API Portal / Gateway Context Diagram

- This is an introductory “concepts and facilities” guide to describe the fundamental components of an API Lifecycle for Discovery, Development, Deployment and Execution of APIs using an API Gateway.
- It helps to establish a common Lexicon of understanding.

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API Portal / Gateway Context Diagram

Discover

Develop

Deploy

Execute

Consume

API Portal

Business Architecture

Usability Architecture

Integration Architecture

System Architecture

DevOps CI/CD

API Gateway Runtime

Technology Stack Runtime

API Management Framework

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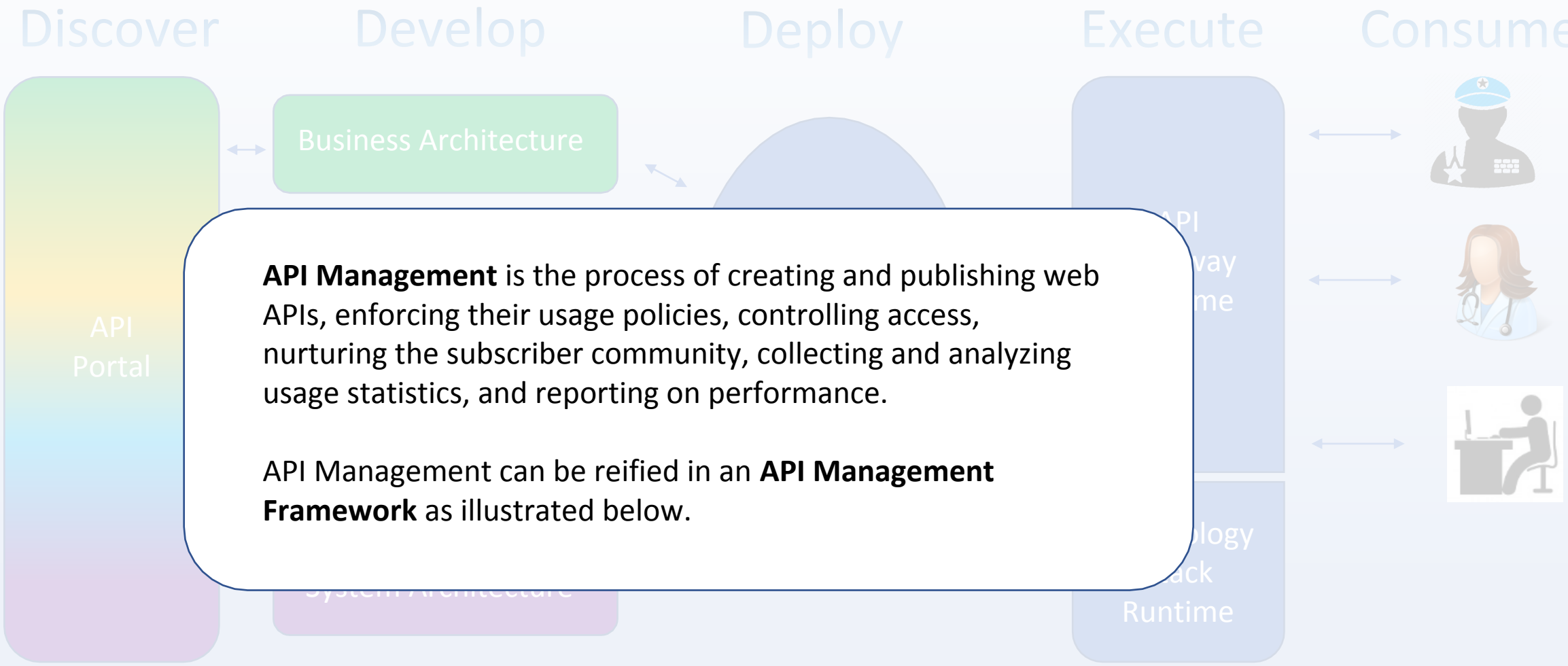
API Portal / Gateway Context Diagram



API Management is the process of creating and publishing web APIs, enforcing their usage policies, controlling access, nurturing the subscriber community, collecting and analyzing usage statistics, and reporting on performance.

API Management can be reified in an **API Management Framework** as illustrated below.

API Management Framework

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An **API Portal** is a destination to attract and support developers and partners as they make use of your APIs. It allows for the packaging of APIs as products, complete with documentation, to enable your community to use APIs in a scalable way.

An API portal helps to enable self-service for developers of API artifacts.

API Management Framework

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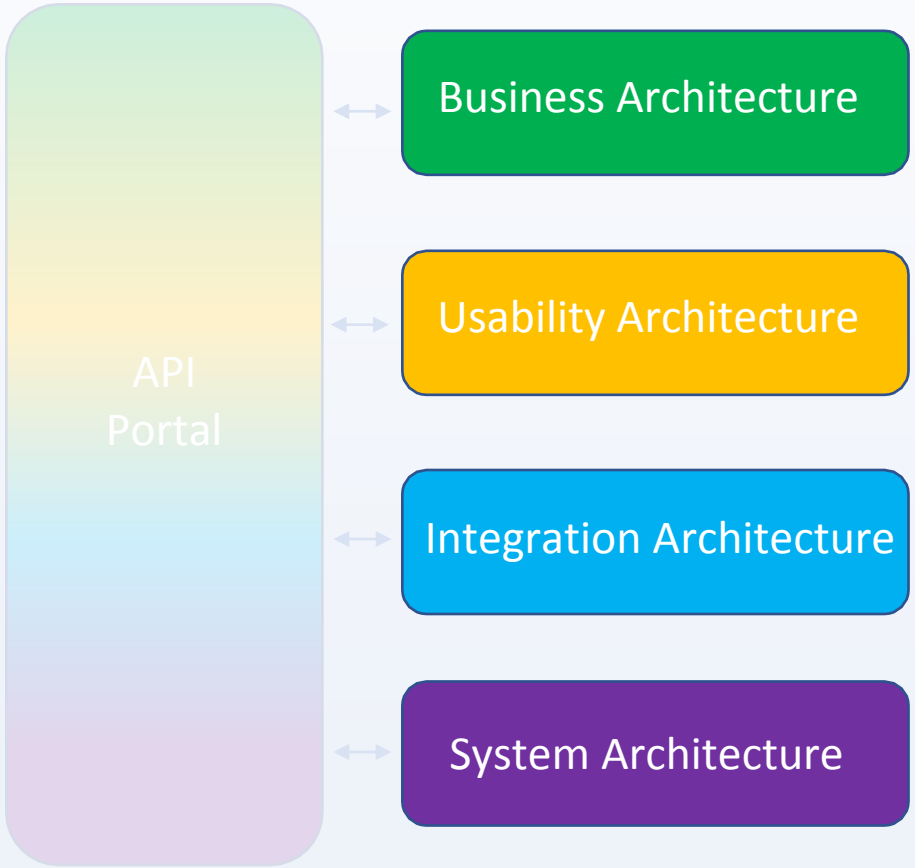

The Developer API Portal must satisfy the needs of multiple classes of users. These include Architects and Developers at four levels: 1) Business, 2) Usability, 3) Integration and 4) System.

A principle tenet of the Portal is to promote Self Service.

Ideally, these users will obtain the information they need from the Portal to Develop, Design, and Test (through mocking) and Deploy to live Test and Production environments.

API Management Framework

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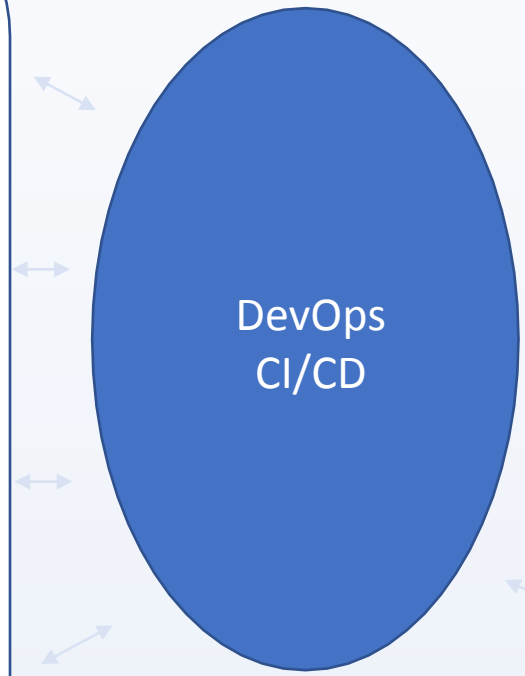
Generally, software teams that practice CI/CD use a version control system to manage code; an automated build engine; unit, functional and integration test systems; performance testers for normal load and stress tests; configuration management tools; and an artifact repository. These teams might also rely on containers for a consistent software deployment model from development to test to production and integrated development environments to ease the complication of build and test.



These tools all integrate with a CI/CD pipeline tool, such as Jenkins or CircleCI. Organizations also rely on monitoring in production and capacity management, and tools for these purposes can be integrated with the CI/CD pipeline as well.

Many API Portal/Gateway vendors provide (in their product) or integrate CI/CD tools, sometimes making it difficult to delineate the functional boundaries of a Portal, CI/CD and a Gateway.

API Management Framework

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Business Architecture

For purposes of this presentation, the Technology Stack and API Gateway represent the runtime environment for API execution.

A succinct definition of an **API Gateway** is that component providing a crucial layer of runtime API mediation, including policy management, traffic monitoring, security, SLA and rate limiting functions.

API Gateway Runtime

Technology Stack Runtime

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