

What's Your Problem?



Internal, partner, and open API initiatives to fit your business challenge

Summary



There's more than one kind of API program that organizations put in place to add the digital dimension that every business needs to be successful.

Is your business seeking to connect with customers, or streamline and digitize internal business processes, or create new channels to work with partners? These are key factors to consider when thinking about your first API program.



The digital value chain—from back-end to app-end

Understanding what these different initiatives look like and how they work is aided by exploring the “digital value chain” that exists within a digital business and links enterprise data all the way through to the apps and consumers that benefit from it.

Much like a physical value chain, where a series of actions takes place to deliver a product to market, the digital value chain connects users to apps to developers to APIs (and API teams) to enterprise data and services in the back-end.

The API team is like an internal “partner team,” working with an enterprise’s distributors and resellers, and managing which products are available. In the digital value chain, your distributors and resellers are developers, who build your digital presence (your “storefronts”) in the form of apps.

These developers might be within your company, work at a partner organization, or might operate independently—in the outside world. Regardless of where they are innovating, developers represent a new channel, and the better their product (the app),

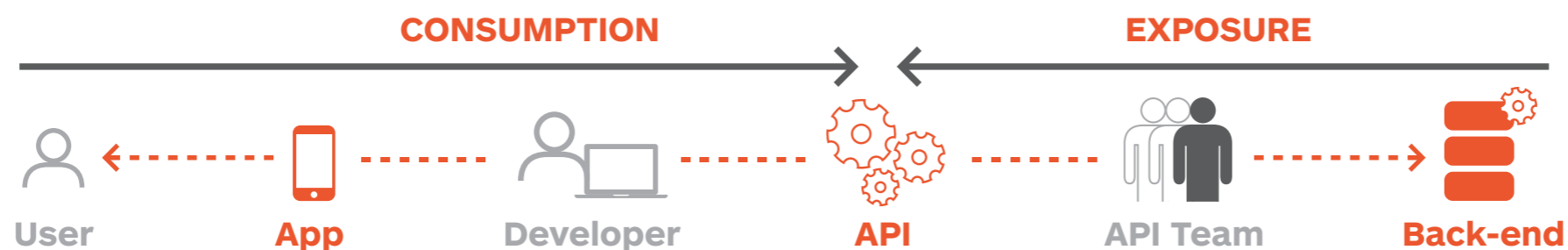


the better the engagement with your end users.

The API team builds the enterprise APIs that expose back-end data and services to enable app developers. Developers use those APIs to build apps.

Traditionally, enterprise APIs have been associated

into APIs. But the focus of APIs in the modern enterprise has been expanded to include “consumption,” which grants developers access to those same resources so they can build and deploy apps.



with “exposure,” which describes the transformation of existing back-end capabilities, resources, and data

Data connects the value chain end to end—in both directions. APIs don't just enable an enterprise to expose or project data. They are no longer just the



sockets through which transactions pass; they create a conduit for data to flow back to the enterprise and today are the primary tools for data collection and analysis.

The data and services made available via your APIs are consumed by your employees, your customers, or other businesses (B2E, B2C, and B2B).



An API initiative for every business problem

INTERNAL API (Agility)

Meet demand for mobile and social apps: iPhone, iPad, Android, Facebook, Twitter

PARTNER API (Collaboration)

Deliver on backlog of business development opportunities with customers and partners

OPEN API (Innovation)

Inspire worldwide community of application developers to create new profit opportunities

Several flavors of API initiative support the digital economy. To determine which is most suitable for your organization, consider whether the app developer resides within your business, within a partner's company, or works independently ("in the wild"). The role you want developers to fill determines which of three API initiatives comes into play: internal, partner, or open.

Many successful API initiatives are done in stages. With each stage, businesses can build on previous projects, assume more risk, and invest in larger projects more easily.



Companies might be inclined to start with an open API using Twitter, Foursquare, or Facebook as an archetype. This approach isn't necessarily the right way to get started. Rather, an open strategy should be undertaken after a business has learned lessons and mitigated risks by executing an internal or partner model first.



Internal APIs for business agility and flexibility

Often, demand for an internal API is driven by the need for mobile applications or portals to handle internal business processes, including HR or CRM functions.

Keeping things secure while providing access—a core strength of APIs—is often important even within an organization. Cross-departmental projects today often require big program management apparatus and onerous processes.

Legacy IT systems tend to be stable, but also slow moving, and so can't easily keep up with market evolution. By putting APIs between IT systems and apps, agility and flexibility result, while still enabling a business to take advantage of the underlying stable systems.

In 2002, Jeff Bezos, CEO of Amazon famously issued a mandate that all teams would henceforth expose their data and functionality through service interfaces.



There was to be no other form of interprocess communication allowed: no direct linking, no direct reads of another team's data store, no shared-memory model, no back-doors whatsoever. The only communication allowed was via service interface calls over the network.



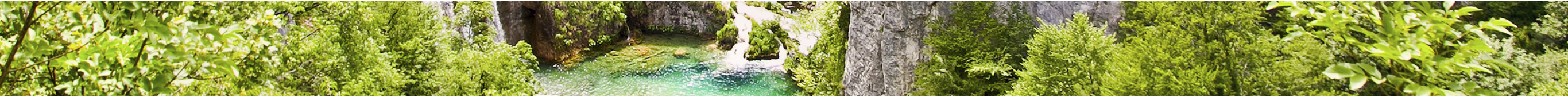
Benefits of internal APIs

Enabling lines of business: There are organizations within a company that have no developers—that is, no technology people to make an app. But departments like marketing often have a mandate to respond to new customer expectations, are faced with slow-moving IT, and have the budget to hire developers to build apps. Exposing a business' data and services via APIs enables those developers.

Cross-department security and streamlining: A common concern for enterprises, even internally, is keeping data and services secure when providing

access to a company's back-end. Cross-departmental interactions are easily secured and streamlined by APIs.

Building an app enabled business: As companies become larger and more complex, many are deferring to API ecosystems to minimize the amount of development effort to support multi-channel enablement. Dell is an exemplar in using internal APIs to better support internal development teams, partners, and retailers. Dell provides Dell Mobile applications for both Android and iOS devices that



make use of product catalog, product advisor, and CRM APIs to efficiently deliver critical business information in real time.

IT productivity: Systems of record have vices and virtues. The most important virtue: they generate revenue. If you are in the hotel business, then your system of record is your reservation system; if in finance, it's your stock trading system; in the automobile business, it is your inventory and analytics system that predicts economic cycles.

Because enterprise systems are stable, they are often slow-moving and do not allow for core systems to keep up with market evolution. By thinking as a platform—that is, putting APIs between the database and the apps—enterprises achieve

agility and flexibility while taking advantage of the stability of those systems.

Of the 18.2 million software developers in the world:

- 1.2 million publish APIs for external use
- 4.7 million publish APIs for partners or registered associates
- 8.9 million publish APIs for internal use only

(Source: Evans Data Corp., 2/6/14)

Tackling an inward-facing project enables the API team to learn important lessons—by starting with a smaller project, but also by gaining access to data on usage metrics—while keeping the project scope small. The API thus starts to add value immediately while setting the groundwork for later-stage developments.

Partner APIs for collaboration and business development

The partner API program incorporates collaboration with other businesses. Companies begin by working with one or two strategic partners, who will create apps, add-ons, or integrations with the API. Ideally, the API will have been tested and, because the API is used across organizational boundaries, the API team learns lessons about support, documentation, and authentication schemes.

Partnering using APIs can be useful in creating new channels, helping partner organizations to use your value proposition to expand into an adjacent business, or enabling a partner to complete its

offering. They also enable deep visibility into business interactions with partners that can help inform and refine partner strategies.

Pearson is an example of a world-leading education company using APIs to connect with internal and partner developers to build innovative products that offer new ways of using and interacting with Pearson content. Pearson's Plug & Play platform enables developers to easily explore and utilize all of their APIs. By offering this API-based platform, Pearson has made it easier to create apps and deliver greater value to a wider demographic.



Benefits of partner APIs

Extending a brand with new channels: The most obvious way of partnering using APIs is creating new channels. Netflix is a classic example that was transitioning from being a mail-order DVD provider to an online streaming media system. Their partner initiative resulted in the popular Netflix-integrated applications for the Web, the desktop, mobile devices, and TV.

Extending products and business: A strategic partner can use an enterprise's value proposition or core offering to strategically expand its footprint.

There are many cases across industries (such as the weather and the financial industry) in which APIs have facilitated this kind of expansion.

Completing product offerings: This is a simple use case where a business has an app or an API and needs something to complete the offering—say, a language translation service. A partner's language translator API can complement and enhance the product package, making the company offering more holistic and valuable to customers.

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After the API team gets comfortable with a few strategic partners, it's a natural next step to create resource portals and automated systems for provisioning partner keys so that more partners can access and take advantage of the API.

"We're starting to see more traditional companies realize that if they want be relevant and trigger their own growth they've got to think more like a platform and less like a monolith."

– Mike Redding, Accenture

Technology Labs at I ♥ APIs 2013



Open APIs for breakthrough innovation

Having developed internal and partner projects, the API team will have built institutional knowledge and confidence for opening the API to the world of innovative developers, who can take the API in creative, valuable directions for the business.

Open APIs are openly documented, available via self-service (developers can sign up and get a key on a website), and employ open technologies. They lead to innovation, efficiency, and reach by enabling your core business service to be “remixed” by developers outside of your company.

Additionally, the burden of being an expert in the hundreds of different platforms and devices out there is shifted away from your enterprise and onto developers. Perhaps more importantly, businesses from Netflix to Walgreens have found tremendous advantage in opening up their data to innovative developers outside of their companies and enabling them to create new experiences for customers.

An open API enables the gathering of important data about how developers build on an API; this helps an organization create a differentiated experience that attracts more developers.



Benefits of open APIs

Breakthrough innovation: The most common of all use cases, and a well-known paradigm given the success of companies like Twitter, Foursquare, or Facebook, this is the case for innovation by leveraging the creativity and know-how of hundreds of thousands of developers around the world using your API to create cool apps and make big breakthroughs.

Niche markets: A company may have a geographical or demographic niche that represents a nice new value proposition for the business. But it may not have the resources or the budget to get the

value proposition into those niches. Taking advantage of an open API program, any developer can create an app that generates new value for both themselves and the API provider.

Direct incentives: A directed approach may be to run a contest or a hackathon and an incentive to build against your API. The automotive industry, for example, has successfully used this approach to solve problems. It extends R&D budgets and resources beyond the borders of your business and spurs innovation on a broad scale.



Choosing the right API program for you

Many successful enterprise API initiatives start with internal models, expand to partner APIs, and then possibly to open APIs, with each stage building on its predecessor.

Yet there are no absolutes. Generally, when you know you need an API, you will start where you have the most trouble, or where the business drivers are. You could ask: “How or where could APIs help us achieve our key business objectives?”

An API program might be internal, if you are meeting a demand for mobile and social apps within your enterprise. Perhaps, if you need to innovate with

partners to deliver on a backlog of business development opportunities, a partner strategy is the way to go. An open API is the right path if you wish to inspire a broad community of app developers to innovate and create growth opportunities for your business.

Getting the right mix of API program scenarios can push an enterprise toward becoming a robust platform for innovation that enables it to compete in a world of new expectations and compelling opportunities, speeding it on its way to digital transformation.

Where to go from here...

If you own a digital or mobility program for retail or other business, these eBooks will help you understand how to meet the challenges of building a digitally enabled customer experience, digitizing business processes, and creating your own digital business model and roadmap.

- ▶ Why APIs? Agile innovation, adaptive apps, and a wealth of data
https://pages.apigee.com/ebook-why-apis-reg.html?utm_medium=social&utm_campaign=eBook
- ▶ Digital Transformation: Getting in Shape for the Digital World
<https://pages.apigee.com/digital-transformation-ebook-web-reg.html>
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