

## How to Choose Between SaaS & Custom Software

A Guide to Defining Your Company's Digital Future

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# Introduction

## To Buy it or to Build it

Whichever way you decide to go you are making a major bet on the best path for your company. Increasingly you will find that few decisions define an organization's success like its digital strategy and products.

In some cases, a SaaS (Software as a Service) tool is the fastest and — at least in the short term — most affordable way to achieve the desired result. In other cases, the failure to develop your own IP (Intellectual Property) puts the company in a compromising position. The choice to “buy or build” keeps many executives up at night. Leaders must consider a variety of critical factors before committing to a course of action.

This guide offers insight into the primary considerations for making a selection between SaaS, custom development, or a hybrid of the two. By answering the questions within, executives can determine where to invest their time and resources as their company's digital roadmap evolves.



**Software as a Service is maturing and filling many niches — there is a SaaS company for everything. At the same time, custom development is becoming cheaper and more accessible. It's an arms race and it's good for everybody.”**



**Alex Finnemore**  
*Head of Revenue, Theorem*

## Executive Summary

### Digital innovation is only gaining momentum thanks to massive reservoirs of open source code. H2

The developer ethos encourages the sharing of one's work through open source platforms so that the entire community may learn and benefit. As a result, we now have access to the building blocks for nearly any imaginable digital tool and product.

Both SaaS and custom products are created using these code banks by combining elements in novel ways and adding unique features. Very rarely does a developer open a blank document and start writing lines of code from scratch.

**31M+**

**+40%**

**1/3**

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**Registered Developers  
on GitHub**

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**Organizations  
Contributing in 2018**

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**Amount of Repositories  
created in 2018**

*Source: <http://octoverse.github.com/people.html>*

“Coding used to be a lot of typing, but now it’s a lot of thinking and exploring and knowing how to connect things together,” says Alex Finnemore, Head of Revenue at Theorem.

The difference between building a custom product and subscribing to a SaaS company is not about the quality of the technology — both can get the job done. It’s about the company’s intended use of the product and its role in the long-term business strategy.

If the function of a tool is closely tied to the core product or service of an organization, the wise choice is almost always custom IP.

For example, a shoe manufacturing company that wishes to improve the efficiency of inventory management will reap greater rewards by developing a unique solution that creates a competitive edge. Because the company owns the IP, no competitors will be able to leverage the same tool. A custom product may require a larger investment in the short term, but the time saved and market share gained will more than outweigh the expense.

On the flip side, SaaS is likely a good choice for any function that significantly removed from a company’s value proposition. If the shoe manufacturing company needs a product to assist their human resources team, there is little risk in licensing an off-the-shelf tool that’s entirely maintained and updated by an outside entity.

Certain scenarios require more nuanced considerations before picking a path forward, such as the availability of internal engineers to work on a tool and the relationship a business has with potential SaaS companies. Most executives, however, will find the answers they seek by contemplating the following four questions — allowing them to charge forth on a digital roadmap with confidence.

# Four Questions to Ask Yourself When Deciding Between SaaS & a Custom

## Question 1 of 4

### Do you want to own the product, or do you want someone else to own it? H3

As long as you're outsourcing technology (i.e., SaaS), you don't own it. Your company cannot claim to be experts at that particular thing. Outsourcing the ownership of software is akin to saying, "We're not great at this, and we don't want to be."

There is nothing wrong with outsourcing a function that's nowhere near the primary offering of your business. A company needs to focus on its core competencies, while ancillary tasks can, and should be, outsourced.

If an organization tries to use third-party SaaS tools to perform its key functions, however, trouble is likely to occur. You might be able to create the illusion that an off-the-shelf tool belongs to your company by deeply embedding it into operations, but the IP and the development roadmap will always belong to someone else.

A SaaS company can change its roadmap at will, and they have no obligation to address the needs of an individual business. You are not in control.

To fully direct a tool's development, a company must build a product internally or collaborate with a firm as a work-for-hire. Engineering teams will need to be formed around it, which takes a long-term investment, but it allows your company to say, "We're experts at this."

If owning the IP and the development roadmap creates strategic value for your business, a custom product is the only way forward. If it has nothing to do with your value proposition, a SaaS tool may suffice.

"You don't need to prove that you can do your taxes or pick plants for your office — you can hire people to do that. You need to prove that your company can do the thing it claims to do. That's when you should own the code. But if it's outside of the core business unit economics, you could consider making it someone else's problem," Finnemore continues.

### A changing landscape: Open source in 2008 vs 2018

A prominent venture capital firm, which we'll leave anonymous, predicted in 2008 that open source software (OSS) would never penetrate or disrupt the following verticals: security tools, business intelligence, and enterprise service bus.

Fast forward to 2018 and what do we see? Some of the top verticals for OSS tools are those exact same verticals. From ELK Stack to Mulesoft, many of the primary tools used in these industries came from an open source foundation. OSS has become an essential part of “custom” software development and will continue to drive forward innovation across sectors.

## Question 2 of 4

### **Will your business succeed or fail based on the quality of this product?**

At times, the determination between core competency and an ancillary task is not as straightforward as it sounds. A company may adapt to a particular tool, either licensed or built internally, without fully recognizing the business impact.

Imagine that you run a television production company. Your business has dealt with the same scheduling and calendar tools for years, finding workarounds for its shortcomings and a custom solution has never crossed your mind. Sure, a calendar cannot operate a camera or edit footage, and it definitely can't act. It seems like a generic tool, similar to email or cloud storage, with plenty of pre-fab options to choose from and not a lot of influence on the story arc of a show.

You're working with your operations team to try and reduce production costs and forecast the teams you'll need to hire over the coming quarter. You have to look through a dozen Excel files, a Google doc, and a slew of emails — alongside your calendar — to really understand your costs and how to optimize them. You realize that you're losing daily efficiency because only a few experts have visibility into your production cost drivers. The off-the-shelf calendar tool can't handle the nuances of your business and doesn't empower your teams to make improvements every day.

The plethora of calendars out there absolutely suffice for most businesses, but not for one that lives and dies by the scheduling and operations of its teams. You calculate the costs of continued inefficiency and realize that the best solution is a custom tool to address your specific requirements.

When a product lacks features and subtleties that determine the success of your organization, it's time to consider developing your own solution.

## Question 3 of 4

**Picture your company in 5-10 years. What changes do you anticipate and how will this tool serve long-term needs? H2**

No one can predict the future, but companies must align their IP to fit a long-term vision. It helps to create a list of assertions about where you believe the industry and the business is headed, and use those dictums to make decisions.

“You have to plan for all hypothetical events. That’s the challenge,” says Finnemore.

If you lead an insurance company, you might assert that more policies will be customized over the next 5-10 years rather than the one-size-fits-all approach. With more people buying “microinsurance,” the criteria for eligibility will change. How will that affect your digital roadmap?

If owning the technology behind microinsurance is vital for the company’s vision, you would want to commit to that direction. You cannot trust that a third-party tool will fit your company’s needs down the line.

In years past, executives avoided custom solutions due to the high cost. Fortunately, the open source archives of code have vastly reduced the time and money required for custom IP. It will still cost more than licensing a tool in the short term, but when looking to the future, it could be the key to staying on the cutting edge of your industry.

You must also consider the internal engineering and design costs for the upkeep of a tool. A custom tool needs to be continually developed to remain relevant. Building your own capability to drive this development will be an important part of succeeding on this path.



## Question 4 of 4

### What are the cumulative costs of each option in comparison to the anticipated ROI?

Once you have a list of assertions, you can start calculating the ROI of SaaS versus custom development.

Comparison	Open Source	SaaS
Purchase Cost	Zero/Low	High
Maintenance	Required	Outsourced
Hosting	Self-hosted	Cloud
Customization	Full Control	Limited/Expensive
Staff Needed	Expanded	Few
Technical Knowledge	High	Low
Start-Up Effort	Complex	Low
Technological Property	Owned	“Rented”
Quality	Under your control	Dependent on vendor

First, you need to look at how much a specific technology gap or inefficiency is costing the business. A company that is spending 10% of its time on a task that could be automated should most likely invest in a tool.

Perhaps there is a SaaS solution that can perform 80% of the necessary functions. That may do the trick. But if the remaining 20% is still a huge time suck, it could be worth building a custom product. It's likely that not accounting for that “last mile” of 20% is actually going to hold you back a lot more than first anticipated.

The math is easier if you know the monetary value of the lost time. An inefficiency that costs \$5 million per year creates an easy case for bespoke technology to cover the last mile. One that only costs \$20,000 per year might not be worth the time and money to fix it — unless it also offers the potential to drive new revenue streams.

## Conclusion

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