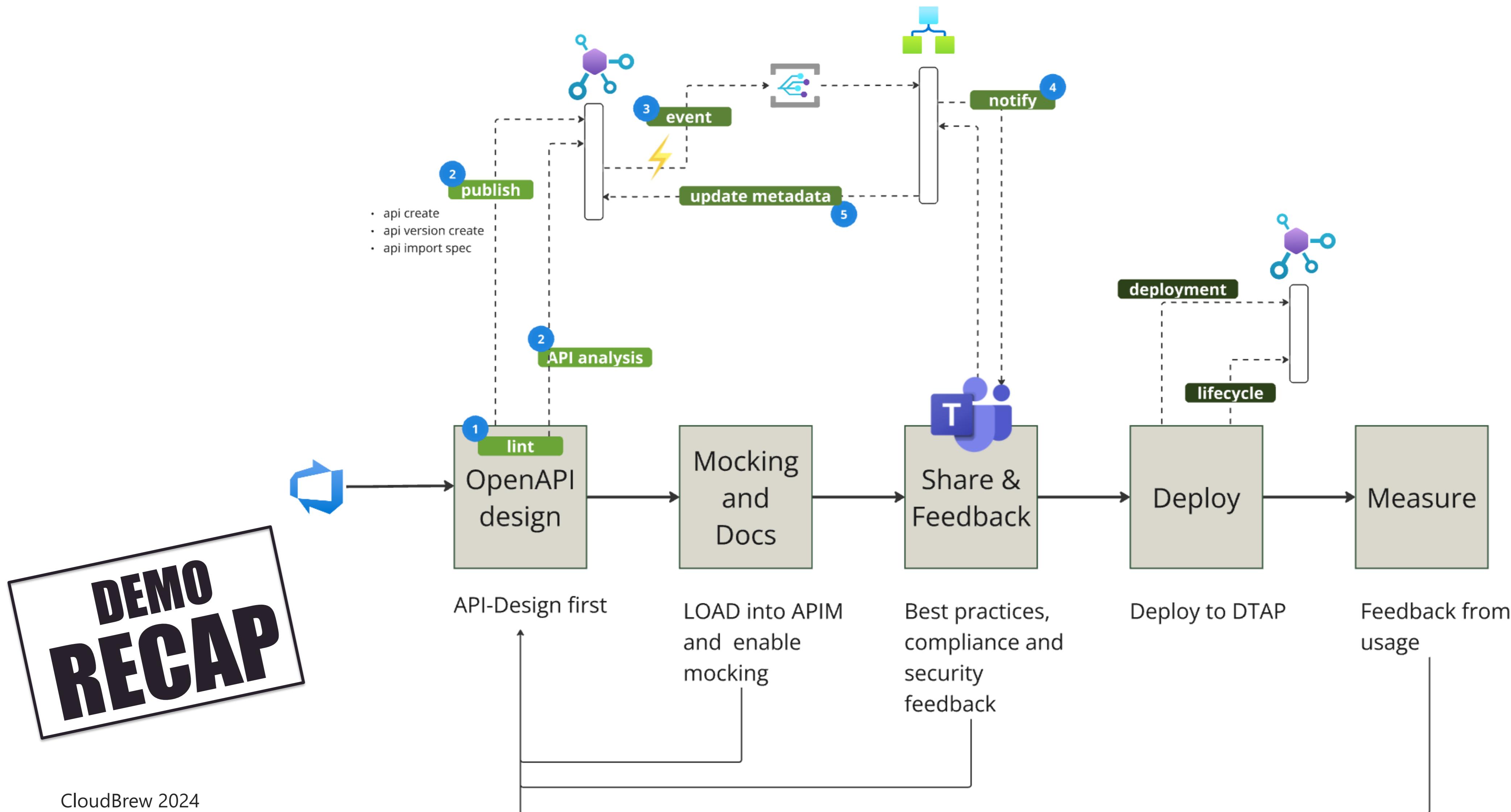


DEMO

Centralized API Governance with Azure API Center



API Governance with API Center



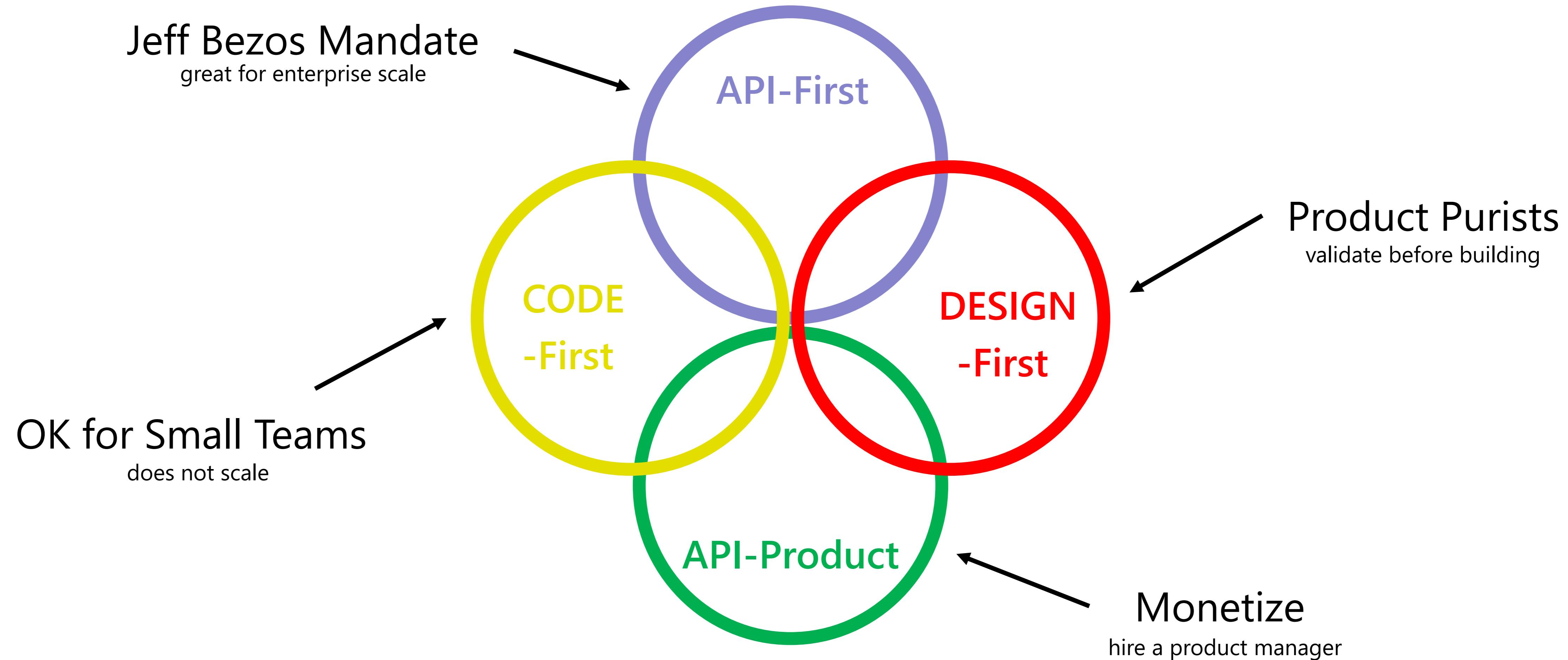
Mark

API Governance Lead

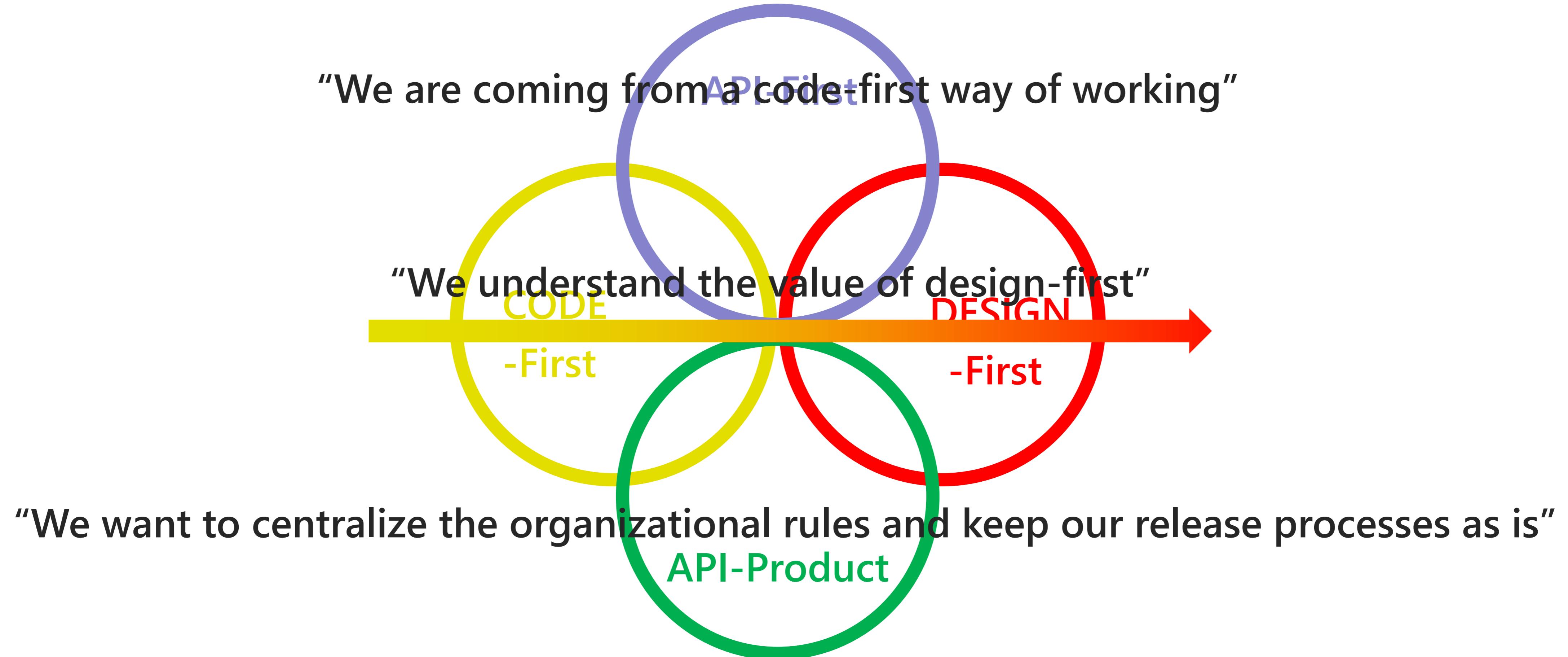


"I want to introduce governance rules with a minimal impact on the as-is situation."

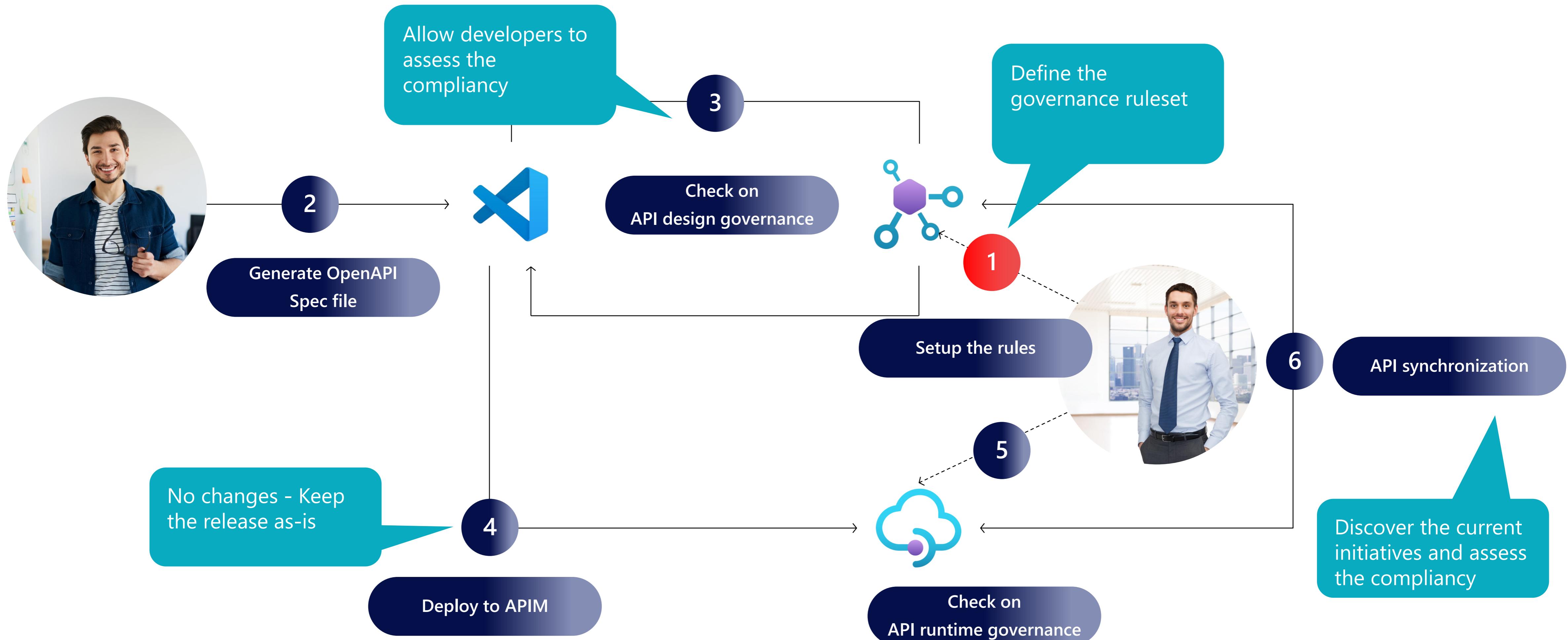
Which combination of API strategy do you need to win?



The story of Mark

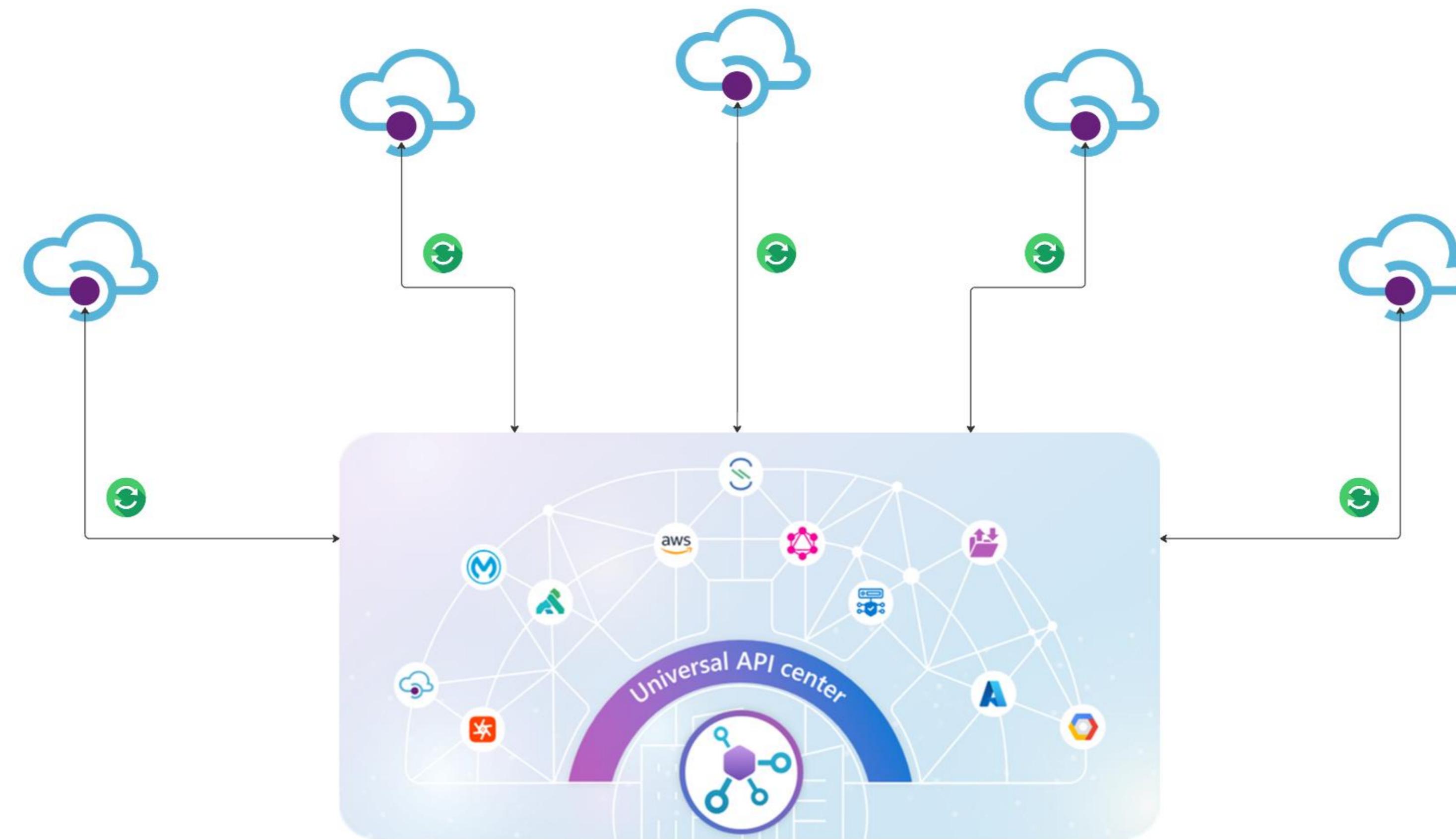


Add API design governance to code-first



Discover and assess initiatives across business units

Synchronize API Management instances with API Center





DEMO

Sync APIM environments and assess the API initiatives



Emma

API Developer
(API consumer)



"I want a consistent experience across APIs no matter the API provider."

SDKs are the developers' painkiller



"I do not waste my time in serialization and deserialization code"



**"I Love it!
It's so easy to understand, easy to use"**

**"Please abstract me away
from your complex authentication mechanism"**



I do not want to learn a new SDK every time a new API integration is needed

“the SDK is not available in my language of choice”

“it is out of date”



“it is poorly implemented”

“I do not want to intake dependencies on libraries from dozens of API producers”

"I want a single tool to get consistent experience across APIs no matter the API provider"

- Emma -

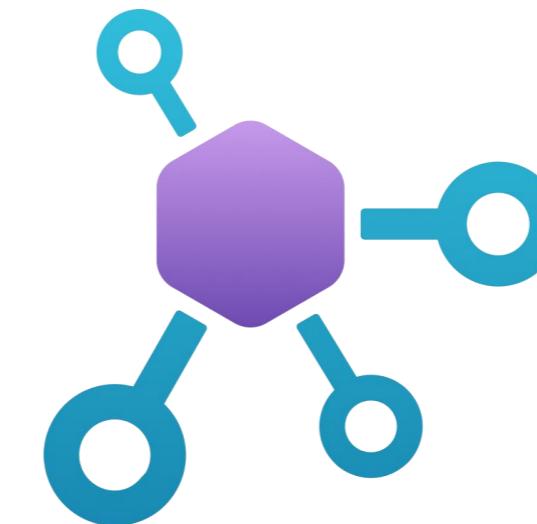
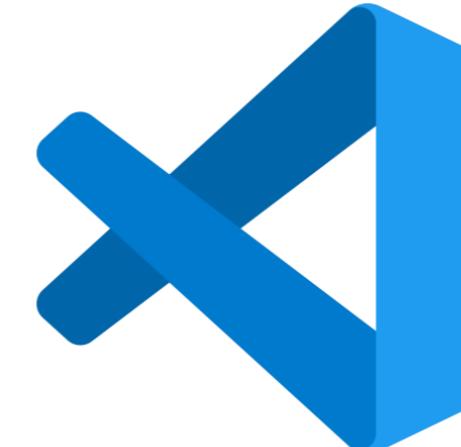


API Center extension for VS Code

Foster reusability by swiftly discover and utilize the appropriate APIs



API Developer



API Center

API : Rocket API
Lifecycle : Production

1.0.45

API : Rocket API
Lifecycle : Preview

2.0.0

API : 1Password API
Lifecycle : Testing

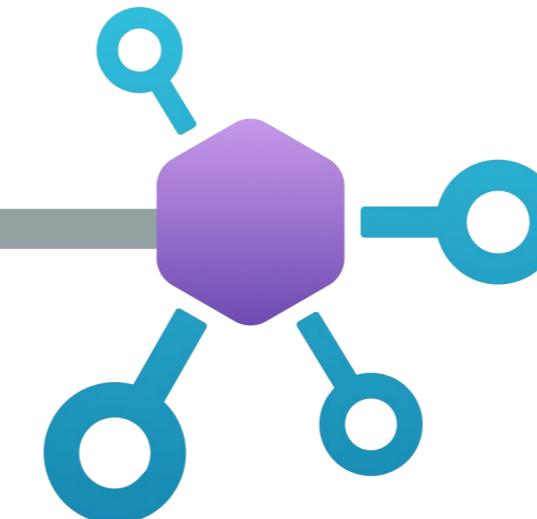
1.5.7

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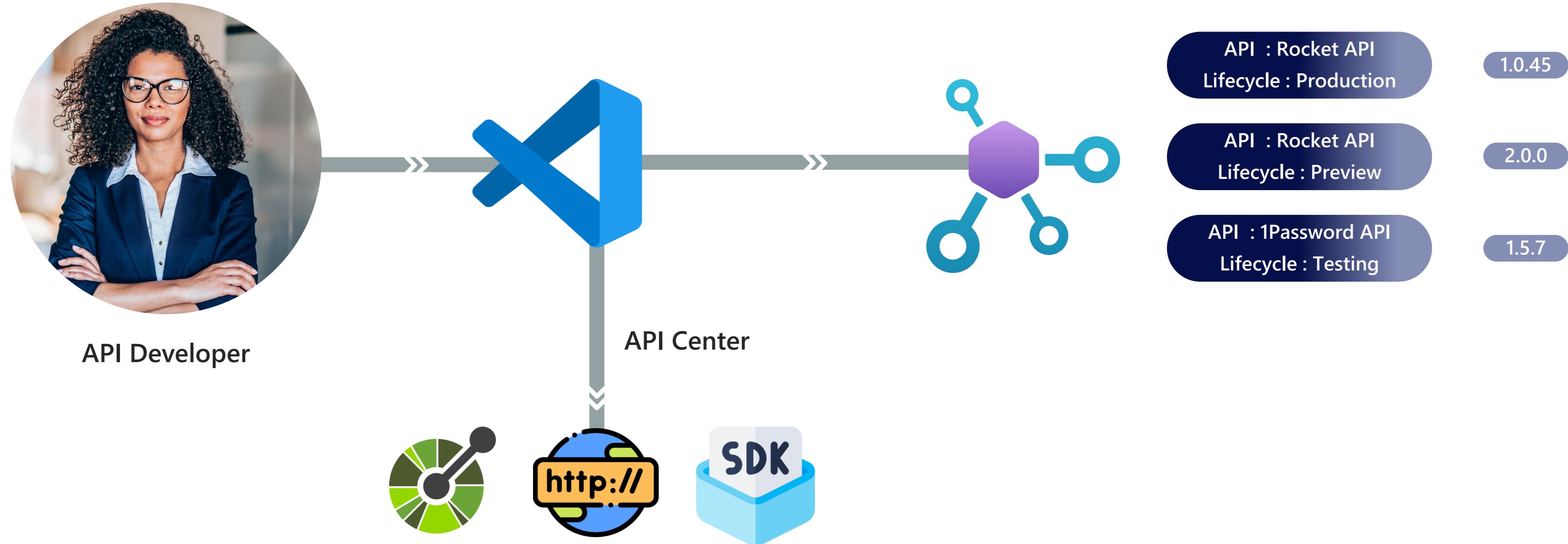
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API : 1Password API
Lifecycle : Testing

1.5.7

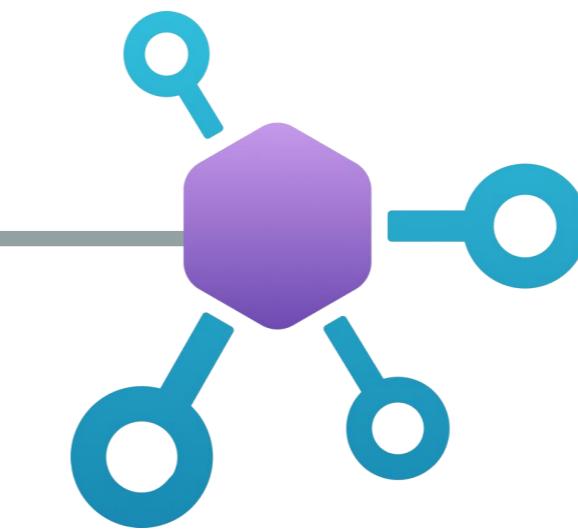
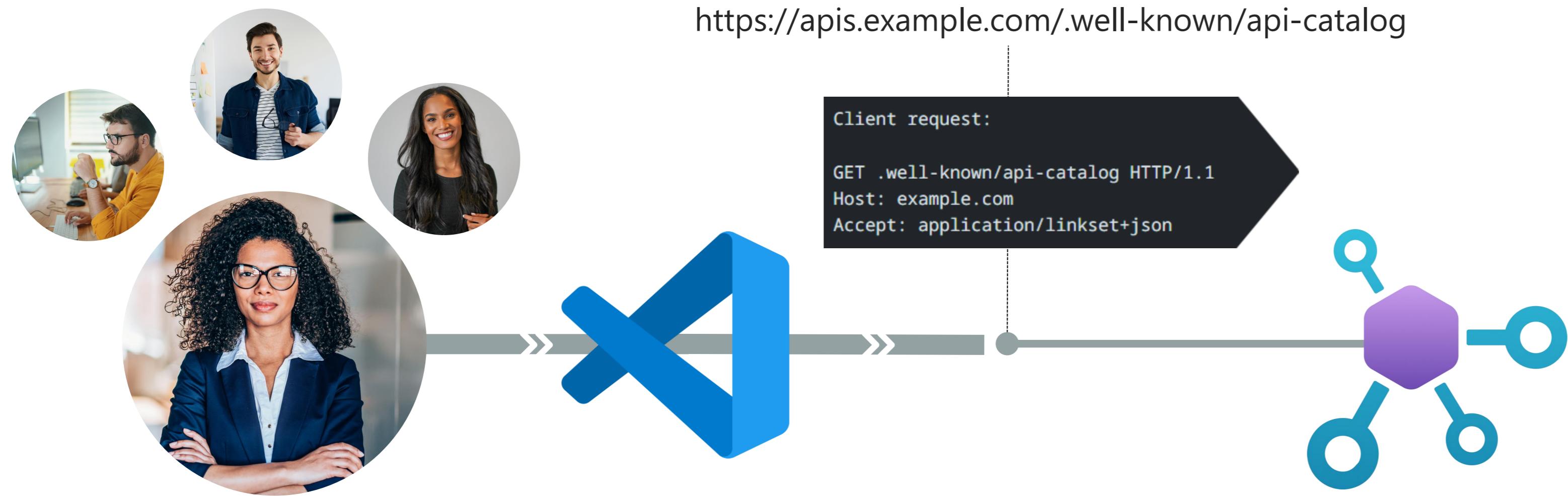
API Center extension for VS Code

Discover APIs, get the documentation, generate SDKs and more ...



Towards an API Catalog standardization

Foster reusability by swiftly discover and utilize the appropriate APIs



draft-ietf-httpapi-api-catalog-06

K. Smith
Vodafone
25 November 2024

Abstract

This document defines the "api-catalog" well-known URI and link relation. It is intended to facilitate automated discovery and usage of APIs.

api-catalog: a well-known URI and link relation to help discovery of APIs

draft-ietf-httpapi-api-catalog-06

```
{
  "linkset": [
    {
      "anchor": "https://developer.example.com/apis/foo_api",
      "service-desc": [
        {
          "href": "https://developer.example.com/apis/foo_api/spec",
          "type": "application/yaml"
        }
      ],
      "status": [
        {
          "href": "https://developer.example.com/apis/foo_api/status",
          "type": "application/json"
        }
      ],
      "service-doc": [
        {
          "href": "https://developer.example.com/apis/foo_api/doc",
          "type": "text/html"
        }
      ],
      "service-meta": [
        {
          "href": "https://developer.example.com/apis/foo_api/policies",
          "type": "text/xml"
        }
      ]
    }
  ],
  "profile": "THIS-RFC-URL"
}
```



DEMO

Discover and reuse assets



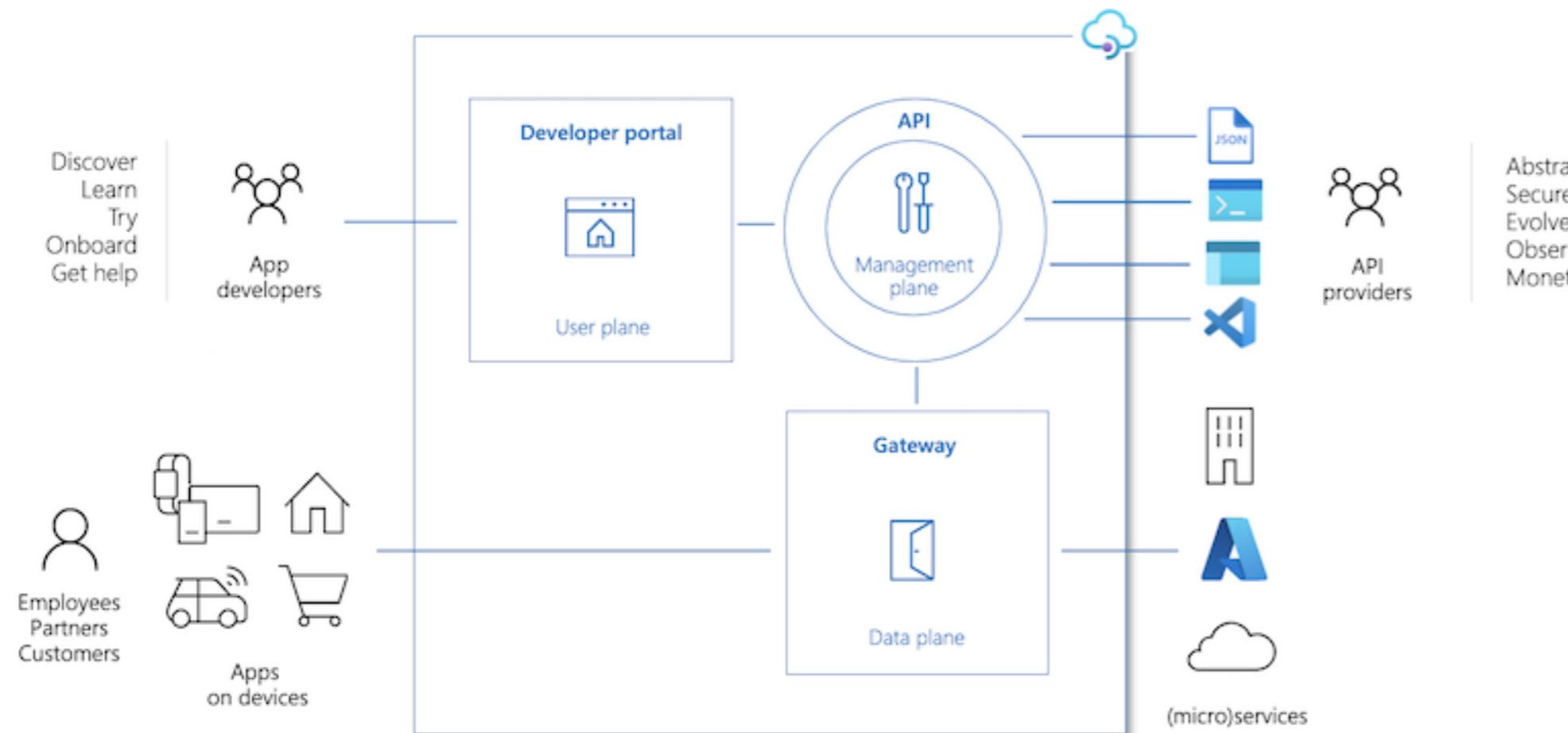
**centralized API discovery and governance aren't just operational tools
they are the cornerstones of delivering consistent, secure,
and high-quality experiences that our users can rely on.**

APIM vs APIC ?

Runtime governance vs Full Lifecycle API governance

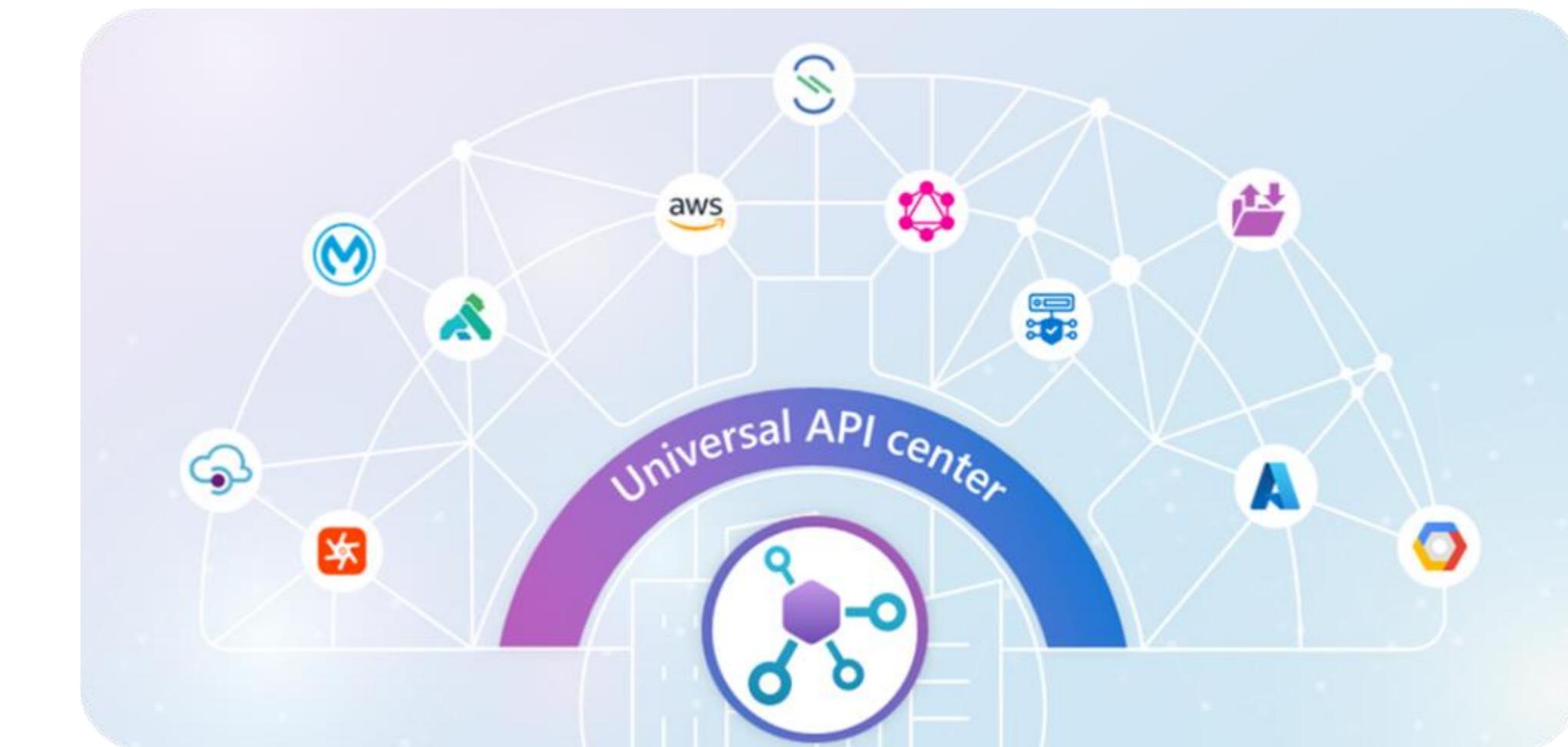
Runtime governance

- Only hosted APIs
- APIs that are belonging to one APIM
- How to surface APIs via productization
- No process management



Full-Lifecycle governance

- Every stage are represented, from design to retired
- API Governance no matter where they are located
- ...



What about pricing?

\$\$\$



Manage plan

API Center pricing plans

Change to the Standard plan for full access to Azure API Center features for all your APIs. [Learn more](#)

Plan	Description	Price	Billing term
<input checked="" type="radio"/> Free	Register up to 200 APIs. The first 5 APIs have full access to all Azure API Center features.	Not applicable	Not applicable
<input type="radio"/> Standard	Registered APIs have full access to all Azure API Center features.	\$699	Monthly

Cannot create API deployment. Number of API deployments for this API version (10) exceeds maximum limit (10).

Resources



- ◆ **Getting started**
<https://aka.ms/apicenter>
- ◆ **API Center Roadmap**
<https://github.com/Azure/api-center?tab=readme-ov-file#roadmap>
- ◆ **API Catalog IETF draft**
<https://datatracker.ietf.org/doc/html/draft-ietf-httpapi-api-catalog>
- ◆ **Kiota**
<https://aka.ms/kiota>
- ◆ **Azure API Center analyzer**
<https://github.com/Azure/APICenter-Analyzer/>



Thank you

