The API ecosystem blueprint

How APIs are delivering better customer experiences, greater productivity, and increased business flexibility at break-neck speed

Dropbox Sign API

APIs are the catalyst for digital transformation

APIs have quietly been the backbone of many online businesses in recent years—eBay processes over $7 billion in transactions through its APIs by allowing websites to list auctions, get bidder information about sold items, collect feedback on transactions, and list new items for sale. And before the pandemic, Expedia processed 90% of its $2 billion annual revenue by allowing people on third-party websites to use its functionality, through APIs, to book flights, cars, and hotels.

However, for the majority of businesses, the value of APIs have largely flown under the radar. It's only now, with a global pandemic forcing us indoors and online, that companies are waking up to the importance of APIs in building flexible and resilient operations.

As Armando Torrealba Echiburú, Product Design Director at Xero explains, "For me, the API conversation is very similar to the UX conversation five years ago, where people were debating the value of UX. It's the same with APIs — they are an investment you do well once and it pays off for a really long time. The benefits will demonstrate themselves, but only if you look at the value of integrating seamlessly and all the overheads you save by integrating every time with different partners."

But to realize the potential of APIs, organizations must first rethink the way they deploy and operate software, refocusing around an ecosystem of API-based microservices.

This retooling around APIs—rather than traditional monolithic software systems—opens up improved digital experiences for customers, helps teams operate with greater productivity, and offers businesses greater flexibility to adapt to new expectations and challenges at pace.

However, with millions of APIs out there—tools, process efficiencies, and data sharing to name a few — it's hard to know exactly how everything fits together or where to start.

It's why we've developed the API ecosystem blueprint—your guide to building a thriving application ecosystem by centering your business around APIs.

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Winning architecture for an increasingly competitive world

APIs are the building blocks of today's digital businesses. They're working behind the scenes in almost every online interaction we have—Netflix, Facebook, and Uber are all underpinned by APIs.

But as the number of APIs keeps growing, implementing and managing them is becoming a considerable challenge for businesses. Those that build modular API ecosystems are agile enough to keep up with future innovations and customer expectations. But those on an errant path will be forced to overhaul their entire system and processes—a costly and time-intensive venture.

The stakes are high; that's why it pays to think about API integration the right way from the beginning.
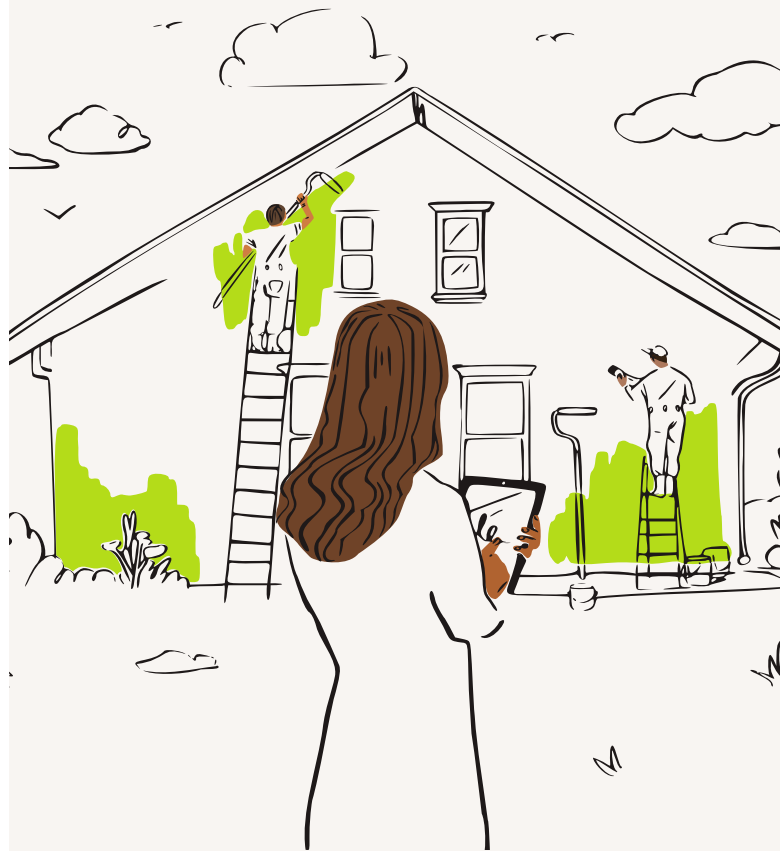
Rethinking the way we organize our software: from monoliths to microservices

For the longest time, monolithic architecture was the default way to build an application. That is, you would build an entire application around one business function, process, or 'job'. For example, when booking an airline ticket online, all of the steps—sign-up, flight selection, payment processing, confirmation emails—had to be coded into a single do-it-all system.

But as the world became more connected, customers began demanding more from these systems—more personalization, more speed, and smarter transactions. And so, pressure to update every aspect of these specialized systems to meet the exact, and often niche, needs of customers became an ever-growing challenge for businesses.

Enter microservices architecture: a new, agile way of building software that doesn't attempt to be every part of the process. Instead, businesses select the best tool for each part of their software and integrate them using APIs to create one overall outcome or process.

To return to our plane ticket example, with a microservices architecture, a business would find the best sign-up system, payments-processing system, email-automation system, etc. and individually integrate them—via APIs—into their own user interface. The sum total of these integrated tools creates one cohesive booking system.
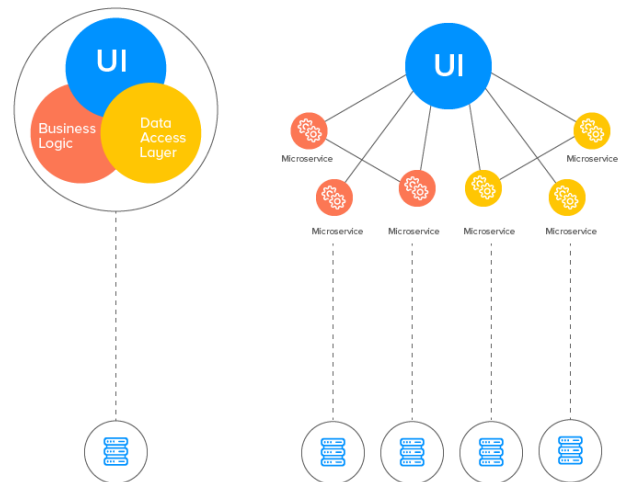
The flexibility of microservices

Adopting an API-enabled microservices model lets businesses build experiences from the best tools on the market, rather than building every new feature and functionality from scratch.

But more than that, it offers businesses greater agility and flexibility to adapt to changing consumer expectations, as Matt McLarty, Leader of API Strategy at MuleSoft says, "The real power of APIs is when we break business capabilities in our business down into these discrete API enabled capabilities. It gives us a lot of agility to rebound or to repackage things, to take best of breed functions and aim them at whatever channel we want; compose them in whatever way we want."

With today's popular subscription pricing models, the cost of picking up a new tool is lower than ever. So if a particular service in your ecosystem doesn't have a feature you or your customers want, it's as easy as unsubscribing and unplugging one API and integrating another with the right features.

Additionally, API integration lightens the load on developers. Instead of spending months developing new tools from scratch, they're only spending days integrating an API.

"With APIs, you can really get the best of breed. If you start building everything in-house, it takes a lot of time to get all the functions in place — engineering, strategy, support. With APIs, you can get the best solution without the effort. Plus, if you're not building something internally, you have a chance to switch to the latest and greatest. If your vendor hasn't upgraded over time, you have the liberty to move quickly to a new vendor. If you've built in-house, you don't have that same fast-moving luxury," says Akshay Sheth, Senior Engineering Manager at FactSet Research Systems.

Once this fast-moving framework is up and running, it sets you up to deliver features and experiences that delight customers and take a load off your development team.
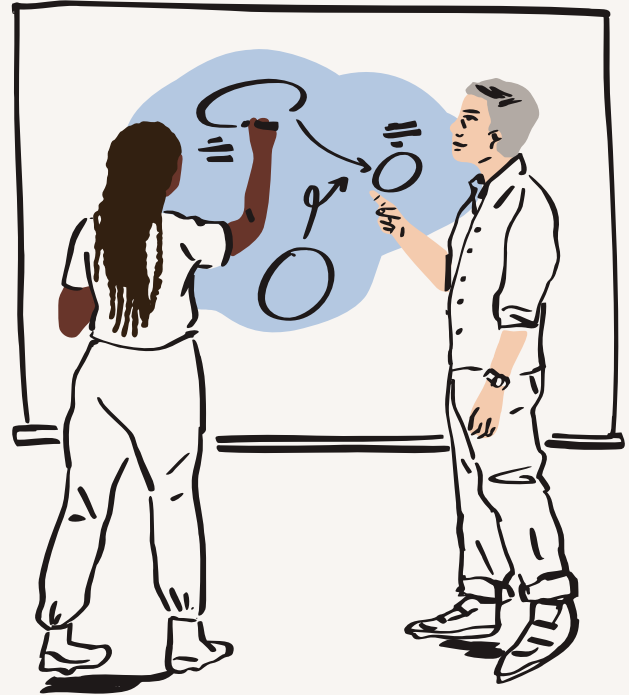
Prioritize customer experience

When it comes to the value of customer experiences, the numbers are clear: customer-centric companies are 60% more profitable.

The thing is, a great customer experience isn't a "nice to have" anymore. It's essential just to compete. Why? Because customers want to engage with businesses that put digital experiences first. And if they can't engage digitally on your platform, they will look for another business where they can.

So the question becomes, how exactly do you achieve a great customer-centric experience?

You could spend hundreds of hours and thousands of dollars building new capability from scratch. But why would you when APIs make delivering a top-tier customer experience so much easier?
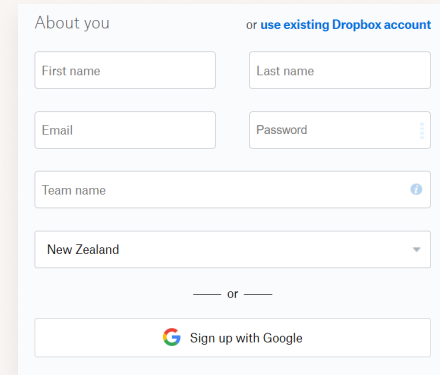
APIs unlock streamlined customer experiences

76% of customers expect companies to understand their needs. This means, just as customer expectations have risen, so too must the experience companies deliver.

As Matt explains, "Business models are totally related to customer experience. Because ultimately, customers are the driver of revenue, so everything that you focus on should help them, right? And I think it's pretty clear that the companies that differentiate themselves in the digital economy are differentiating based on customer experience."

APIs have become the easiest and fastest way for companies to target specific moments in the customer journey. By integrating APIs, businesses can add incremental improvements that pre-empt customers' expectations across sales, customer service, marketing, and more. For instance, eCommerce workflows often use a Google Maps API to help customers auto-complete addresses for a faster buying experience.

Another powerful everyday API is the "log in using Google/Facebook/Twitter" tool which streamlines the sign-up experience. So rather than inputting personal data every time, APIs source it from a user's existing accounts—with their authorization, of course.

From Dropbox

But contact centers are where APIs really become powerful. Support teams often struggle to reconcile multichannel customer interactions because each channel uses a different app—Hootsuite for social, Intercom for chat, a call center for phone calls. And this means information falls through the cracks and customer interactions risk becoming disjointed and frustrating.

However, with specific APIs, businesses can build information-sharing bridges between these systems to deliver a unified and consistent customer experience no matter what channel a conversation takes place on.

CGIA closes deals 17% faster with an API-led customer experience

Traditionally, selling insurance has been a long and admin-prone process for both customers and salespeople. With so many documents, signatures, and approvals to manage, any reduction in paperwork is a huge improvement to the customer experience.

By integrating the Dropbox Sign eSignature API into their insurance workflow, CGIA completely digitized the signing processes, removing slow and annoying manual steps.

"HelloSign's [now Dropbox Sign] seamless signing experience has allowed us to deliver evidence of insurance in real-time and we've seen a reduction in the time it takes to close a sale. HelloSign [now Dropbox Sign] has become a necessity for our business as online shoppers demand a hassle-free way to buy," says Bob Negrey, VP of Information Technology at CGIA.

And it's greatly improved CGIA's speed of sales, too.

"With HelloSign [now Dropbox Sign] we're able to close sales about 17% faster compared to the manual signature process," says Miguel Huizar, producer for CGIA

Customers love data flow too

It's not just experiential improvements that are making customers' lives better though, the context and transparency of clean, flowing data enabled by APIs also makes a huge difference to a customer's journey.

As explained by Armando, "One thing we get from our research is that customers really appreciate having everything in one place. And even if everything's not in one place, at least having the data in one place where it makes sense. Integration even on a data level is really important."

Allowing data to flow through different apps can save users hours in context-switching and manual data input between different tools and applications.

CUSTOMER STORY

How an API integration simplifies contracts
for sales teams

One of the most time-intensive processes for salespeople is putting together contracts. Deal data, contact information, and digital contract tools often require endless switching between tools and tabs just to pull everything together.

Dropbox Sign saw this pain and imagined a better way of doing things—sending contracts straight out of Salesforce. So they built an API integration that does just that. By embedding an eSignature tool into the Salesforce platform, using the Dropbox Sign API, Salesforce users can now build contracts, populate them with client data, send them for signatures, and track progress without ever leaving Salesforce.
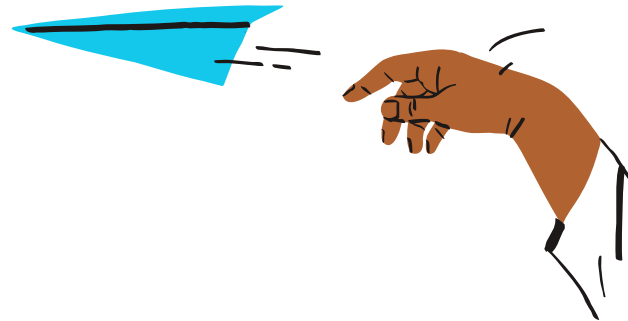
Give your teams scalable superpowers

Unlocking high performance is the goal of any team leader. But knowing how to achieve it is hard to pin down—is it motivation, the tools and processes they use (or lack), or something else?

So why not give your team the best tools for the job and find out?

That's what an API-led ecosystem is designed for. Teams can adopt tools that fit their precise needs fast. And there are so many tools out there helping teams operate at newfound scale, like automations for HR professionals and marketing teams that send out thousands of personalized contracts or emails with a single click.

Arm teams with the tools and insights to work better

More than just operating at scale, API-connected tools are helping teams operate smarter, too. As Akshay says, "By investing in APIs you're helping your internal teams move fast and make better decisions by partnering with external vendors. APIs are the pathway to that better efficiency and decision making."

For instance, API-enabled customer support tools such as Intercom or Zendesk give customers simple measures to report and resolve issues. But behind the scenes, these tools also guide customer service teams with valuable data insights, like where customers are having the most problems or where issues keep occurring. And when teams have this information at their fingertips, they can address the root causes of a problem and be proactive about finding a solution.

Employee retention: a happy API side-effect

There's also a massive competitive cost to low-productivity teams: employee attrition.

If businesses don't equip top performers with the experiences and tools to do their jobs effectively, they'll seek out companies that do. And adding employee attrition to an already low-producing team sets businesses up for failure.

But when you do equip your team with the latest tools—whether that's data analytics, faster processes, or simply a better work experience, you not only get better results, you become more attractive to top talent.

instacart

Instacart saves 50+ hours a week using an eSignature API

At any given time, Instacart contracts over ten thousand personal shoppers to handle the shopping, packing, and delivery of groceries to Instacart's customers. Initially, Instacart relied on traditional pen-and-paper signatures to onboard new shoppers. But the application process was awkward and lengthy.

To speed things up, Instacart used the Dropbox Sign eSignature API to embed an online signature workflow and make all of its paperwork completion happen digitally in its app.

And the results have been huge. Under Instacart's legacy system, processing paperwork took the team at least 3-5 minutes per shopper — but by using Dropbox Sign, the Instacart team has **saved 50+ hours per week**.

Beware, not all APIs are created equal

The success of any ecosystem strategy relies on the ongoing health of its APIs, including managing all integrations, ensuring they continue to work, and keeping them secure.

Though API upkeep is far less effort than building entire applications from scratch, it doesn't mean they won't become a time-suck for your development team.

Developers integrating APIs need to understand what the APIs do, how they work, how people intend to use them, and what's required to keep them running and secure. And if this time and effort outweigh the benefits you'll gain from the integration itself, you're losing out on the agility that microservices infrastructure offers.

That's why you need to know exactly how to spot good API integrations when you see them. Here's what to watch out for.

1. Easy documentation

A well-designed developer portal stocked with high-quality, easy-to-follow API documentation is essential. When you have clear, simple instructions, integrating an API is fast and simple even for inexperienced developers.

"API documentation is very important. But you have to make sure you've got different personas in mind with the documentation. Sometimes API documentation is comprehensive — it's a reference of every possible field. That's not too usable if I'm a first time API user. So I think you want different flavours of documentation where you've got reference documentation, quick-start documentation for beginner users, and scenario-based documentation, you want to cover it all."

— Matt McLarty, Leader of API Strategy at MuleSoft.

2. Ongoing dedicated support

Dedicated API support is a must-have for API tools. The promise of APIs is that they're fast and easy to implement. So if you do encounter a problem with an API integration, it's critical that there's a dedicated support team behind it. That way if something breaks, you're not left unsure when a fix is coming.

3. SDKs

Software Development Kits (SDKs) are critical to a good API. SDKs give developers the tools, libraries, documentation, code samples, and processes to integrate an API, which speeds up implementation time considerably.

"If you are implementing an API, you have a very limited window. It may work when implementing an API but long-term support is a problem. If you don't have a strong team supporting it, or if there is a question about how to make it work, self-service and documentation can only go so far. It's important to have your team be part of the process."

— Akshay Sheth, Senior Engineering Manager at FactSet Research Systems

Pigeon Loans

The Dropbox Sign API has customers eSigning fast

- On average, a Dropbox Sign API integration takes just 2.5 days— the fastest in the industry*.
- 40% of Dropbox Sign API integrations are completed in 10 hours.
- 88% of developers finished their integrations in 40 hours.

"I've implemented other APIs and it usually takes about a week. Dropbox Sign is using such forward-looking technology, along with clear and easy to understand documentation that I was able to do it in less than 3 hours. This was a record for me."

— Brian Bristol, CTO and Co-Founder, Pigeon Loans

*Source: G2 - Most Implementable 2020

Conclusion

Build a microservices ecosystem one step at a time

For businesses aspiring to compete in an experience-first world, shifting to an API-led architecture is a necessary first step.

But to get there requires a mental shift. Businesses must think of APIs as the building blocks of their entire operation; enablers of both employee-to-customer and employee-to-employee interactions. Only then can they start operating with the agility and flexibility to keep up with customer expectations.

Sounds great, right? But it still leaves one final question: how do you get started with APIs?

The answer, start small—one API at a time.

And the Dropbox Sign API is a great place to start your API journey. Dropbox Sign makes preparing, sending, and receiving legally binding eSignatures smooth and seamless.

Ready to integrate eSignatures into your app or website? Test the Dropbox Sign API for free.

About Dropbox Sign

Dropbox Sign simplifies work for millions of individuals. Companies all over the world rely on our eSignature solutions to power their applications, making it easier to close deals faster, onboard new hires, complete documents without error, and much more. For more information visit the Dropbox Sign website.