Writing your Technical Strategy
(psst, it doesn't have to feel like a Squid Game)

Feb 15th, 2022
[Bruce Wang](#) // @batmany13
Director of Engineering, API Systems @ Netflix

a little about me

- Live in San Francisco, with my spouse (teacher), and daughters (9 and 7)
- 20+ years of 🖥️ industry experience (mostly B2B)
- 15 years as a software developer 💻 (Java, Python, Ruby, Elixir, Golang)
- 10 years as Engineering Leader / "humble gardener" 🪴
- 2x Founder (one exit, one failure)
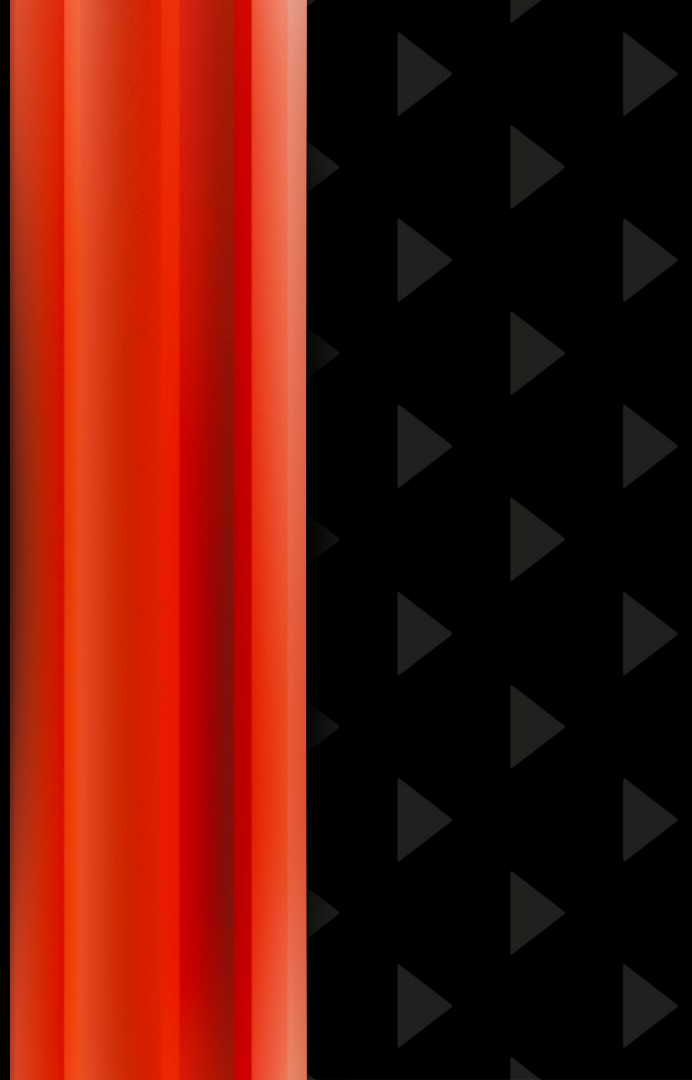- Joined Netflix in Jan 2020

YOUR NEXT TASK IS TO WRITE YOUR TECH STRATEGY

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Timeline of Netflix's API Platform

- 2007 - Netflix Announces Streaming
- 2008 - Data Center -> AWS/microservices
- 2008 - **Open API aka REST**
- 2009 - Netflix device teams start leveraging REST for discovery needs
- 2011 - "Open" API is 99% internal traffic
- 2012 - **API .Next**
- 2014 - Open API is closed (we legacied a few key partners)
- 2015 - **EdgePaas**
- 2017 - Sharding of API
- 2020 - Legacied Open API partners decommissioned
- 2021 - **GraphQL**
- NOW - REST is alive and serving "legacy" devices

Being the "hourglass"
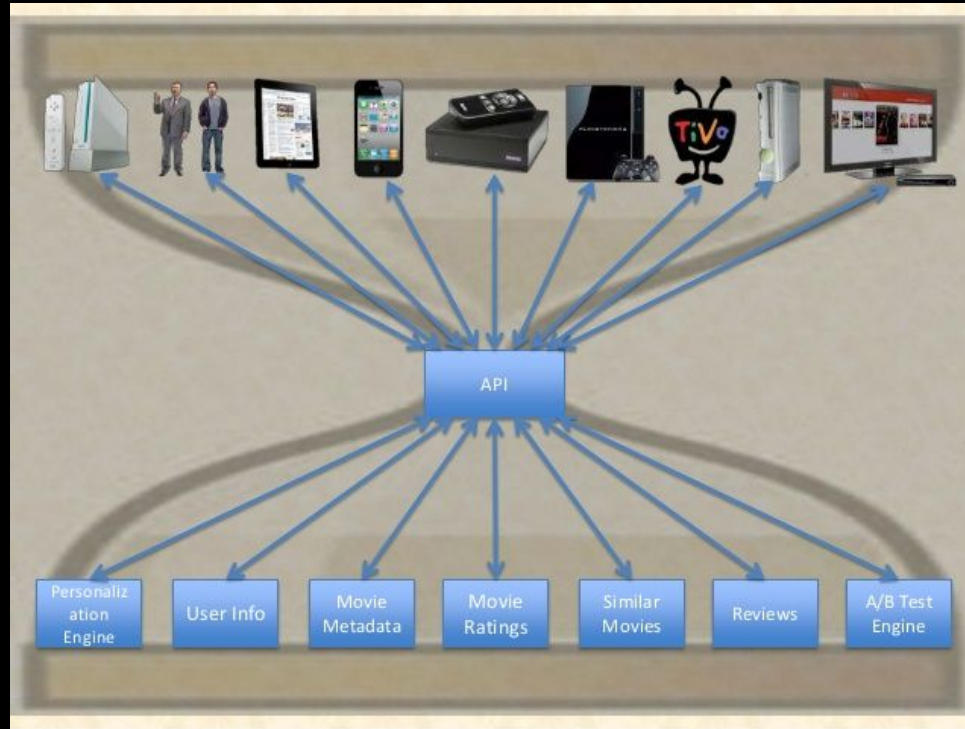
Insights from my journey
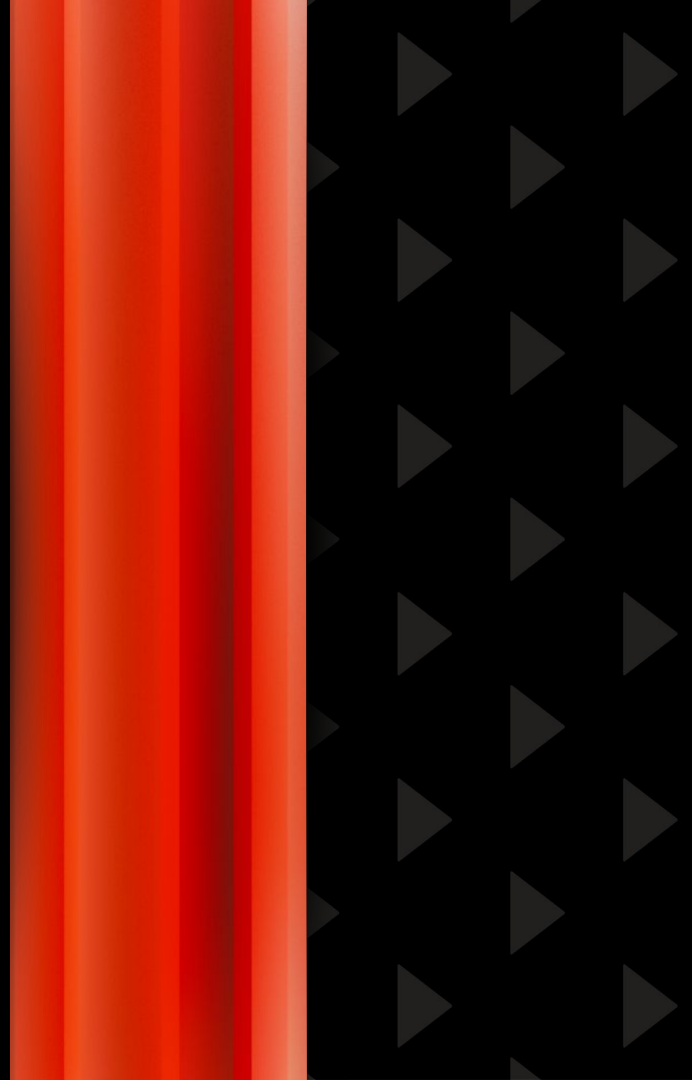
In 4 "easy" steps

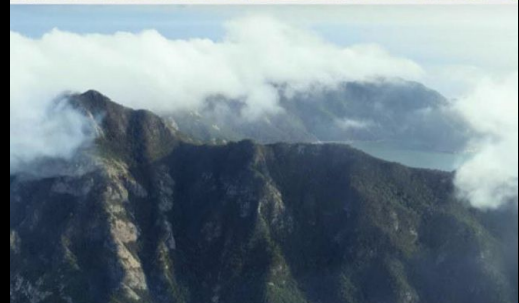**Prep**
Document
Collaborate
Evolve

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Prep
Have a holistic, deeper understanding of your domain

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Prep tips

- Talk to your team individually, multiple times
- Meet with partners (especially ones who'll give you honest feedback)
- Understand the history
- Seek external advice

Document
This requires its own strategy

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Document tips

- Write a title, draft quickly
- Use a template
  - TL;DRs are your friend
  - Have an author/status/date section
- Don't bury the "lede"
- Consider a rallying cry
- Keep it shortish (< 10 pages)

Product Multi-Edge, GraphQL Strategy @ Netflix

Author: Bruce Wang (he-him SF)

Status: *Draft → **Shared** → Adopted -> Obsolete*
Last Major Update: August 2021
http://go/pme

TL;DR: *Proposal to create a focused working group with dedicated, distributed resourcing across engineering to ensure the successful adoption of Federated GraphQL API based Edges and provide a strategy that will sustain Netflix for years to come*

Problem

Netflix has quickly evolved to support three major federated GraphQL API Edges (Studio, Consumer, and Enterprise), and **the biggest challenge has been coordinating resourcing and focus** around these broad initiatives and making strategic investments to advance our goals. Two years ago, we started with 5 ICs, spanning two orgs/teams[1], and have grown modestly to 7 ICs yet we've scaled dramatically across 3 dimensions:

- **Size of graph** - Studio Edge has ~2200 objects, with 620+ queries and 870+ mutations
- **Traffic** - Games Edge and MemberUI Lolomo going to production on Consumer Edge
- **Number of partners** - With Consumer and Enterprise Edge, we now encompass almost all of engineering from CUE, Platform, Open Connect, DSE and Product Engineering on top of much of Content Engineering for Studio Edge.

Due to this, we've mainly relied on borrowed resources, community and incubator-type support to cover our needs. This model will no longer scale as more and more use cases adopt this architecture and continue to scale across the above dimensions, with concerns spanning schema evolution, security, testing, standards and beyond becoming much more acute.

Proposal

We should create an overarching strategy and formalize the above efforts under the **Product Multi-Edge (PME)** initiative, led by API Systems, requiring **dedicated, distributed** resources across Netflix engineering. The main goals being:

Collaborate

Writing is a collaborative, bi-directional process

Collaborate tips

- Share and solicit feedback from ever expanding circle of reviewers
- Repeat your message, use it for roadmap and resourcing planning
- Consider doing a "tech strat forum" if your strategy impacts many teams
- Find/create your advocates

Evolve
Your strategy is a living document

Evolve tips

- Take into account broader strategy, update accordingly
- If you're stuck, set it aside and revisit it in a few months
- It's ok if you need to pivot or start over

And again

Prep
Document
Collaborate
Evolve

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Thank You.

Bruce Wang
brucew@netflix.com