WSO2CON 2024

Building the API first enterprise



Mifan Careem
Chief Solutions Officer
WSO2

APIs are your business abstraction.

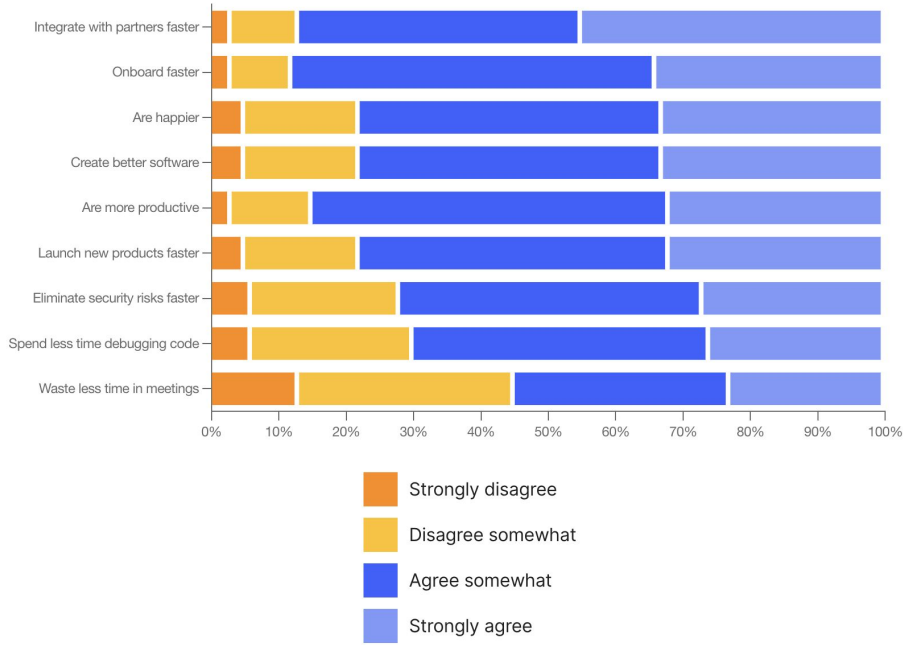


Mifan
@mifanc

APIs are the abstraction of Intellectual Property. Abstractions of course apply at different levels. APIs are a well known abstraction, enabling the creation of your business as APIs.

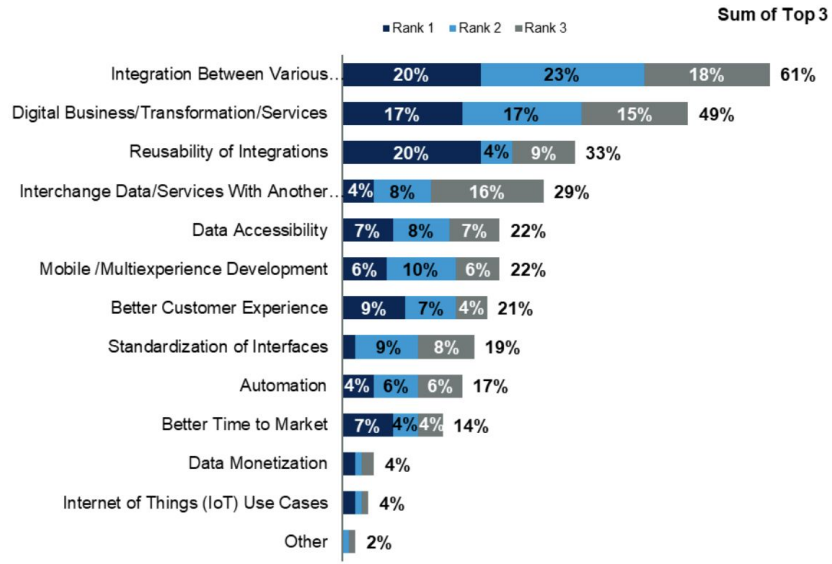
The state of APIs

It pays to be API-first—especially if you're scaling up



https://www.postman.com/state-of-api/api-first-strategies/#api-first-strategies

Business Goals of APIs
Percentage of Respondents

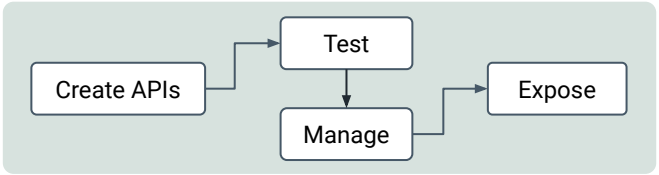


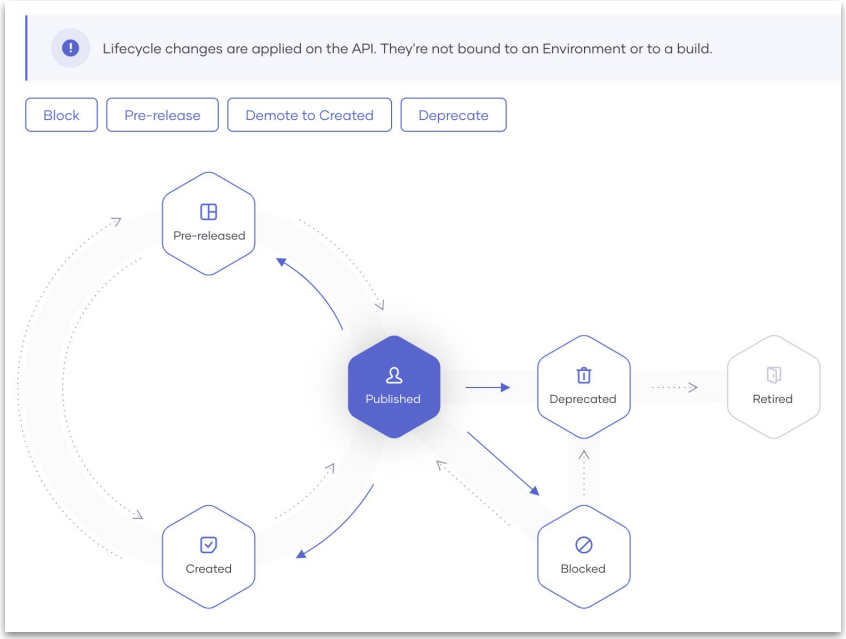
n = 112 Gartner Research Circle Members
Base: Excludes "Don't know"
Q: What are the top 3 business goals or objectives your organization is trying to address with APIs? Rank three.
Source: Gartner's 2019 API Usage and Strategy survey
ID: 451168

Gartner, 2019 API usage and strategy survey

“API first development blurs the lines between API design, implementation, management and governance”

Full API Life-cycle management





API Developers

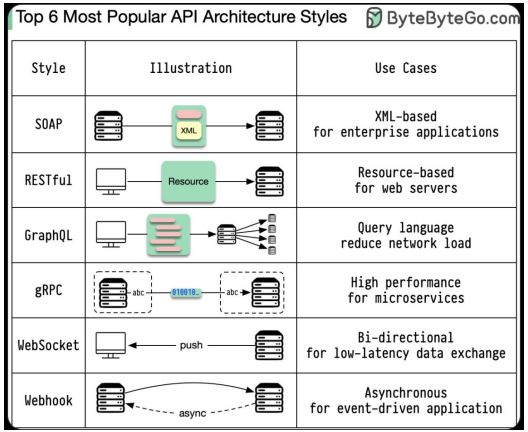
API Product Managers

API Consumers

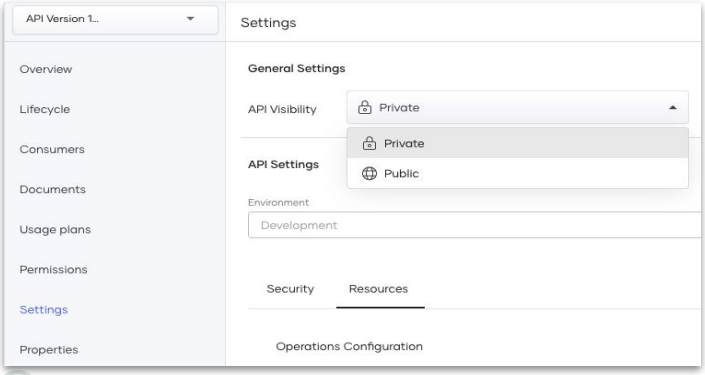
- Enable business goals
- Define API roadmap
- Incorporate feedback
- Evangelise APIs
- Coordinate DevRel

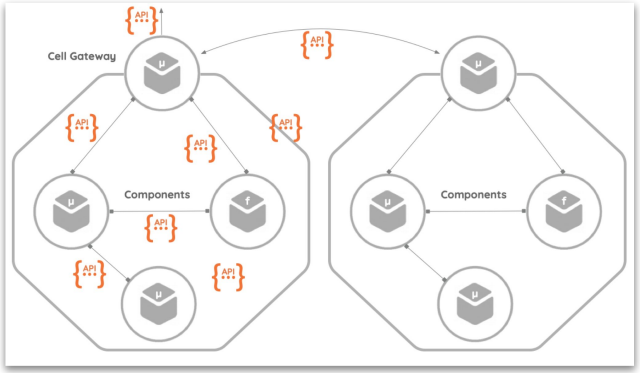
Designing the right APIs

- Contract first vs code first
- By function
  - Domain, Experience APIs
- By visibility
  - Internal vs external
- By type
  - REST, Async, Webhook, Websockets, GraphQL,..

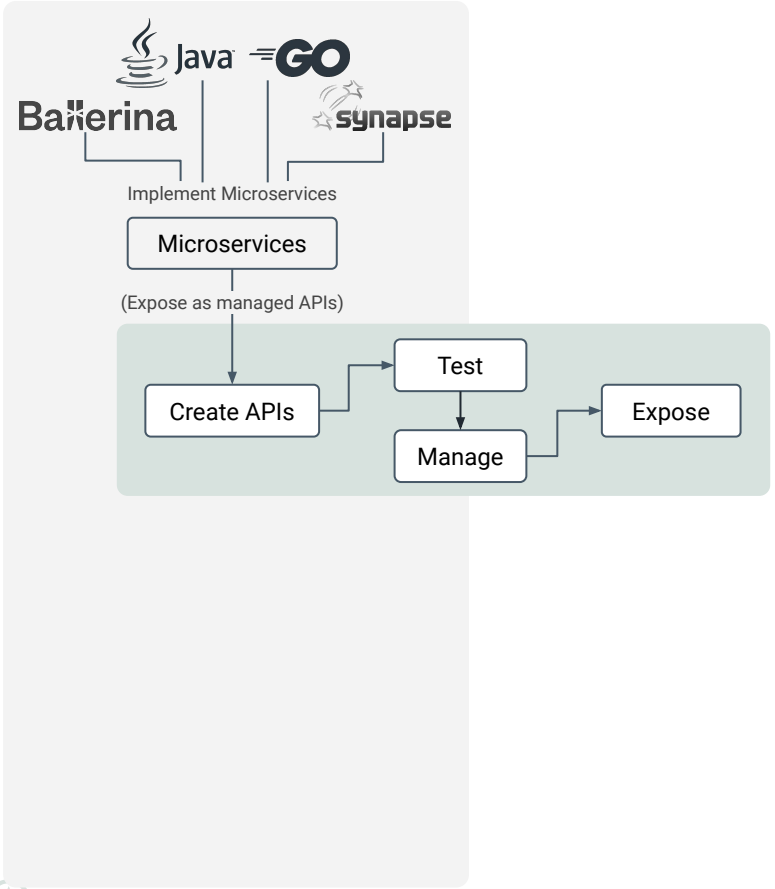


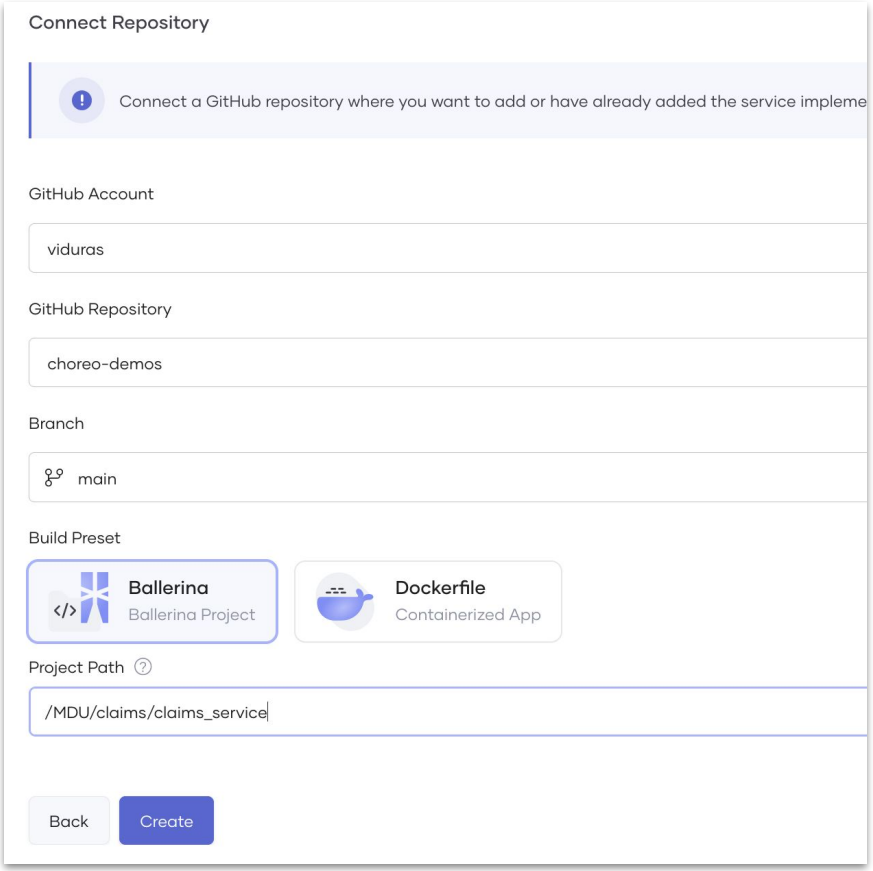
https://twitter.com/alexxubyte/status/1663568959348826114



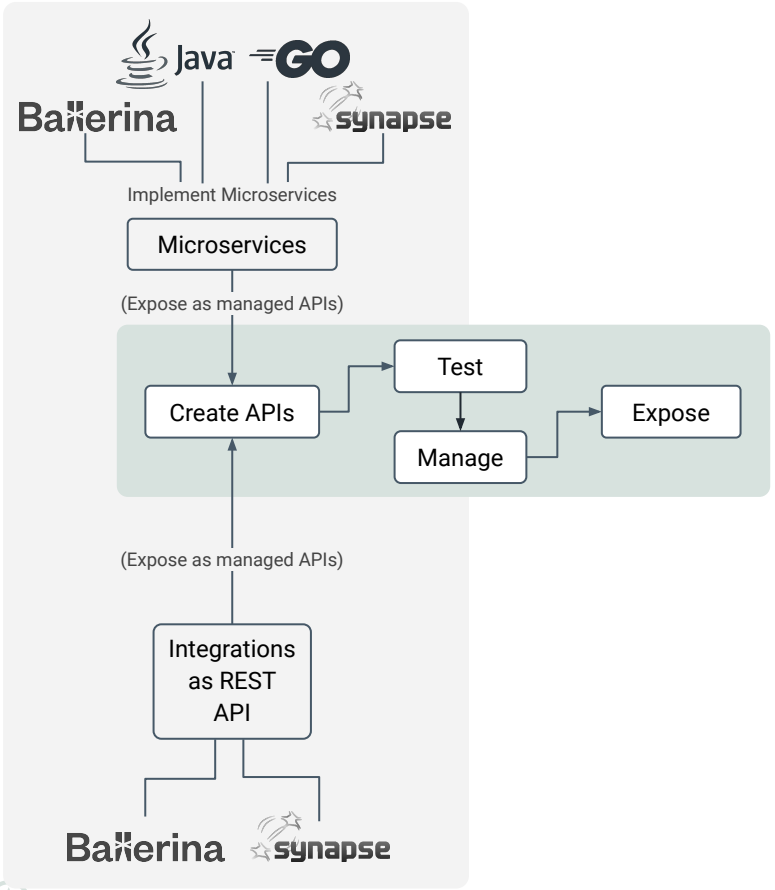


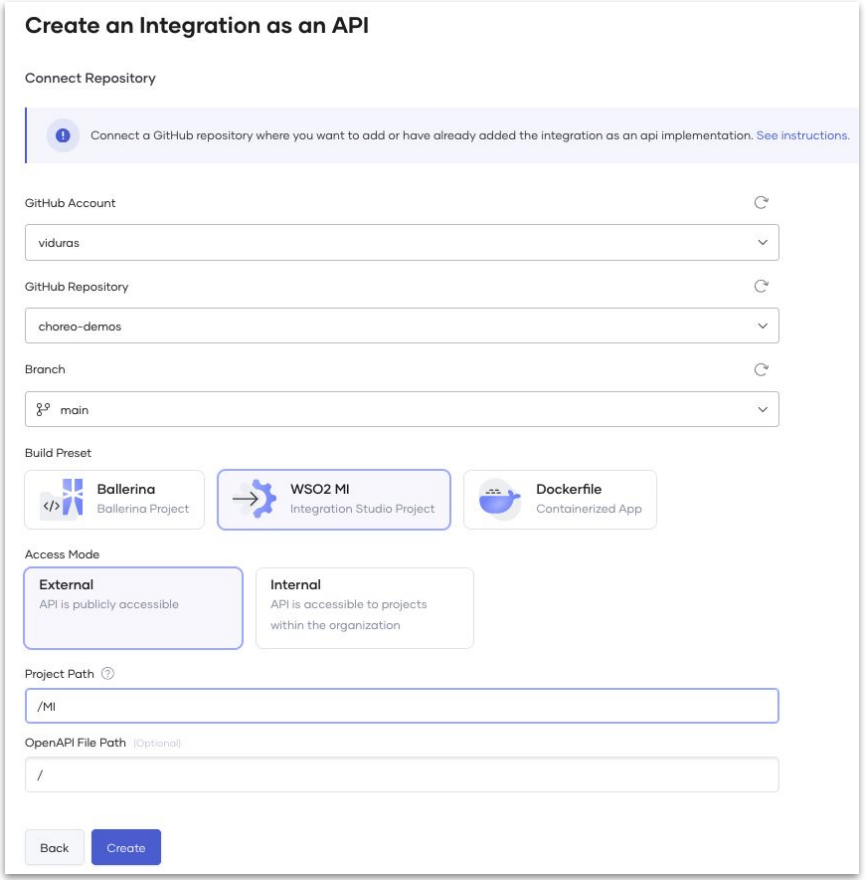
API Implementation



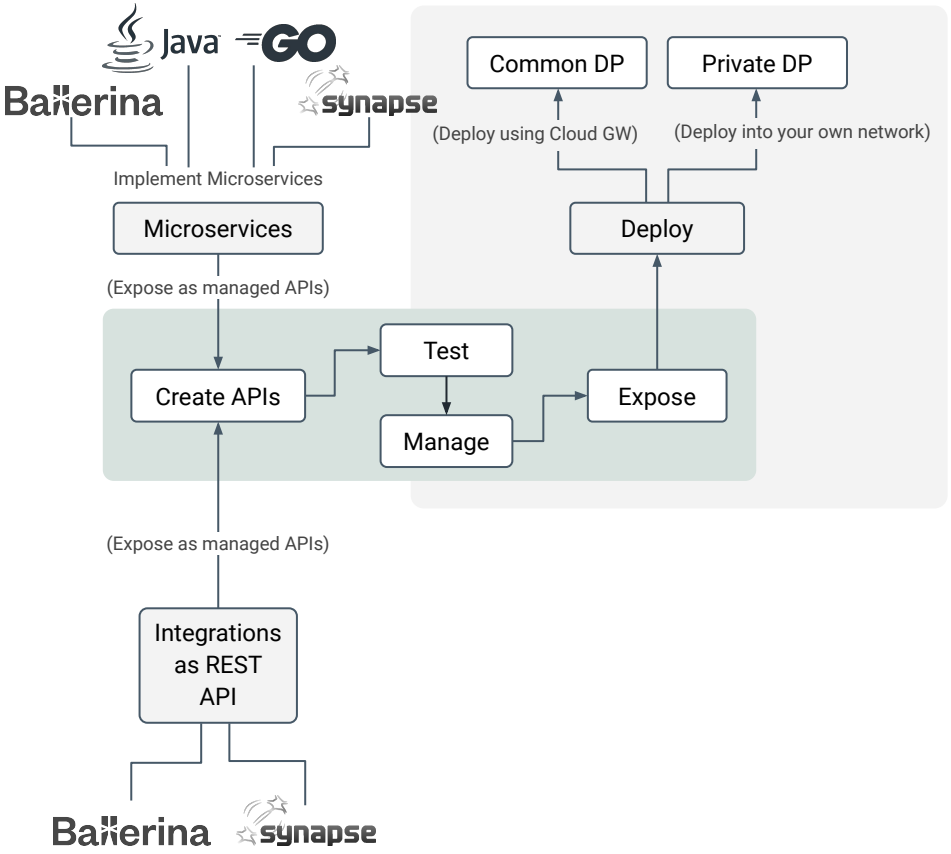


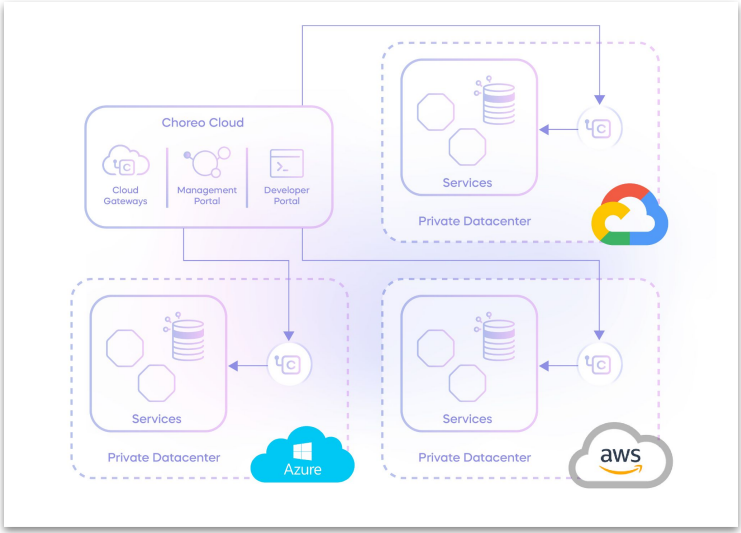
API Implementation



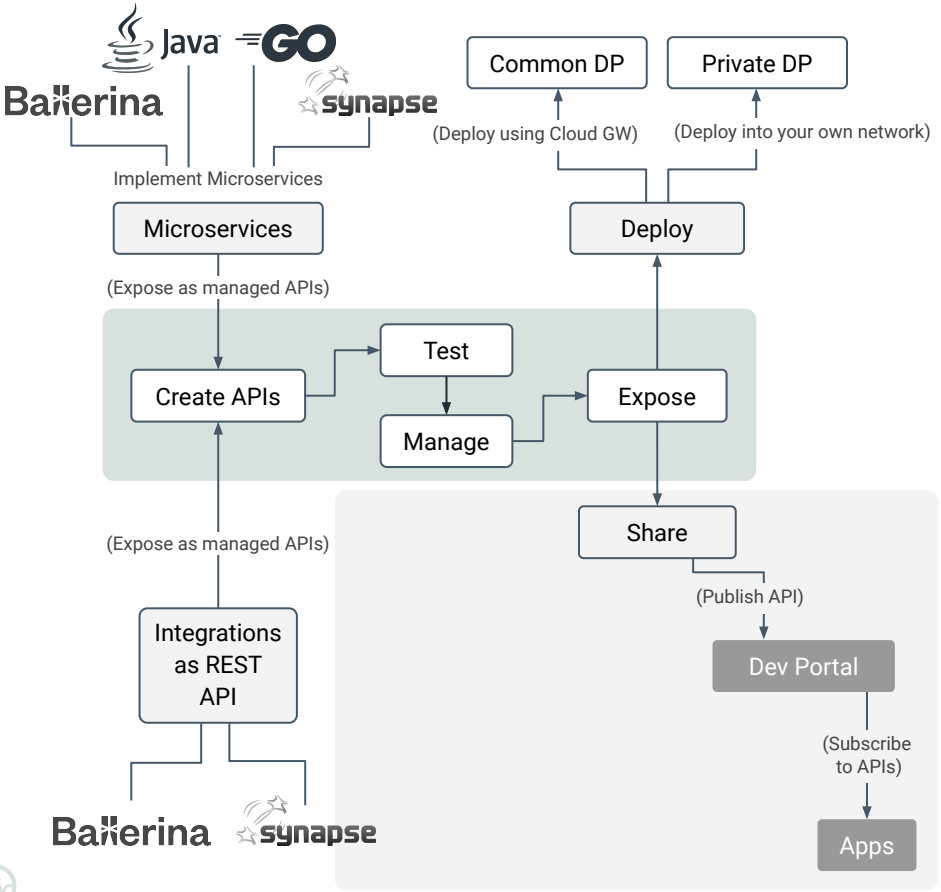


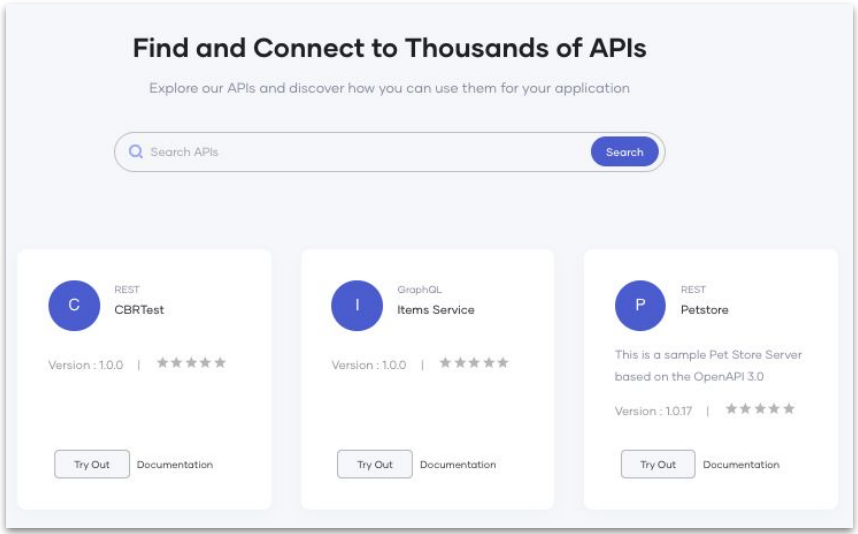
Hybrid Deployment Options





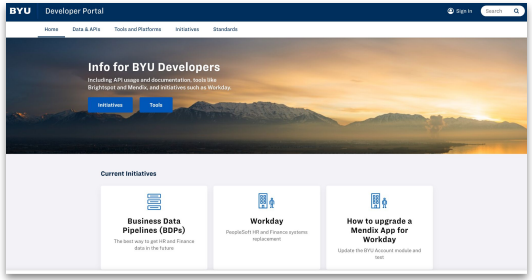
Share APIs across teams

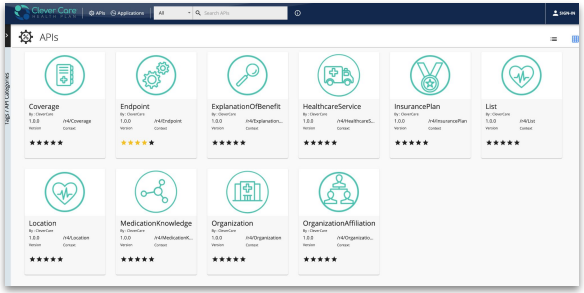


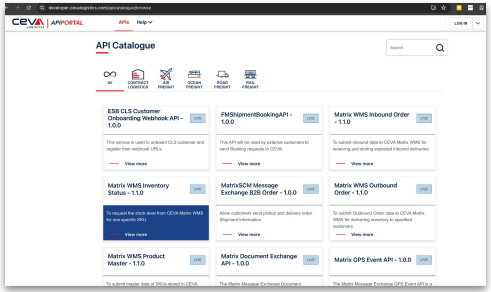


Dev portals enable developer engagement and reuse

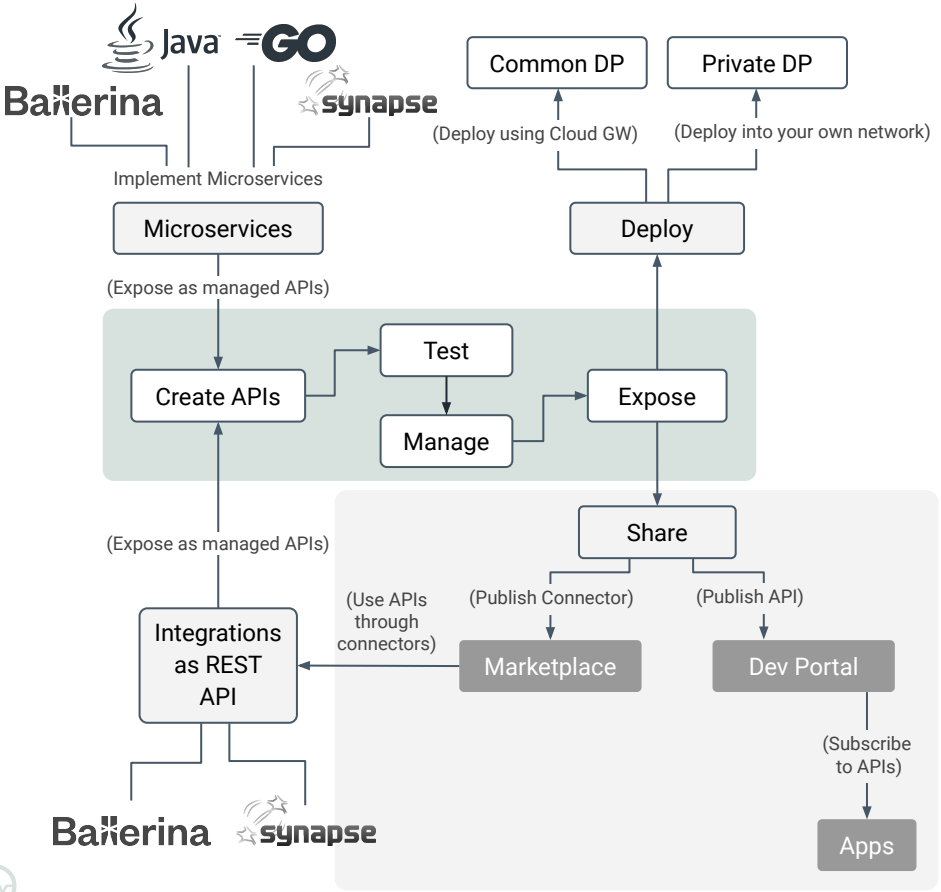
Discover	Subscribe	Consume	Feedback
Search	Registration	SLAs	Forums
Code samples	API keys	Notifications	Support
Documentation	Workflows	Metrics	SLAs
Onboarding		Sandbox vs Production	Developer outreach



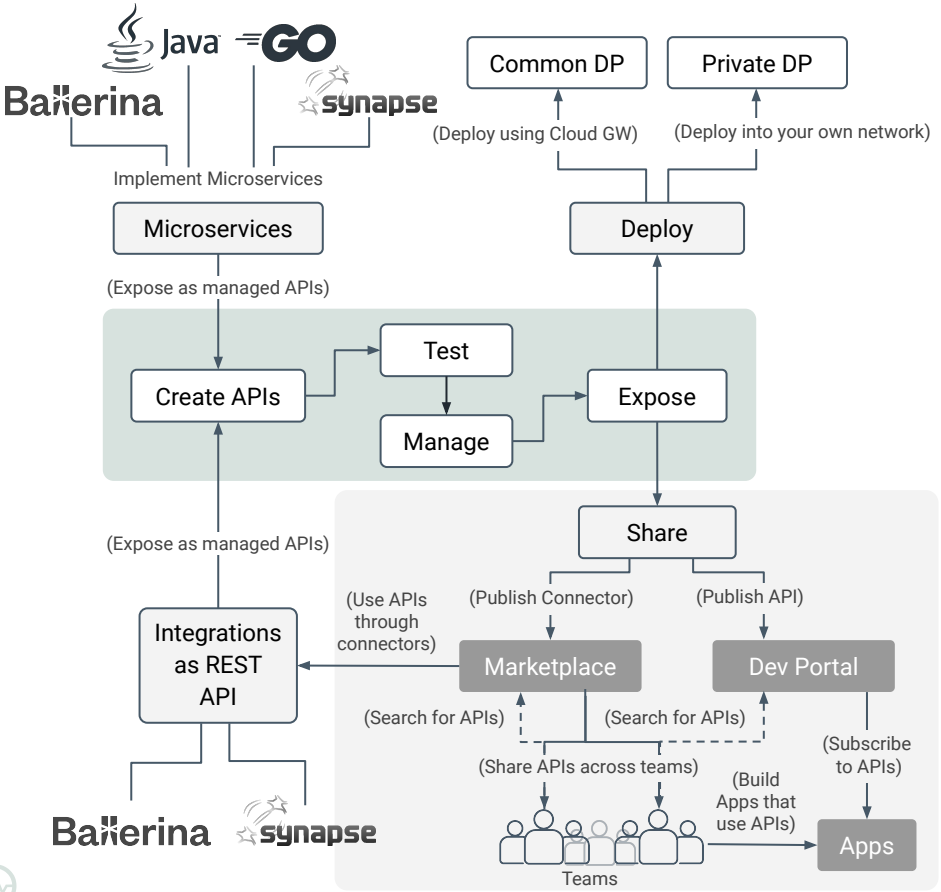


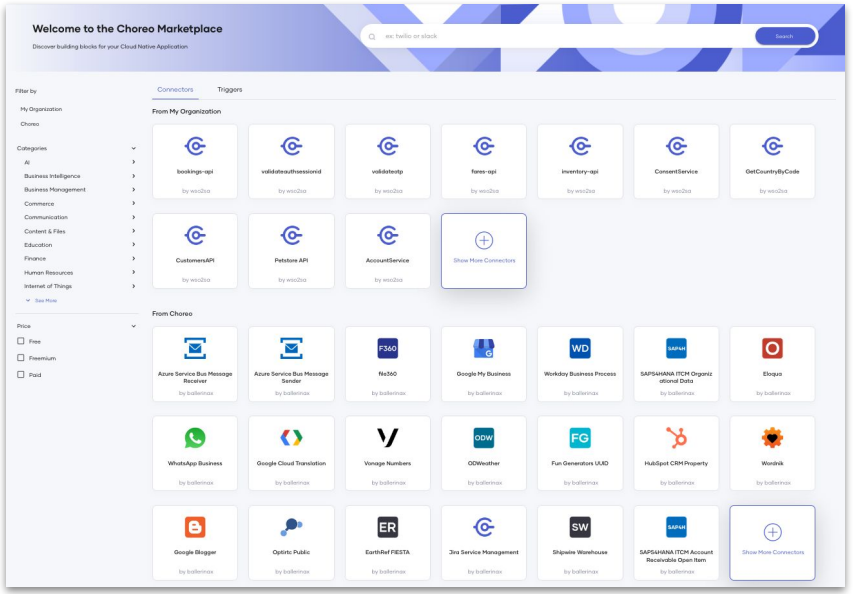


Share APIs across teams

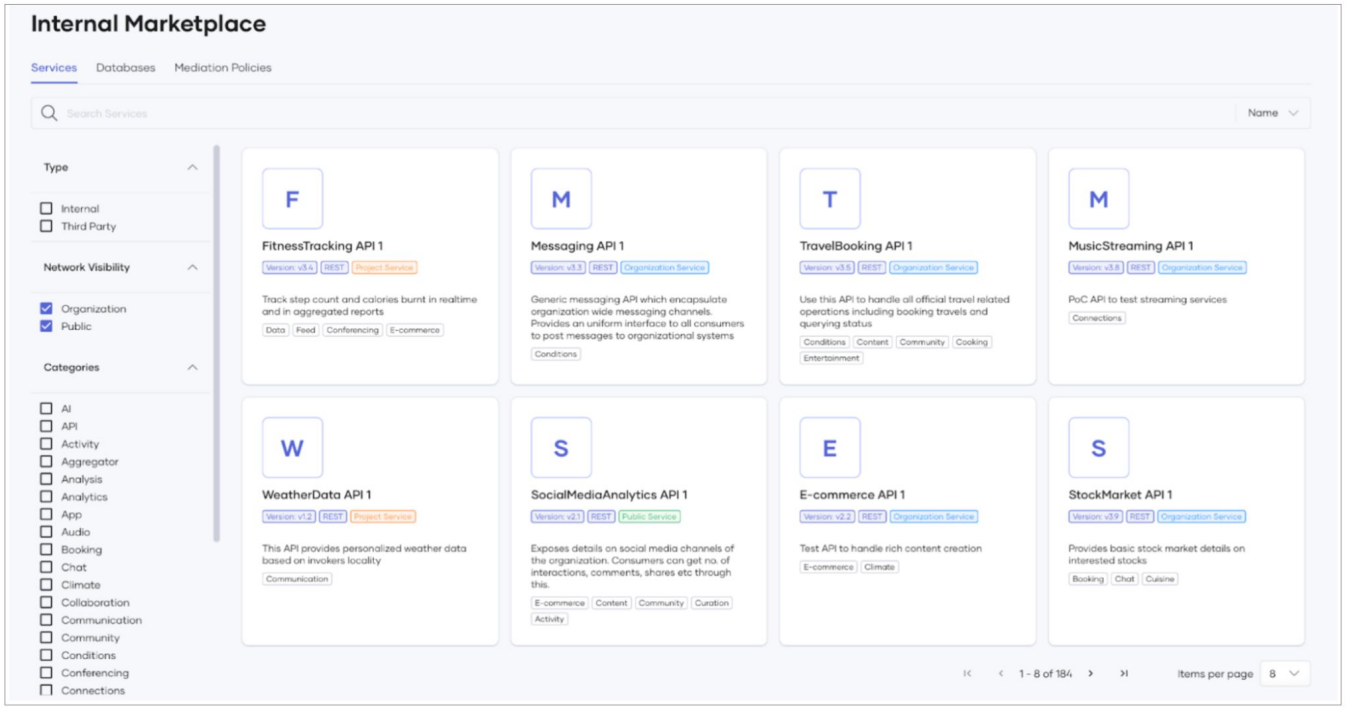


API Discovery



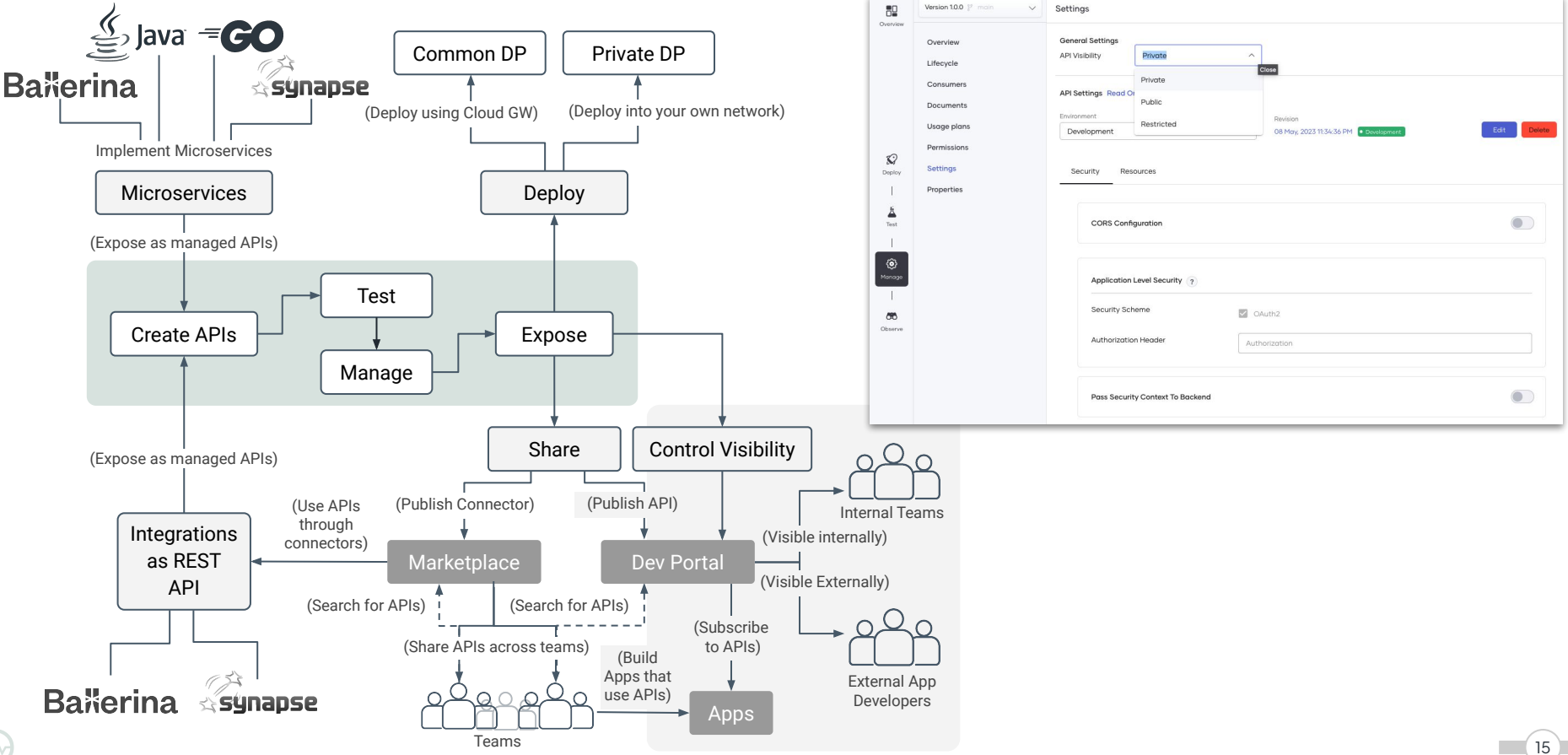


Internal Enterprise Marketplace

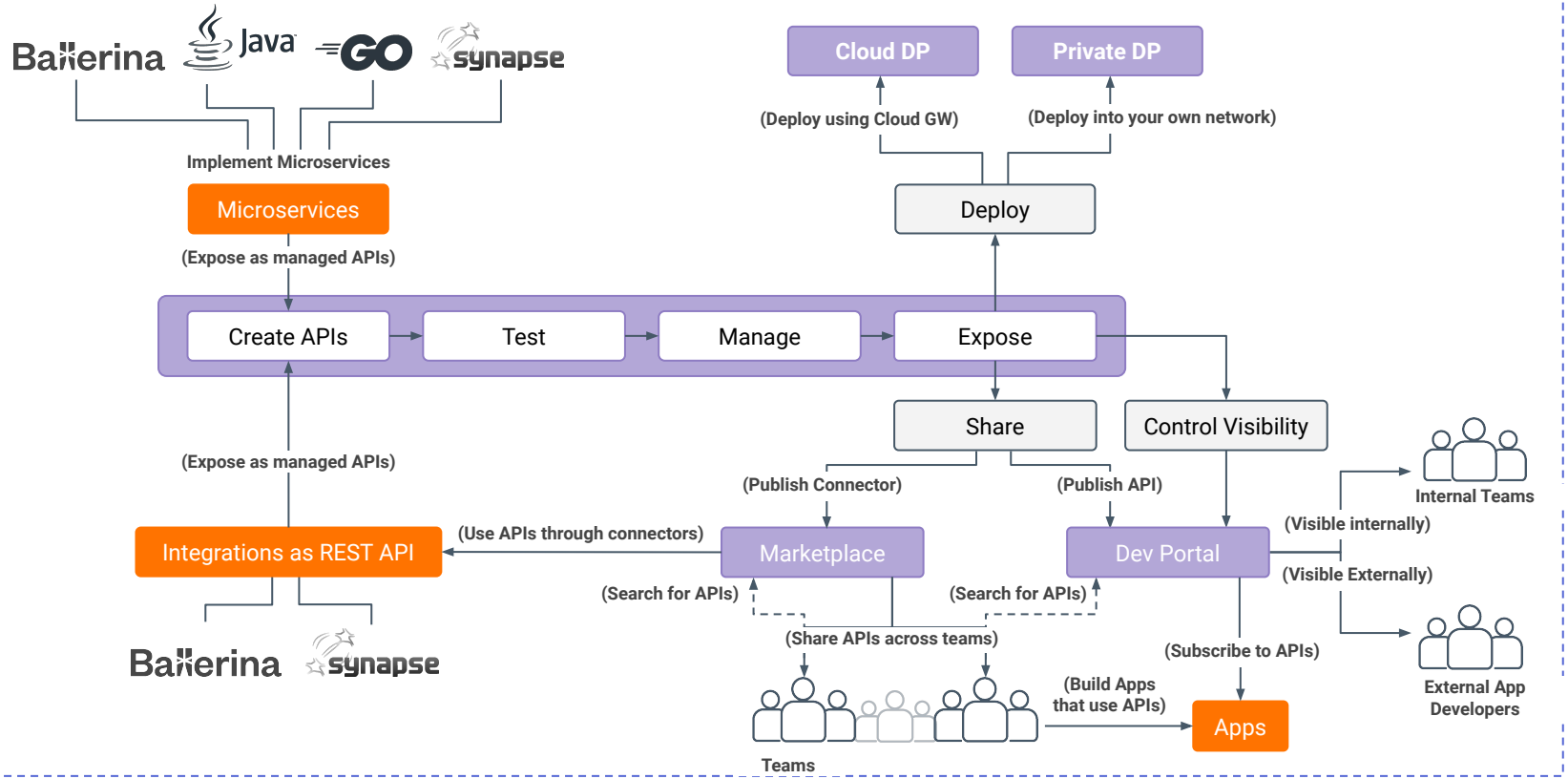


- A marketplace for not just APIs
- Filter based on Domain
- Teams need access to 3rd party APIs

API Visibility - Internal vs External



API first SDLC

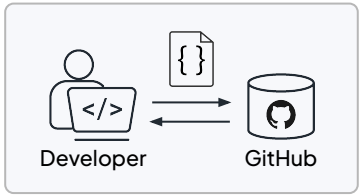


“The API lifecycle is the software development lifecycle”

Christian Posta, “Full lifecycle API management is dead: build APIs following your software development lifecycle using an Internal developer plaform”, DZone, 2023

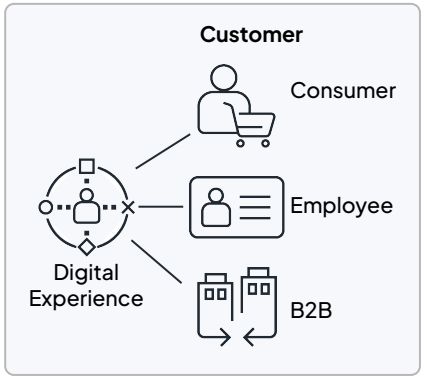


Enterprise software engineering in the cloud native era



You write code. You want to get it to the hands of the customer ASAP.

- Runtime architecture, CICD, DevOps, Environments, SecOps, Configuration Management, Version management, Testing, Observability, Analytics, SRE,
- Code writing also needs access to reuse
- DevOps goes to Canary etc.
- Self Service and policy-driven
- Zero Trust environment



Only the digital natives have software manufacturing down to a science; all others are struggling.

Platformless =

API-first

network services are the fundamental building blocks of all modern software



+

Cloud Native Middleware

runtime infrastructure for building and running secure, scalable cloud native distributed systems



+

Platform Engineering

internal developer platforms with DevOps and SRE capabilities to unleash developers



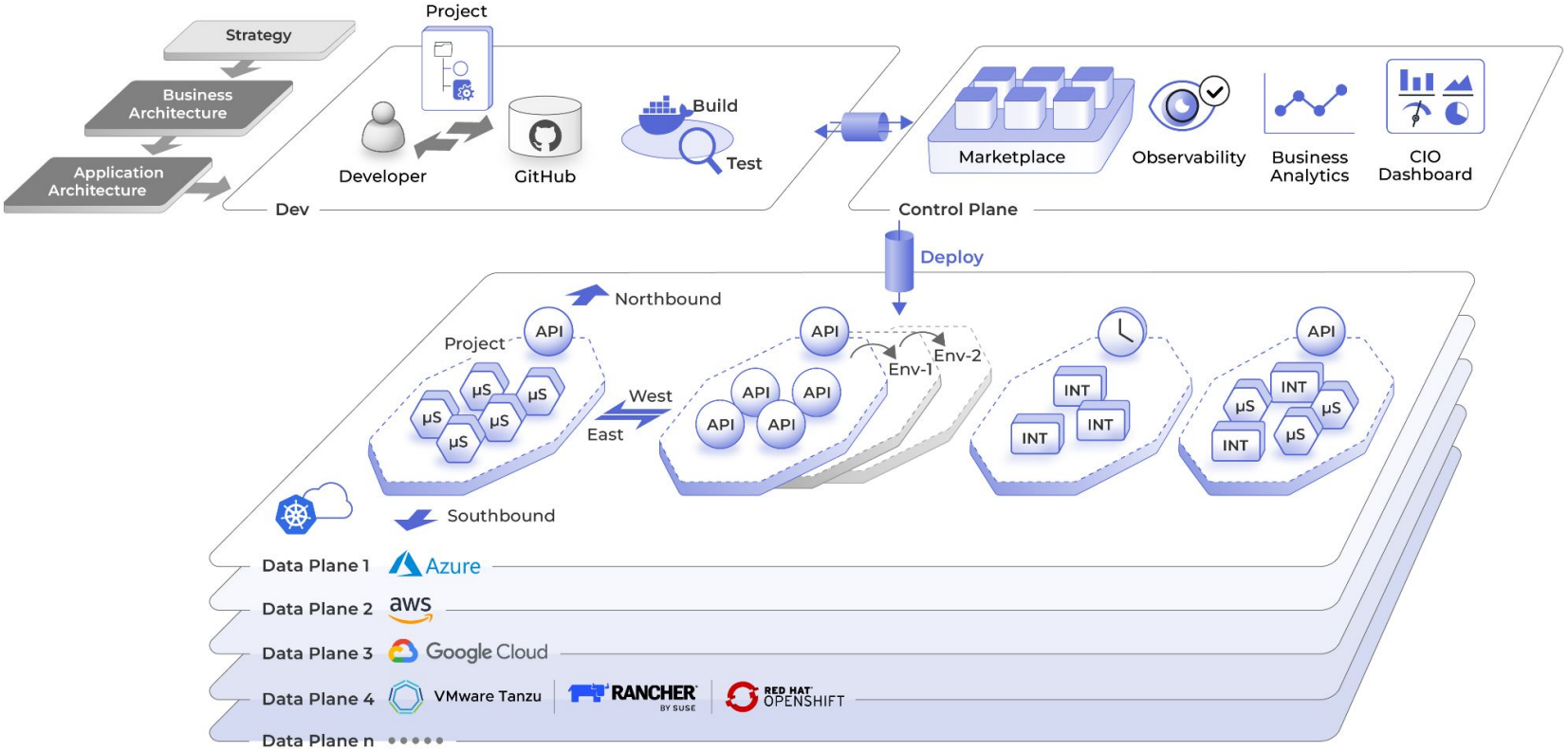
+

Developer Experience

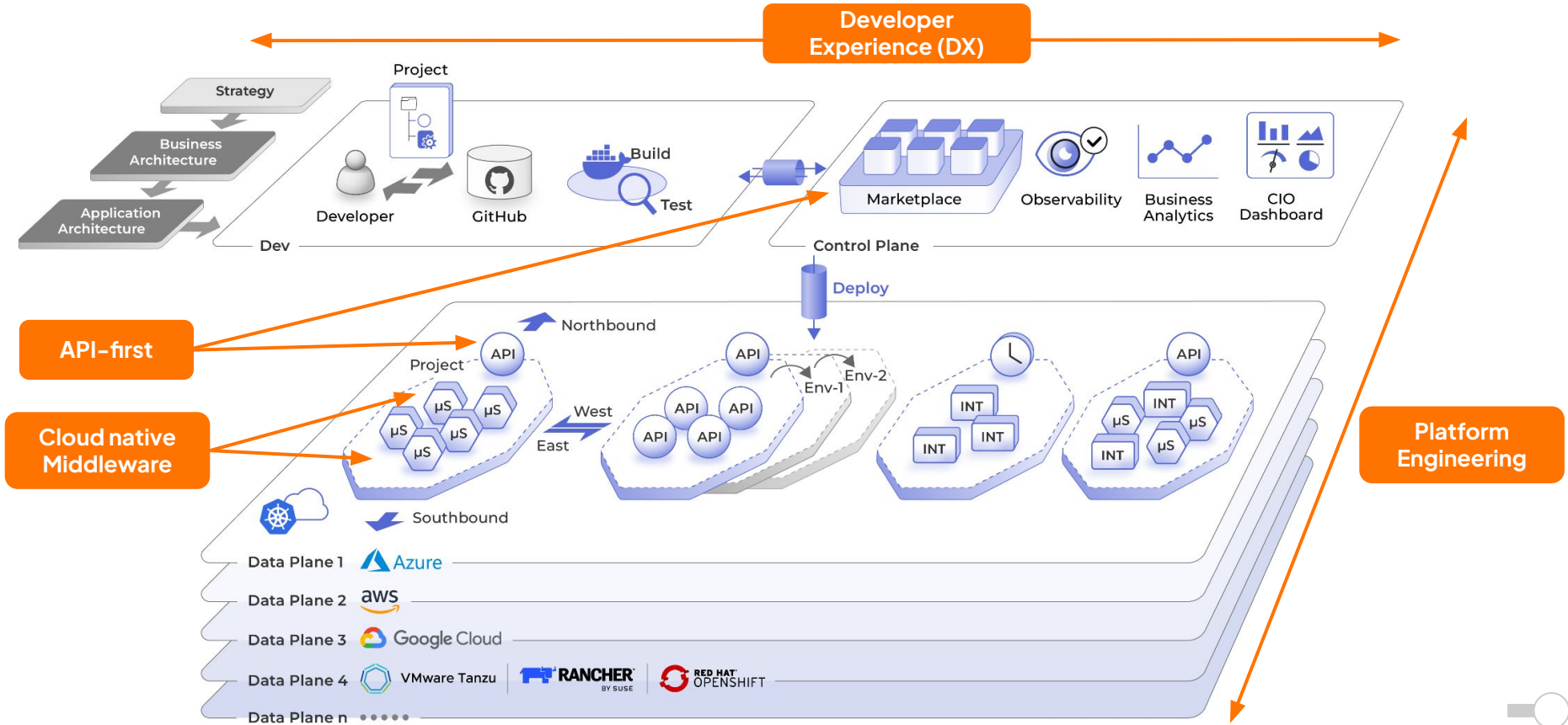
passionate developers move focus from platforms to applications



Platformless with Choreo

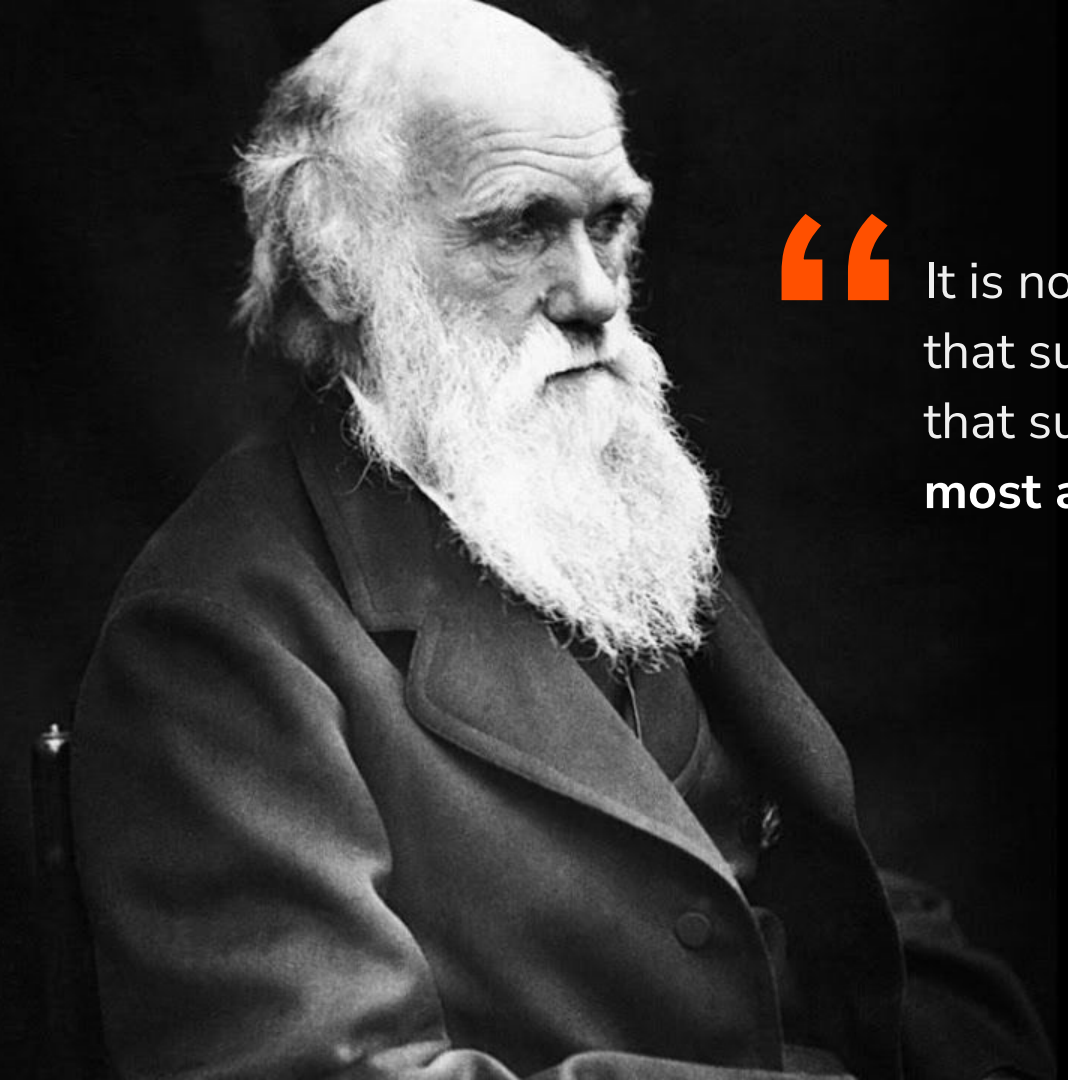


Choreo -> Platformless



Takeaways

- Treat APIs as products and practice API product management.Reuse is the ultimate goal most organizations strive for
- Focus on internal, enterprise marketplaces
- Organizations have to consume 3rd party APIs
- APIs are not all just REST
- API gateways are a commodity
- Enterprise software engineering is a continuum and the lines are blurred between different parts



“It is not the strongest of the species that survives, nor the most intelligent that survives. **It is the one that is the most adaptable to change.**”

Charles Darwin

Thank You!