THE CLOUD **CONNECTIVITY** COMPANY

Cloud Native Meetup

Kong's Service Connectivity Platform

18th of October, 2022
Linz, Austria

Who am I? Why should you listen to me?

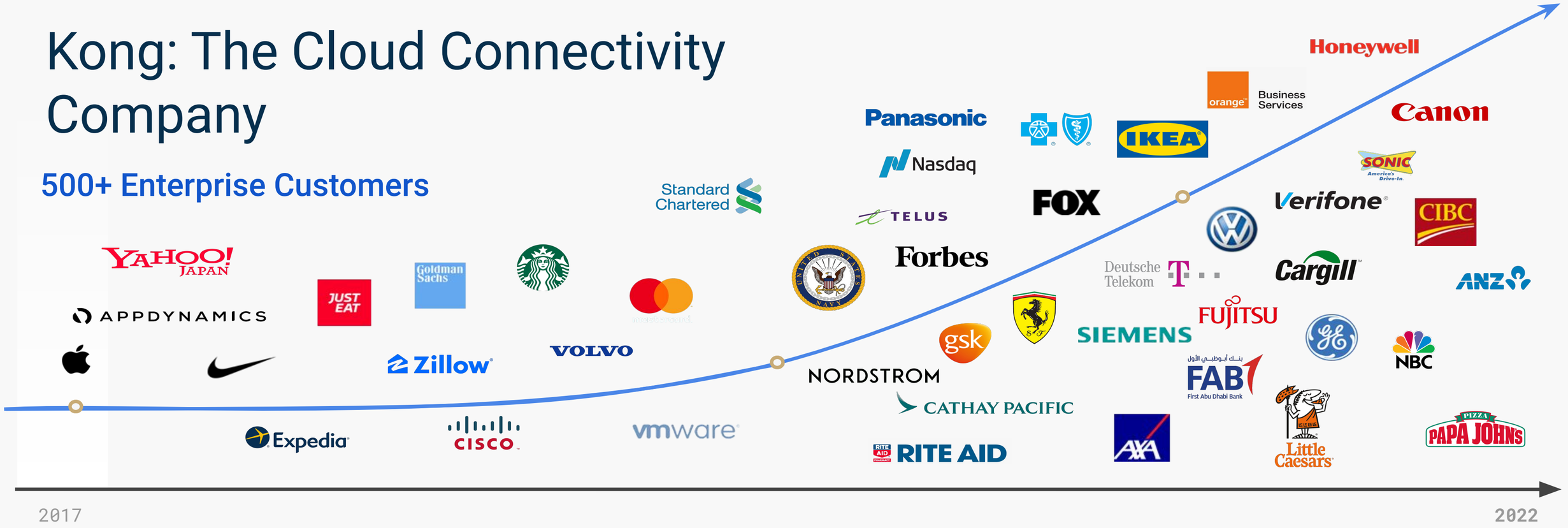
Marco Marquez
Solutions Engineering Manager
8+ yrs working with APIs
& building API programs

Kong

What is Kong?

Kong: The Cloud Connectivity Company

500+ Enterprise Customers



The Most Adopted API Gateway in the World

Over Trillions of Transactions Per Day

300M	1.5M+	28k
Downloads	Active monthly instances	Stars on Github

ANDREESSEN HOROWITZ

TIGERGLOBAL

crv

Index Ventures

Unicorn Valuation $1.4 B

Other Accolades:

Gartner Magic Quadrant

Recognized as a Leader & Most Visionary!

aws partner network

Premier Partner Status & Advanced ISV

Kong THE CLOUD CONNECTIVITY COMPANY

CUSTOMERS

All Sizes and Industries Trust Us

2100
Self-Service

500
SMB & Enterprises

170
>$100K ARR

100+
Global 2000

CONGLOMERATES

Cargill · SAMSUNG · SIEMENS · Honeywell · Panasonic

SOFTWARE & TECHNOLOGY

cisco · miro · carta · S&P · ELSEVIER · vmware

TELECOMM & ENTERTAINMENT

orange · COMCAST · vodafone · GLOBO · airtel · TELUS

FINANCIAL SERVICES

Goldman Sachs · JPMorgan Chase & Co. · HSBC · Vanguard · TransUnion · AXA

HEALTHCARE

NOVARTIS · gsk · moderna · Cigna · ThermoFisher SCIENTIFIC · UnitedHealth Group

RETAIL

7-ELEVEN · NORDSTROM · IKEA · ENTERPRISE HOLDINGS · wayfair · LEGO

Basics

The Future of Software is **Distributed**

APIs & Microservices Are **Increasing Exponentially**

65%

Increasing investment in APIs and Microservices[1]

87%

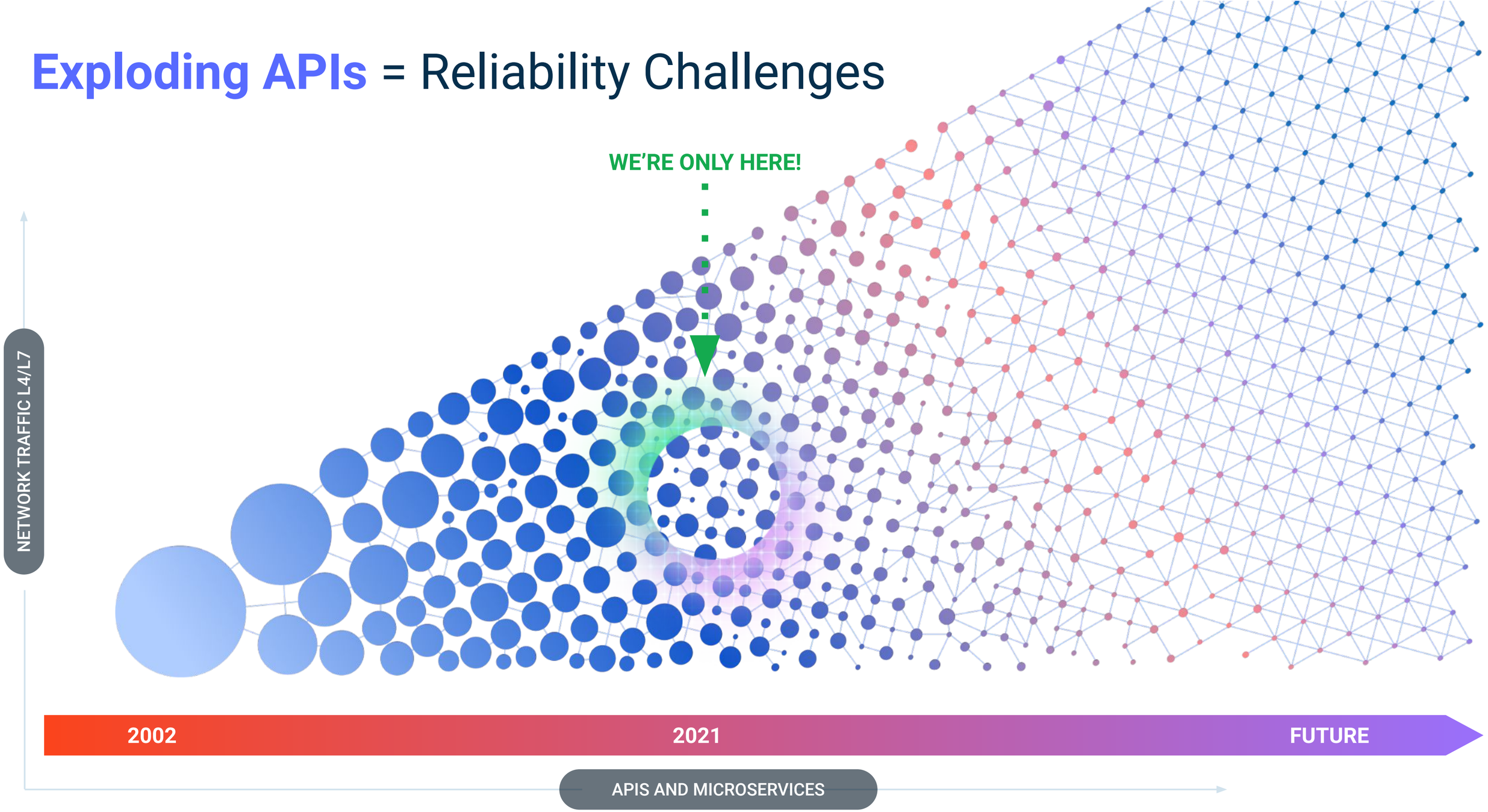
Will fall behind if they fail to adopt APIs and Microservices[2]

100%+

YoY growth of APIs and Microservices worldwide[3]

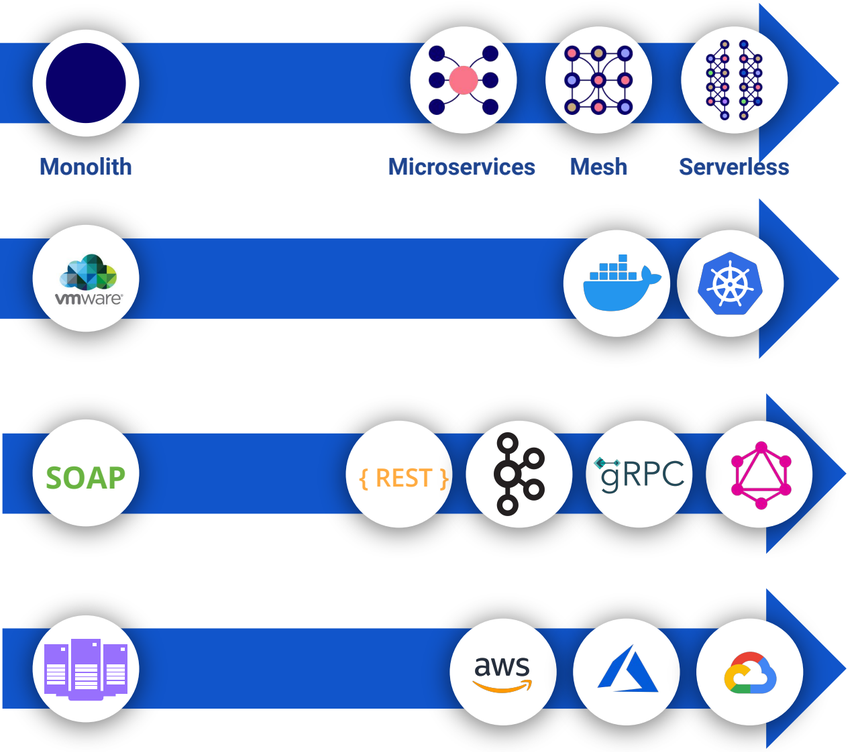
1 Mckinsey CIO Survey
2 Vanson Bourne
3 Gartner Research

Exploding APIs = Reliability Challenges



Go Cloud Native

Modernize & Migrate



Become Agile

DevOps, GitOps, CI/CD, IaC

gitops

Dev Ops

GitLab

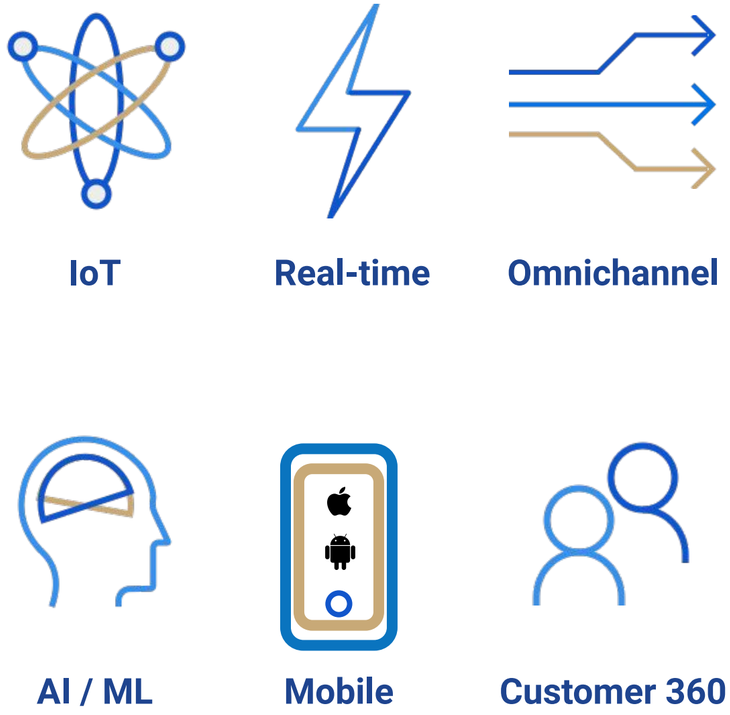
Jenkins

Terraform

ANSIBLE

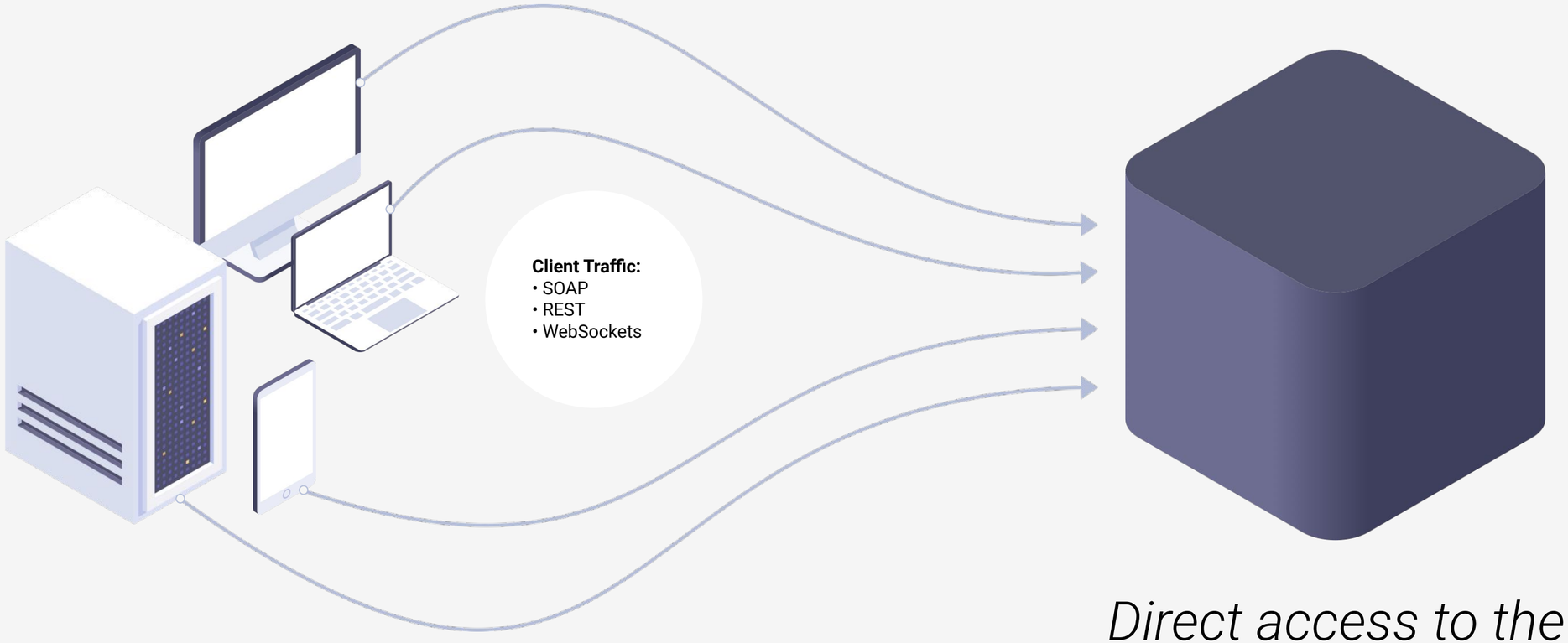
Unlock New Use Cases

Real-time, IoT, and beyond



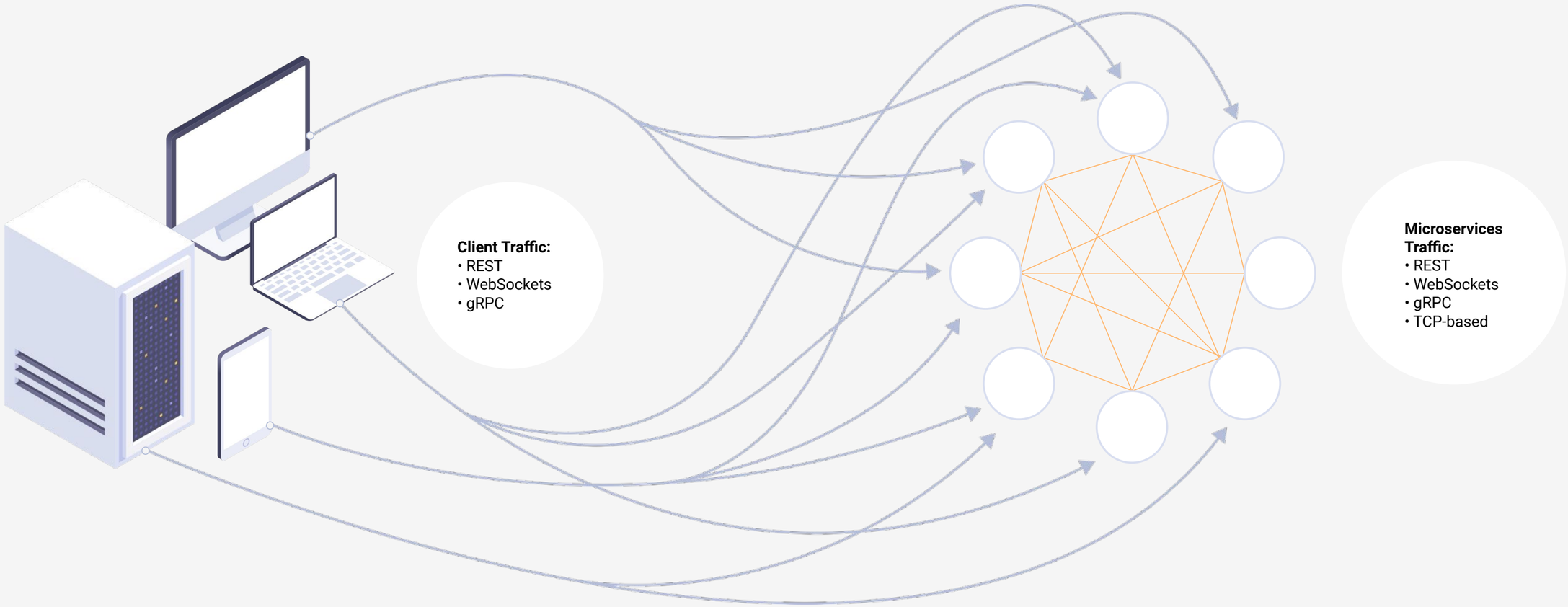
Architecture

Who works for a company that has an architecture similar to this?



Direct access to the ***monolith***

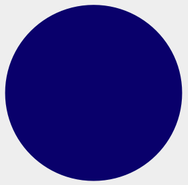
Who works for a company that has an architecture similar to this?



Direct access to **microservices**

So what's the problem?

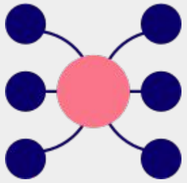
From monolith to microservices



MONOLITH

Endpoints: 1

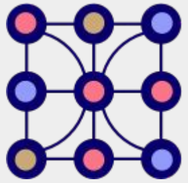
Connections: 0



SOA

Endpoints: 10+

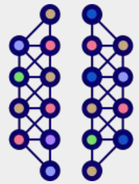
Connections: 50+



MICROSERVICES

Endpoints: 100+

Connections: 5,000+



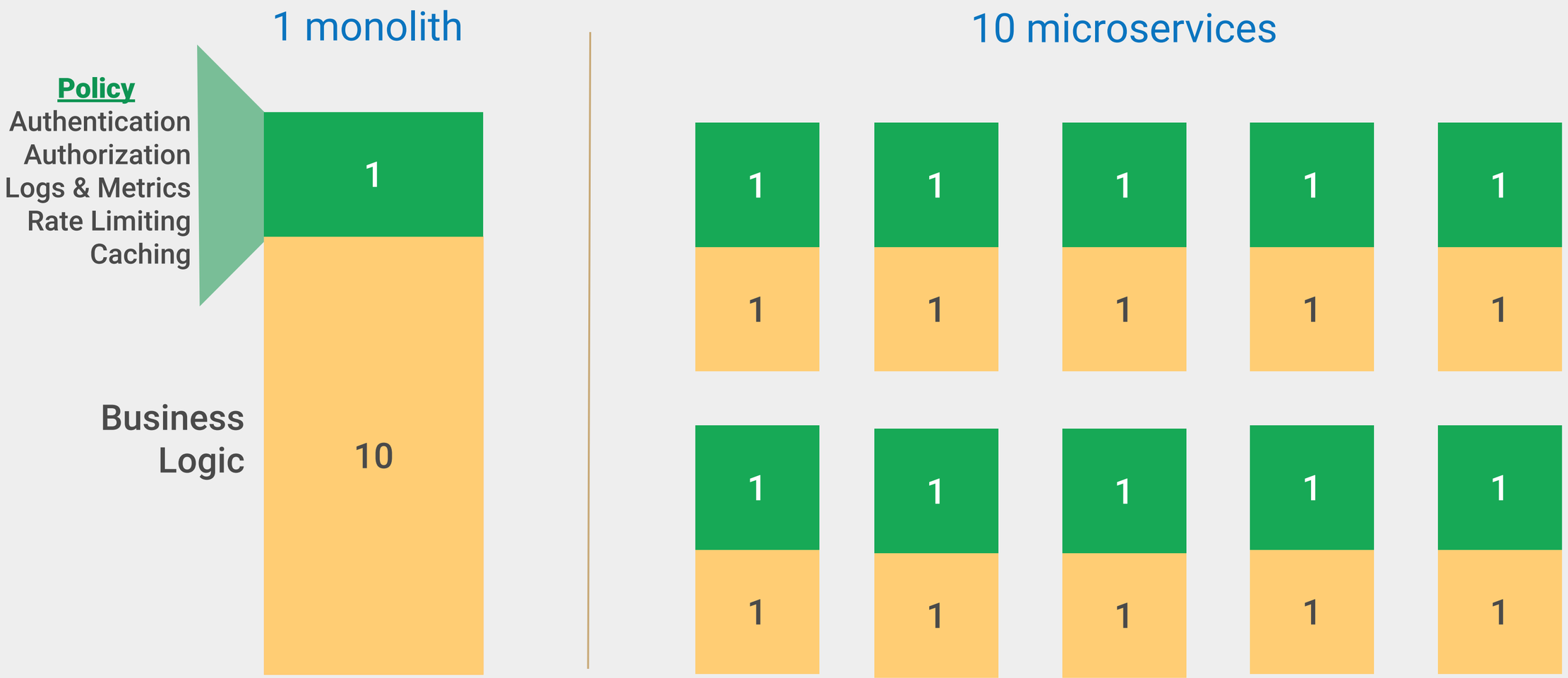
SERVICE MESH

Endpoints: 1000+

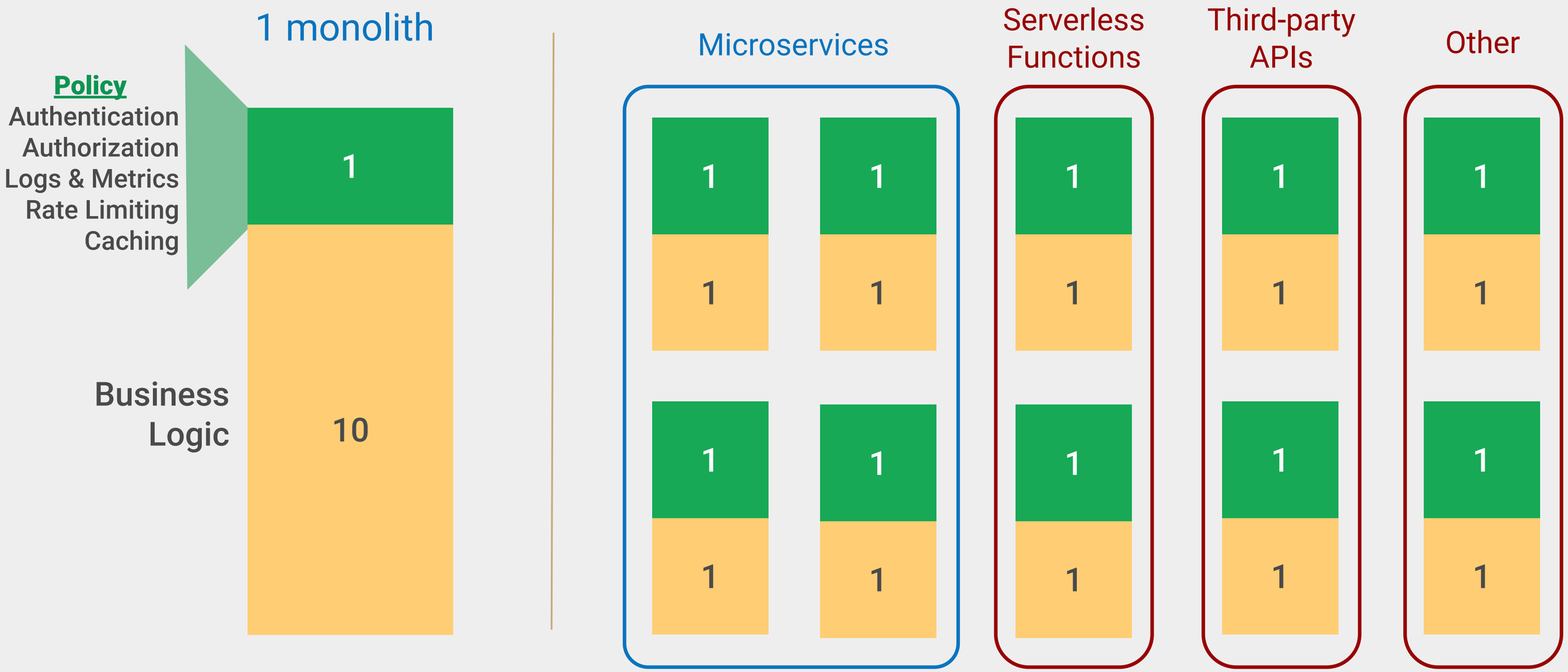
Connections: 500,000+

Reliability	From **reliable** function calls to **unreliable** network calls.
Security	From **secure** processes to **unsecure** networks.
Performance	From **fast** CPU to **slow** network.
Discoverability	From **few** APIs to **many** APIs.
Complexity	From **homogeneous** technology to **heterogeneous** technology.
Visibility	From **few** deployment units to **many** deployment units.

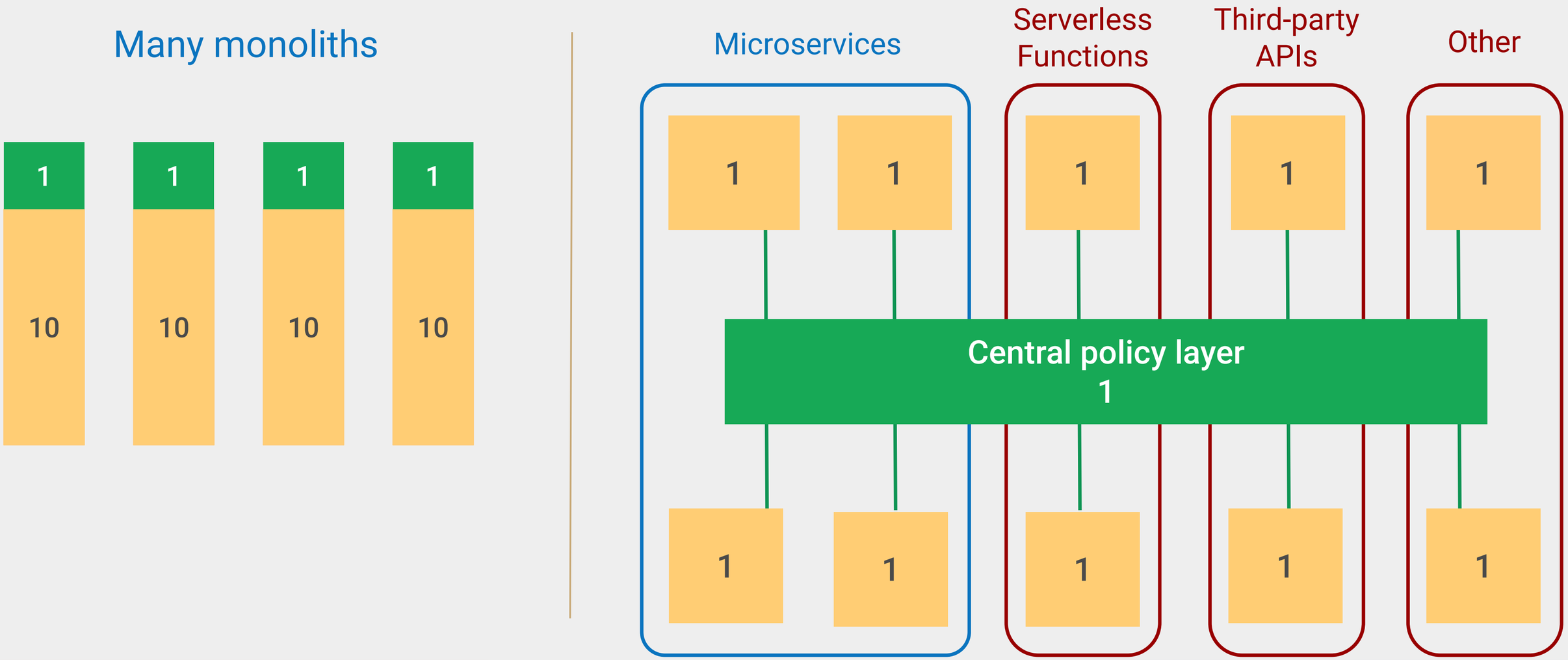
Deconstructing a monolith



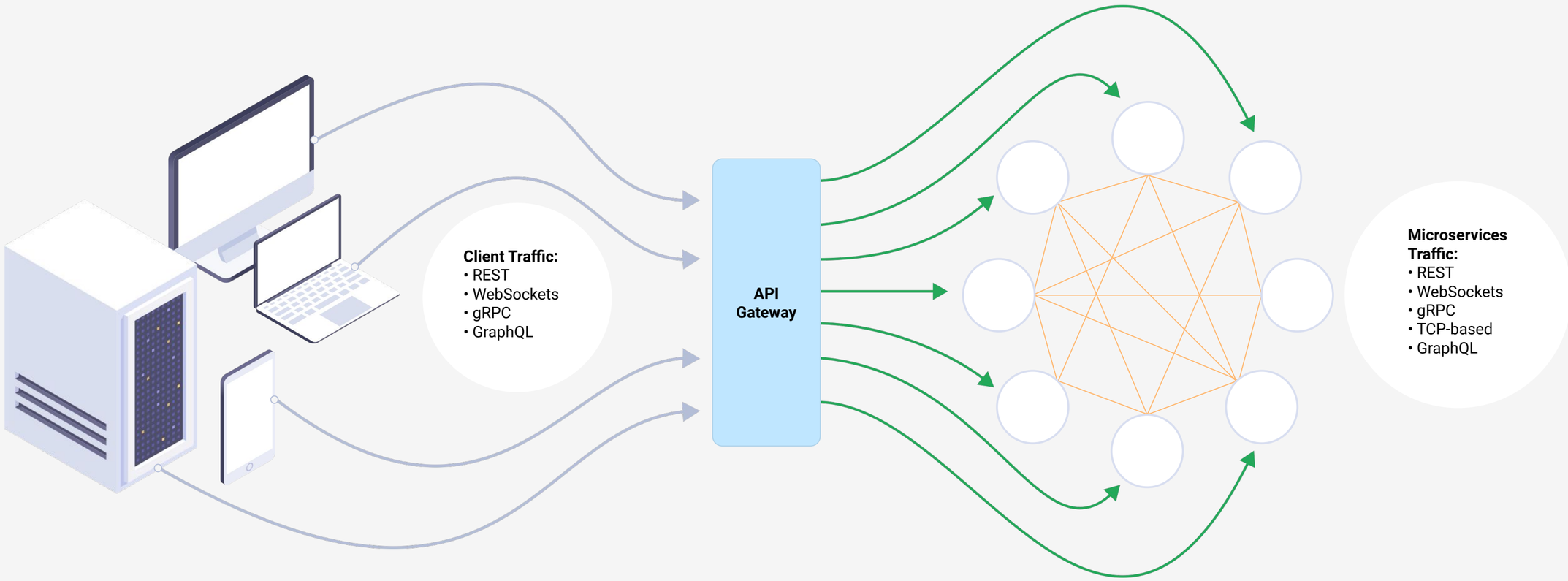
Deconstructing a monolith



Central policy layer

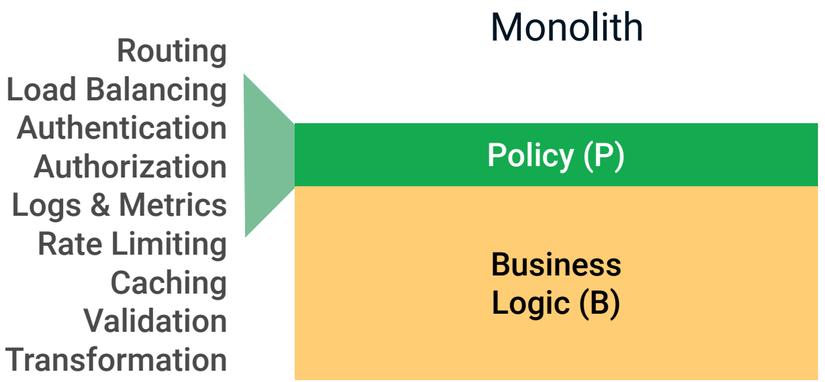


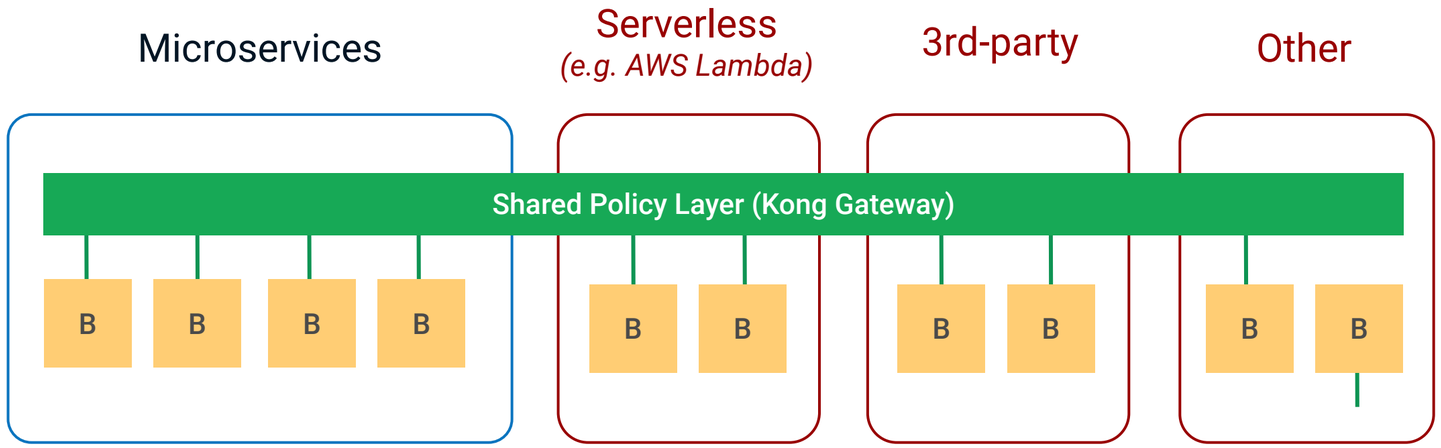
API Gateway for unified ingress and control



A Shared Policy Layer is a Necessity

More applications and services





More languages and protocols

Java
node JS
python
GO
{ REST }
GraphQL
gRPC

More deployment types

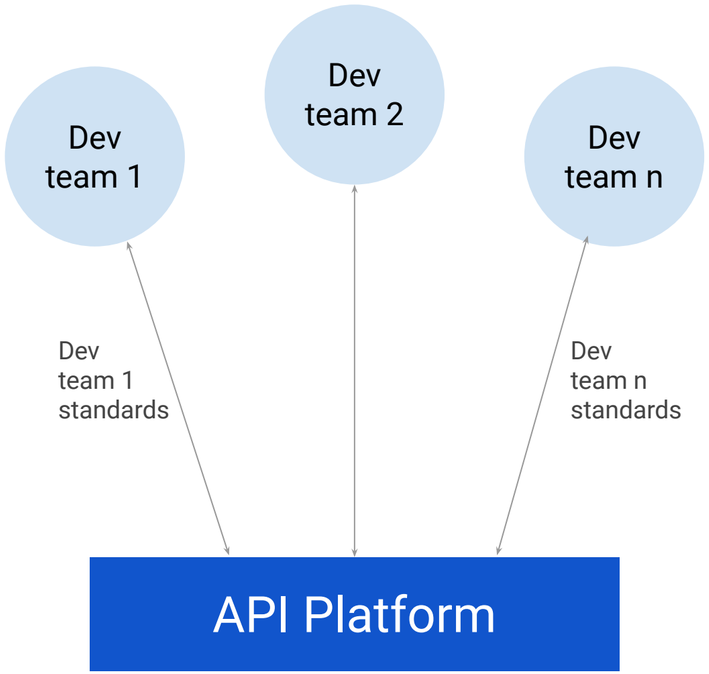
ON-PREMISE HOSTING

aws

MULTI-CLOUD & KUBERNETES

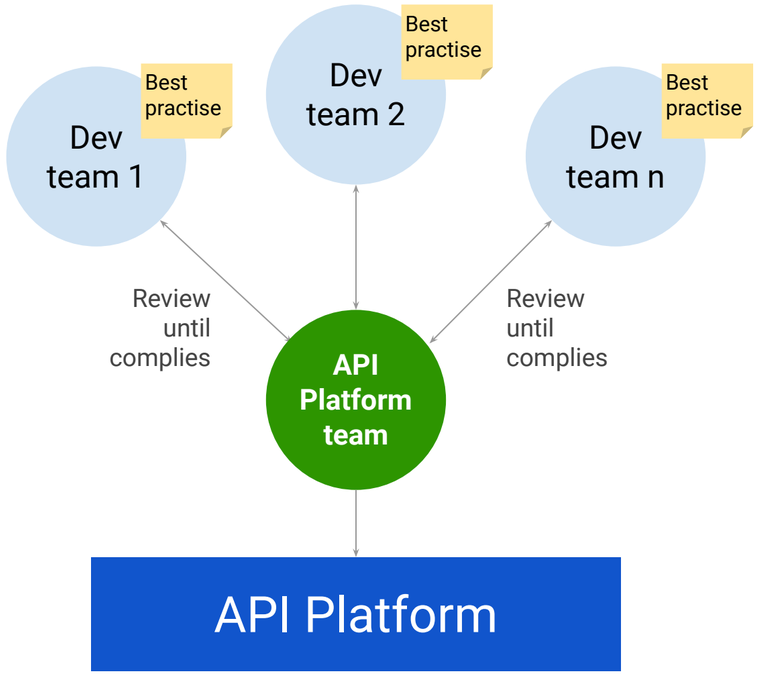
So what's the problem **NOW**?

Decentralised



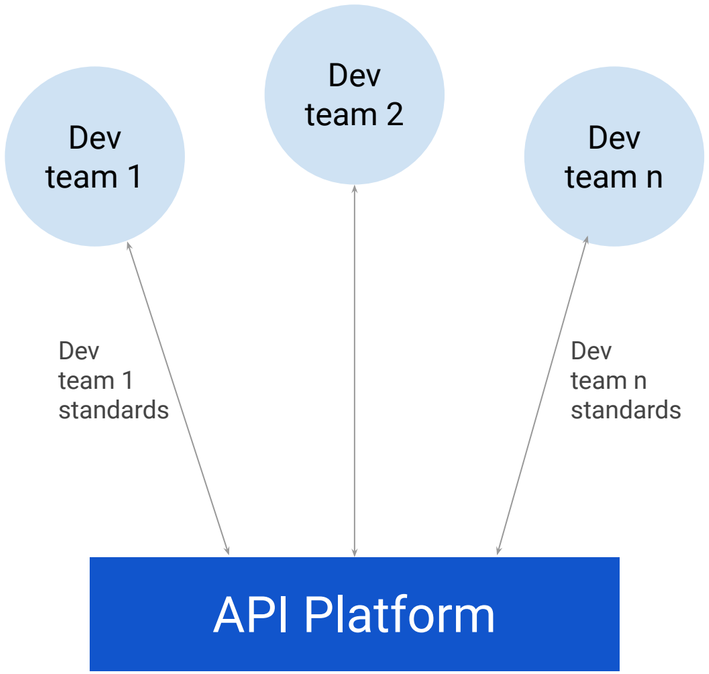
- ✔ SPEED
- ✖ BEST PRACTICES
- ✖ CONSISTENCY
- ✖ RELIABILITY

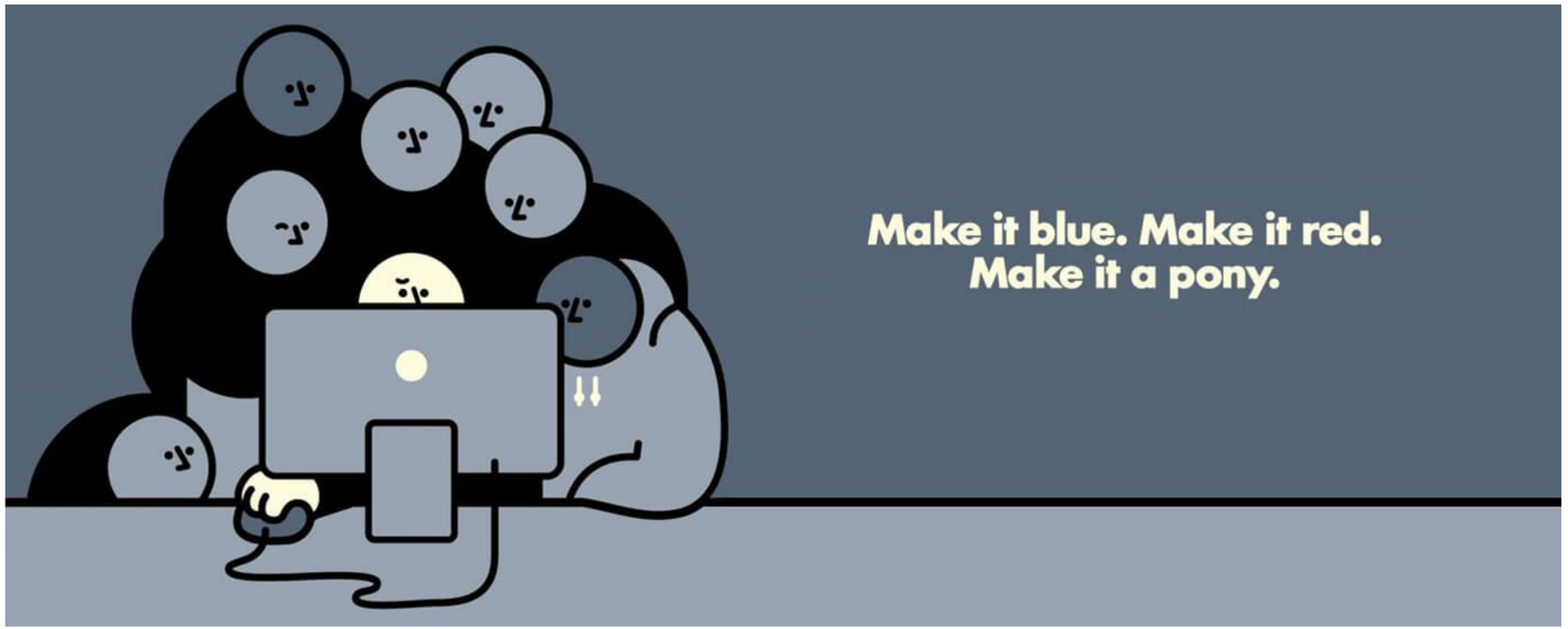
Centralised



- ✖ SPEED
- ✔ BEST PRACTICES
- ✖ CONSISTENCY
- ✖ RELIABILITY

Decentralised

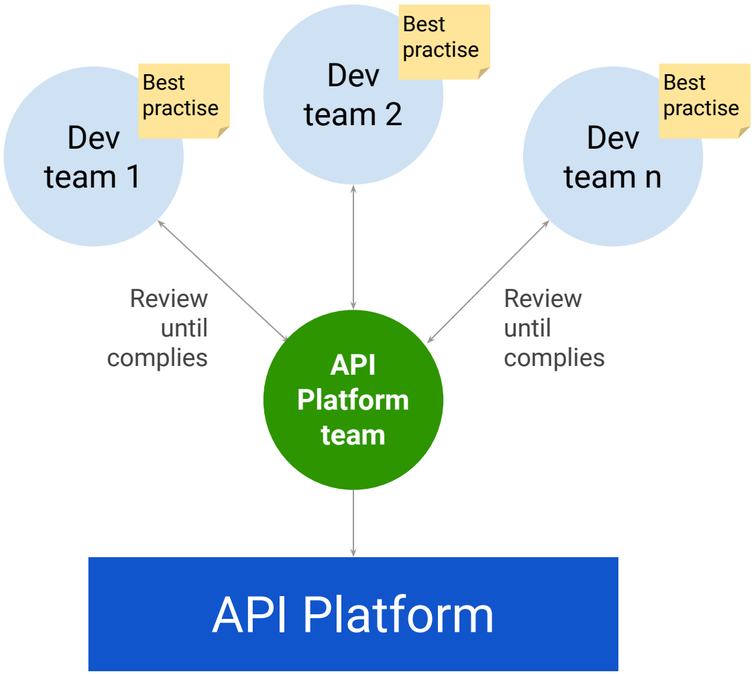




Too many ~~cooks~~ developers in the kitchen

- ✔ SPEED
- ✖ BEST PRACTICES
- ✖ CONSISTENCY
- ✖ RELIABILITY

Centralised



- ✖ SPEED
- ✔ BEST PRACTICES
- ✖ CONSISTENCY
- ✖ RELIABILITY

What are the Barriers to an efficient API Delivery?

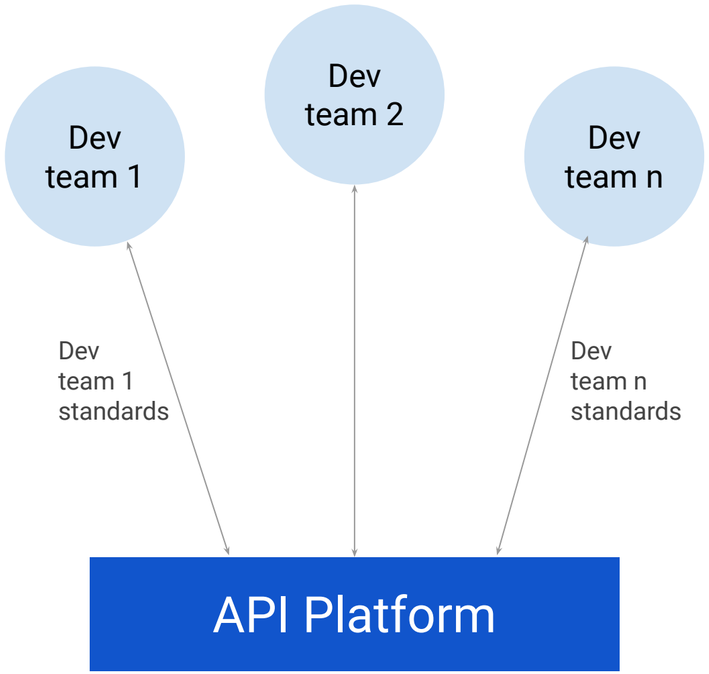
“Some organizations – typically those at the very beginning of an API program – give developers free reign to deploy, manage and publish their APIs without quality gates. This allows them to move at speed; however, with distributed development teams following different processes, the end result is an API platform full of inconsistency.” Melissa Van Der Hecht

- **Consistency** of different development teams, processes, and output
- **Speed** in a complex environment with increasing demands
- **Best Practices** across a distributed ecosystem
- **Reliability** in delivering products to different environments

So what's the solution?

Decentralised

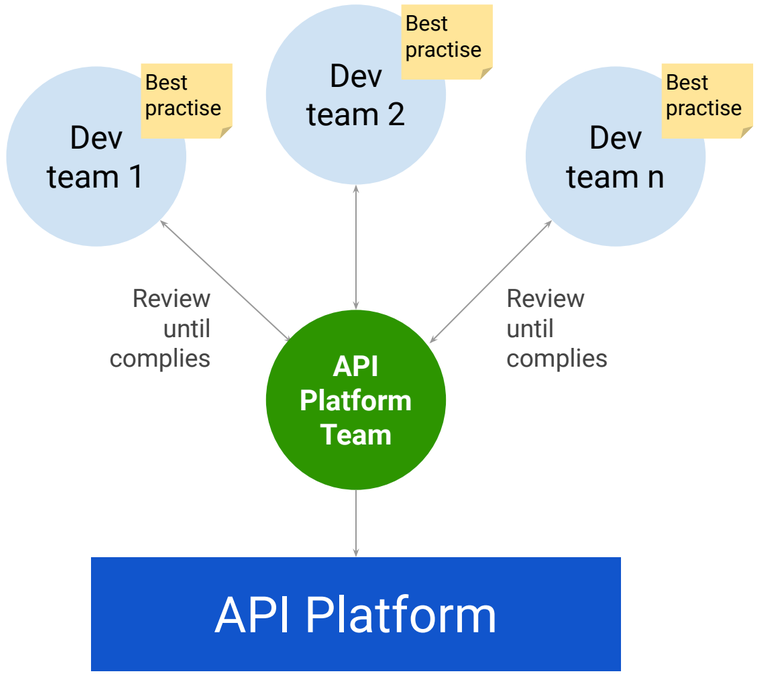
Speed oriented



- SPEED
- BEST PRACTICES
- CONSISTENCY
- RELIABILITY

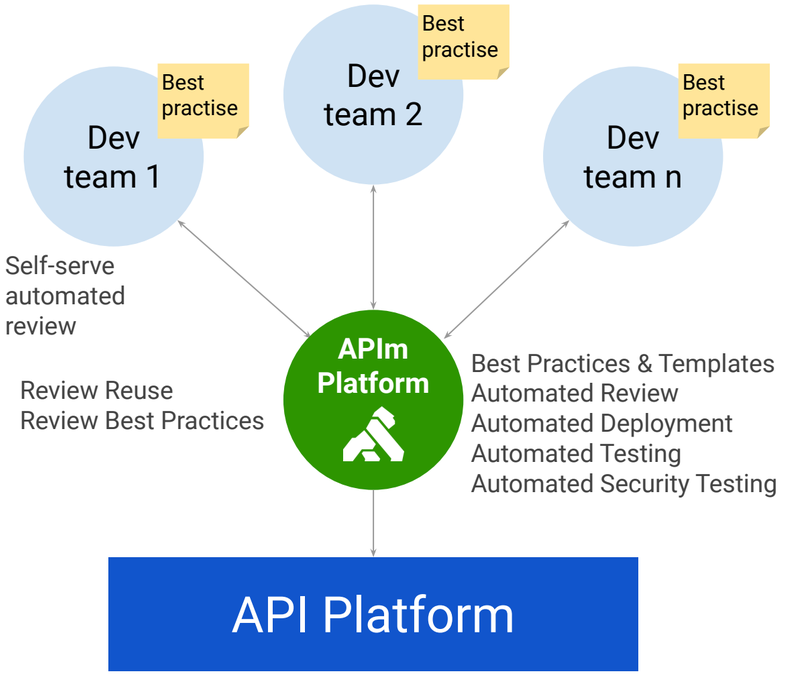
Centralised

Quality oriented



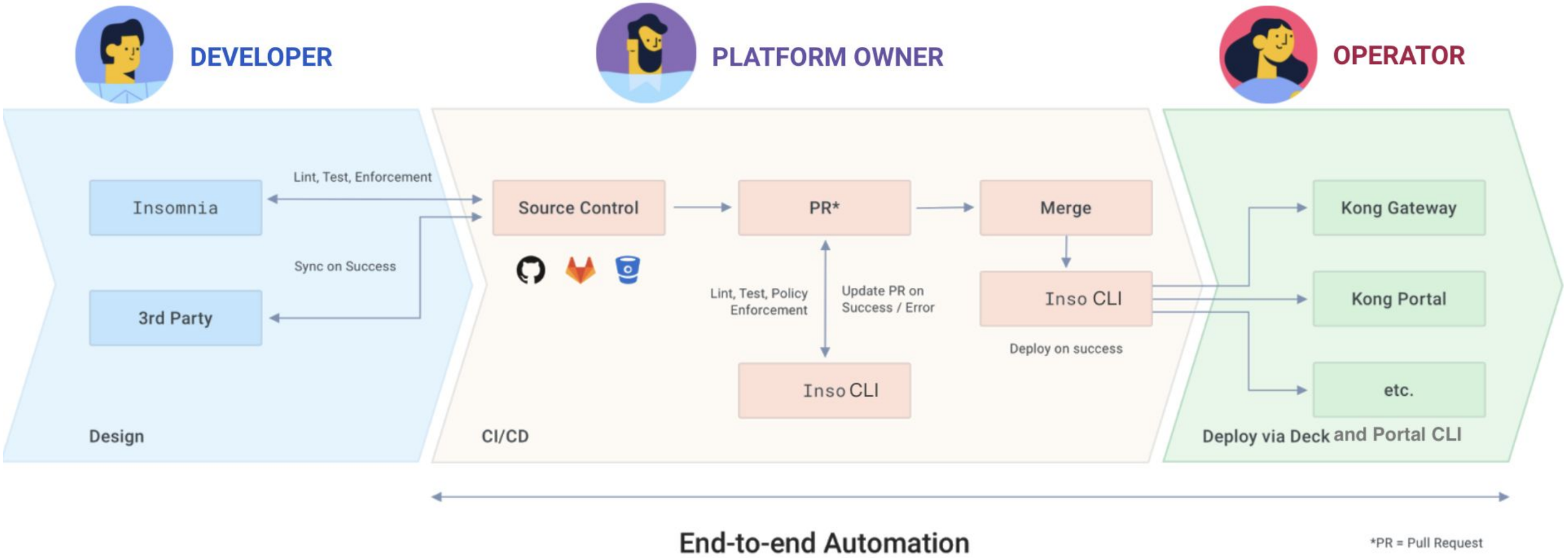
- SPEED
- BEST PRACTICES
- CONSISTENCY
- RELIABILITY

APIOps



- SPEED
- BEST PRACTICES
- CONSISTENCY
- RELIABILITY

APIOps workflow in Kong



Demo

Thank You!