

It's never been easier for a vertical saas solution to embed fintech in their platform, but that doesn't mean there aren't critical strategic and technical considerations to make before you offer financial products. We partnered with Justifi to create the definitive guide for technical founders who want to super-charge their platform with fintech offerings thoughtfully.



# The CTO's Guide to Embedded Fintech

Over the past few years, the technical complexity of adding embedded fintech products to a vertical SaaS platform has dropped considerably.

This is largely due to the emergence of dedicated embedded fintech providers that simplify the process of adding financial services to industry software. The first wave of fintech providers (e.g., Stripe, PayPal) enabled vertical SaaS companies to process payments, but today vertical SaaS operators can select from a wide variety of embedded offerings, including lending, insurance, card issuance, and more.

It is now widely recognized among founders and investors that these embedded fintech products are key to scaling the addressable markets of most vertical SaaS businesses. They provide a foundation for building multibillion-dollar software businesses in “niche” industries by enabling them to capture revenue from servicing the financial needs of their customers—and their customers’ customers.

While embedded financial tools have come a long way and are easier than ever to implement in a vertical SaaS platform, they still aren’t perfect. Launching an embedded fintech product requires founders—and CTOs, in particular—to make strategic technical decisions about the product they’re pursuing and who they are partnering with to launch that product.

This report is a guide that will help vertical SaaS CTOs consider the opportunities and technical challenges that arise when embedding fintech services into their product. It was produced in partnership with Justifi, a company that provides an orchestration layer for embedded fintech products. The Justifi team shared their learnings from helping dozens of vertical SaaS companies launch embedded financial products.

In this guide we’ll cover the importance of data ownership, regulatory considerations around embedded fintech products, how to select the right fintech partner, and more.

# Data Ownership

When preparing to embed fintech products into your software, your most important task is to determine how customer data will flow through the system. Vertical SaaS companies that have built a system of record will already be familiar with the critical importance of owning their customers' data. This is what enables them to execute a "land-and-expand" strategy based on their deep understanding of their customers' business. With your customer data in hand, you can both identify promising new product opportunities and qualify new and existing customers for those products—including embedded financial services.

In the case of embedded fintech, owning your customer's financial data is important for three main reasons:

## 1 . **Flexibility and Leverage**

If you don't own your customers' data, you are at the mercy of the third-party vendor that does. The end result is that you lose a substantial amount of the flexibility and leverage that makes embedded fintech products so valuable.

## 2 . **Better UX**

If you don't own your customers' data, it will create a worse experience for those customers, who are forced to meet their financial services needs from a variety of third parties rather than a single software platform that already serves as their system of record. This can create friction—and ultimately lower the adoption of fintech products—by requiring customers to enter redundant Know Your Customer (KYC) information during onboarding workflows.

## 3 . **Optimized Unit Economics**

Owning customer data allows you to optimize your unit economics because you can use your customers' data to directly underwrite financial products like loans or insurance policies. Because of your deep understanding of your clients' business and financial health, you can offer them better rates than standalone third-party vendors and dynamically adjust those rates to rationalize their unit economics.

But embedded fintech products differ from non-financial products in one key respect. Unlike other expansion opportunities, such as marketplaces or integrated point solutions, embedding a fintech service almost always involves collaborating with a specialized third-party vendor to provide that service. While vertical SaaS companies can—and do—bring these functionalities in-house (Toast's decision to become its own payment facilitator is a notable example), this approach typically isn't viable for early-stage companies because of the heavy regulatory compliance burden. In many cases, even late-stage companies that can afford the engineering and compliance costs of building a fintech product in-house find that it is still more efficient to work with a fintech partner. Working with specialized fintech providers allows you to rapidly and efficiently deploy embedded financial services with minimal risk and administrative burden.

There are several important questions you should consider when selecting a fintech provider (more on this below), but the most important one is: Who owns their customer data? The answer is highly dependent on how you embed those services.

Direct API access, web components, and hosted solutions are all potential answers, but each has important tradeoffs in terms of data ownership and functionality. The key thing is to recognize that there doesn't necessarily need to be a tradeoff between data ownership and the management of financial services products regardless of how they are implemented.

In the not-so-distant past, CTOs typically had two choices if they wanted to embed a financial service on their platform. One option was to manage all the direct integrations themselves to ensure that they were the only ones handling customer data. The other choice was to completely relinquish ownership of that data to the third-party provider. Neither option was particularly appealing. Building direct integrations can create significant technical complexity as the number of integrations multiplies and directly handling sensitive customer data exposes a vertical SaaS to all kinds of regulatory compliance risks. Then again, handing all that data over to a third-party undermines some of the biggest value propositions of embedding financial products in the first place, especially the ability to optimize your unit economics and tailor financial products to individual customers.

Fortunately, modern fintech solutions have eliminated this tradeoff. A strong embedded fintech partner will reduce the technical complexity of integrations, shoulder the compliance risk of handling and storing sensitive customer data, and allow you to own your customer data. Owning your customer data, in this sense, doesn't mean storing it on your own servers and carrying the substantial risk associated with that approach. Instead, it simply means that you, as the vendor, won't have that data held hostage by a fintech partner if you decide to leave to a different provider.

In other words, it's now possible for vertical SaaS vendors to have embedded financial services through a third party and own their customer data, too. This is one area you should never compromise on.

## Regulatory Burdens and the Zero Risk Principle

In the United States, financial data is strictly regulated. This reality must be taken into account by any CTO thinking about adding embedded fintech products to their software. One of the biggest regulatory burdens is around KYC laws, which require financial institutions to conduct diligence on their customers to ensure that the financial service isn't being used for money laundering, terrorist activities, and other illicit activities. While the risk that your service is being used as a money-laundering front is low, the related compliance burden is substantial.

It's important to understand the different types of customer data that are relevant to financial services and the compliance burdens that accompany them. This will help you determine the kind of customer data you want to handle internally and the risk that accompanies that data. It will also help you select an ideal fintech partner that can handle the customer data you don't want to touch. Broadly speaking, there are four kinds of customer data you should be mindful of: required sensitive data, required non-sensitive data, valuable data, and unique data.

Type of Data	About	Examples	Risk	Outsource?
Required Sensitive Data	This type of data is required to underwrite a financial product and may be necessary to verify your compliance with anti-terrorism or anti-money laundering laws.	EINs, banking information, credit card numbers, dates of birth	High	Yes
Required Non-Sensitive Data	This is data that a vertical SaaS platform typically collects to onboard their customer. It is the bare minimum data the company needs to service those customers and is typically publicly available.	Customer name, customer address, contact information	Low	No
Valuable Data	This is data that describes what your customer is doing on the platform.	How long the customer has been on the platform, number of transactions processed, historical dispute rates	Low	Maybe
Unique Data	This is customer data that only the vertical SaaS vendor has access to.	Average purchase volume, average invoice, average payment volume	Medium	Maybe

Third-party fintech solutions are built to shoulder the regulatory and compliance burdens that come with handling sensitive customer financial data. The tradeoff is that these providers will take a larger cut of the financial transactions flowing through your platform that is commensurate with the risk of maintaining sensitive customer data. This should be an acceptable tradeoff for most vertical SaaS operators during the early stages of their company. The goal is to launch embedded fintech products as quickly as possible with zero compliance risk,

and this can be accomplished by outsourcing the regulatory compliance burdens to the third-party provider. As a vertical SaaS company matures, it may decide to absorb more of that risk in order to increase revenue from their embedded financial services. While it is uncommon for vertical SaaS companies to become their own payment facilitators or underwrite their customers directly—that is, to absorb 100% of the regulatory and compliance risk—it is possible in principle and may in fact be desirable once a company reaches a certain scale.

# Integration Considerations

There are three primary technical pathways to launching an embedded fintech product: direct API integration, web components, and hosted solutions. None of the three are necessarily better than the others, but each pathway does have unique challenges and opportunities. The solution you choose should ultimately depend on the maturity of your platform, the way customers use your product, and how quickly you wish to deploy the embedded fintech product.

Generally speaking, direct API integrations will have the largest scope—and thus require more time and engineering resources to deploy—but also allow for full customization. Hosted solutions are on the opposite end of the scope spectrum and can be deployed quickly with minimal engineering resources, but they offer limited to no customization in terms of how they're integrated into the software. Web components fall somewhere in the middle of these two extremes when it comes to both scope and customization.

To determine which solution makes the most sense for their vertical SaaS platform, you should ask yourself three questions:

## 1 . What is my timeline to launch?

If you are optimizing for velocity, you should consider a hosted or components-based solution. These “turnkey” solutions for embedded financial services allow you to get the product into your customers' hands as fast as possible, accelerating both customer acquisition and revenue growth.

## 2 . What engineering resources are available?

If you have a small engineering team, they likely don't have the necessary resources to build a fully integrated solution without sacrificing significant developer resources that would otherwise be allocated to building out the core software product. Given that a vertical SaaS platform's primary revenue driver is its core software, allocating precious engineering time to building a direct API integration may not be worth the effort compared to launching a fintech product as a hosted or component-based solution.

## 3 . How will this financial service be implemented in the product?

Consider, for example, a vertical SaaS company that wants to integrate an insurance product into their software. How and when will they sell this product to their customer? One possibility is to offer the insurance during the checkout flow. If the vertical SaaS vendor opts for a direct API integration as a solution, this will require collecting a substantial amount of sensitive customer financial data and ensure that this data is handled according to stringent payment card industry (PCI) standards.

This is no small task, so it may make more sense for them to embed a hosted or component's based solution. While this may be technically simpler and lower the regulatory burden, it also means that you won't be able to maximize control over the user experience on your platform. Instead, you will have to use the default solutions provided by web components or a hosted solution.

## Choosing an Embedded Fintech Product and Partner

Many vertical SaaS companies—but by no means all—will begin their journey into the world of embedded financial services starting with accepting payments directly on their platform. For early-stage companies, it almost always makes sense to partner with a third-party vendor that acts as their payment facilitator rather than going through the arduous engineering and administrative process of becoming a payment facilitator themselves. How they grow their financial services products from there will ultimately depend on the characteristics of their industry. For example, working capital loans often make more sense in industries where there are significant delays between a service being rendered and collecting payment, whereas an insurance product may make more sense in industries where a customers' customers are making infrequent, high-value purchases.

A simple, yet powerful heuristic for determining what embedded fintech product is best for your customers is to look at what products they are already using. While a vertical SaaS company certainly can—and should—look to innovate to see how they can provide their customers with new sources of value, the path of least resistance is usually to lead with products that the customer is already familiar with.

In this case, the added value comes from the fact that they can access a product they are already using from the software platform they're already using to run their business. It may also have the added benefit of better rates than they're getting from their current financial services provider. Generally speaking, you will have the best results if you can identify the financial services that provide the most value to your direct customers, even if that financial service is ultimately provided to your customer's customers.

## Embedded Insurance Scenario

There are two main paths to an embedded insurance offering for vertical SaaS companies. The first path is to provide insurance directly to your customers. But the real prize for vertical SaaS companies is by offering insurance or a warranty program to your customer's customers at the time they are purchasing goods or services from your customers.

If you are the CTO of a vertical SaaS company that serves travel agencies, for example, you might want to provide your customers' customers with air travel insurance at the time of checkout. This is likely to be a highly profitable offering because the potential losses on a trip that costs thousands of dollars are quite low relative to the potential loss on a multimillion-dollar liability package provided directly to your customer. At the same time, you're likely to see high adoption rates by your customers because they don't carry the risk of underwriting insurance policies for their customers, but they can offer those customers a value service.

Using your embedded insurance product in their customer journey has a very low cost relative to the value they are providing to their customers. Finally, you can reach a much larger pool of potential customers. Whereas a vendor might have only a few thousand first-order customers, if they can extend their embedded insurance offer to their customer's customers, they now have the opportunity to reach orders of magnitude more users of that product.

The important thing is to ensure that your fintech partner has the capacity to offer the type of insurance that you need for your platform. If your partner only has insurance products that cover, say, general liability, they probably won't be a good fit for a SaaS platform covering travel agents. Instead, you should seek out a partner that has direct experience providing financial services in your particular vertical or in a vertical with similar characteristics to your own. As we'll see below, this is why it's critical to think about embedded fintech in terms of products rather than categories.

Regardless of what fintech products you choose to pursue and in what order, it is critical that you identify the right partners for building that particular product. Aside from questions of data ownership, there are a few characteristics you should look for in your fintech partner.

**1 . The partner should value the unique advantages of vertical SaaS companies.**

They shouldn't solely see your company as a lead source, but instead view you as a mutually beneficial partner.

**2 . The partner should provide actual utility to a vertical SaaS vendor's customers.**

Just because a potential partner provides payment, lending, and insurance products doesn't mean they have the right payment, lending, and insurance products for your customers. For example, if you're partnering with an insurance broker, it is critical that this broker has expertise in the types of insurance products that are already being used by your customers.

**3 . The partner should have the right technical specifications.**

It is absolutely critical that you conduct deep technical diligence on prospective partners. You should scope out their technical specifications to ensure that the partner's APIs meets your needs and their hosted solution works as advertised.

**4 . The partner should align with your roadmap.**

Carefully examine a partner's current integration offerings. Do their products fit the needs of your customers? If they don't offer a product that you anticipate needing in the future, are you willing to wait until they do or are you ready to build that product internally?

When you're considering an ideal partner, it's important to remember that the profile of a strong partnership will inevitably change over time as you scale. Your customers will have different needs and the vendor may want to absorb more risk in exchange for higher margins on their financial services product. Changing financial services partners is a natural part of a vendor's growth. This is why it's important to avoid partners that insist on exclusive long-term relationships, because this can reduce your ability to maneuver and respond to changing customer demands or market dynamics.

## Questions to Ask Your Fintech Partner—and Yourself

The process of selecting a fintech partner will be much easier if you come prepared. A mistake that vertical SaaS founders often make when they're considering launching an embedded financial service is to think in terms of categories rather than in terms of products. In other words, they frame their goals as "we're going to launch a payments/insurance/loan service," rather than "we're going to solve this customer problem by launching a payments/insurance/loan service."

To avoid this trap there are a few questions you should be able to answer before you start engaging with potential fintech customers:

- **How will this product be sold during the customer purchase journey?**

The answer to this question will depend on whether you are selling a financial service to your customer or your customer's customers. If you're selling to an SMB, it could make sense to surface an offer on the user dashboard, whereas selling to the customer's customers might require surfacing an offer during a checkout sequence.

- **What kinds of customer data will this product require and how will we handle it?**

This largely depends on the type of financial service being offered and the requirements of your fintech partner. Some types of data (i.e., KYC) will be common across all providers in all industries. But the data required by an insurance provider, for example, may differ significantly across industries.

- **How are we going to price this product?**

The great strength of embedded financial services is that it allows vertical SaaS companies to optimize their unit economics. You can receive preferential pricing from fintech partners because your company has so much information about your customers, and this helps lower the risk of underwriting financial services for them. You can use this preferential pricing in various ways. For example, you might lower the cost of your financial service to incentivize customer adoption or you can charge the market rate and boost your margin. This choice will depend significantly on the unique circumstances of your company.

Once you've answered these questions, you'll be in a much stronger position to identify an ideal fintech partner for your platform. But there is one additional, all-important question to ask: Why should we be comfortable doing business with you? The goal is to uncover information such as how long they've been in business, the number and type of customers they service, their remaining runway, and their product roadmap. This will help you gauge their stability, which you will be heavily reliant on.

There are now so many potential fintech partners in the marketplace that you're almost guaranteed to find one tailored to your needs. The extra effort you put into finding that perfect fintech partner will pay dividends in the future. Most of that effort comes down to truly understanding the product you want to launch and the needs of your customer. This will streamline the process of launching an embedded fintech product and make it much easier to identify the prospective partners that are the best fit for your platform.