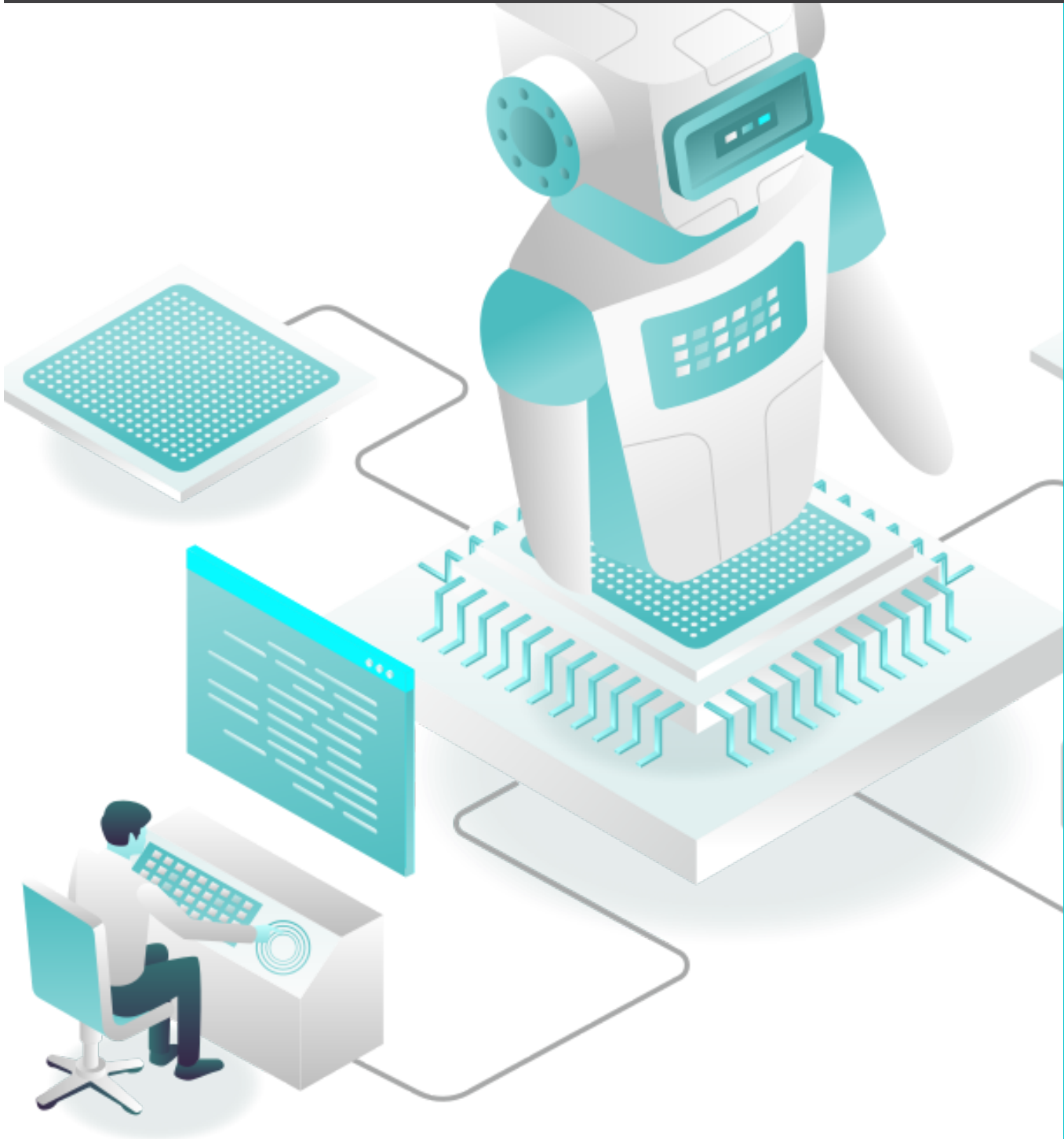


# GUIDE TO MAKING A BUILD VS. BUY DECISION



# Guide to Making a Build vs. Buy Decision

To an increasing extent, mid-market companies are getting squeezed by two competing forces.

One is an intense need to deploy digital solutions to enhance customer, supplier, and employee engagement. Many mid-market businesses report priorities such as:



Addressing talent and skills shortages with automation, mobile services, cloud computing, and generative AI



Differentiating and outcompeting with innovative technology that helps staff work more efficiently and creatively to delight customers



Maintaining a robust security stance against this growing attack surface

The other force exerting its influence on mid-market companies is the ever-present constraints of tight budgets and a limited in-house talent pool for bringing these projects to life.

In this scenario, a mid-market business must take extra care in choosing a path for executing digital transformation projects. **The conventional wisdom says there are two choices: buy a commercial off-the-shelf (COTS) solution, or build a custom solution from the ground up.**

It's not as well known, but a third approach is also available: the hybrid approach, which in most cases means buying a COTS solution that meets most of your needs, and customizing it to fill the gap. Where it's not feasible or cost-effective to customize the COTS application, a variation on the hybrid approach is to build a custom companion application that can integrate with the COTS solution.

All three of these approaches entail some risk. Because you may not get a second chance, you have to choose wisely and get it right the first time. **In this guide, we describe the advantages and disadvantages of each approach and suggest some ways to make the decision on which path is best for your situation.**

## Before You Start: Questions to Ask Yourself

On your journey to making a build-vs.-buy decision, the first step is to gather some facts. To that end, we present a set of crucial questions that your organization should ask itself before choosing an implementation path. Your task is to answer them honestly, on the basis of facts and data and not on wishful thinking and best-case-scenario projections.



### General Questions

**What is the scope of the problem you are trying to address with this software and how complex does your solution need to be to fit your business size and needs?**

You need to understand and draw a box around the problem you're trying to solve. You will be tempted to bring adjacent problem spaces into the scope of the project--this temptation must be resisted at all costs! Otherwise, the scope creep will turn your proposed solution into a bloated mess, and your project will never be finished.

Drawing a bright-line distinction between the main problem you're trying to solve and other problems that can be addressed later is important, whether you end up building or buying a solution. If you build a solution, a well-defined scope will enable the development team to accurately estimate the level of effort. If you shop for a COTS solution, it will be easier to evaluate the candidates: Either they fully address the need, or they don't.

## Does your organization currently have (or can you hire) experts capable of building, maintaining, and supporting the solution?

In-house development teams are more common in large organizations with deep pockets than in mid-market companies. But even if you have the luxury of an in-house development team, they might not have the bandwidth to take on another project. Interrupting their current work to start a new project carries risks that you must consider.

For both in-house and external development, you also need to consider not just the development effort but post-launch maintenance and support over the software lifecycle. If you don't have in-house resources for all of these tasks, you will need to budget for external resources.

COTS solutions typically have maintenance and support costs built in to the price, so there shouldn't be any mystery as to who is going to support the software and how much it will cost to do so.

## Is using the software critical to your business operations, or can you afford to wait while the solution is developed?

For custom software development, even a simple solution with a narrow scope and limited capabilities takes time to develop, test, and deploy. If you're in a hurry to address a critical capability gap, it might be better to look for a COTS solution that can be deployed quickly, even if it doesn't address all your needs.

## Cost Questions

### How much will it cost you (in time and money) to build your ideal software from the ground up?

If you opt to build a custom solution, be aware that it won't be cheap. The costs extend beyond the billable hours for external developers.

Whether you have an internal development team or engage the services of external development consultants, you will need internal resources---namely, the business users---to spend time on the project. Their expertise with the business processes and knowledge of the pain points is needed to define the system requirements, and they will need to test and provide feedback throughout the project. These activities will take them away from their regular duties, so you will likely take a productivity hit during the project. Don't forget to account for these costs for a custom solution.

## **How much will it cost to buy software that fits most of your needs (i.e., a workable solution)?**

The initial cost of a COTS solution, in general, is easier to quantify: You get a quote from the vendor. The quote should include one-time and recurring costs so that you can compare the total cost of ownership (TCO) for each option. For each vendor, make sure you understand the licensing model and the different deployment options (on-premise, cloud, or software-as-a-service). Take the time to comparison shop among a small number of options and make apples-to-apples comparisons.

## **How much will it cost to maintain either option over the next five years?**

Both custom and COTS software involves ongoing costs for support and upgrades. For COTS solutions, some vendors offer a lower up-front cost but make it up in annual subscription and maintenance charges. For custom solutions, you will need either to retain the development consultants for support or train an in-house team to do it.

## **Capabilities Questions**

### **What do you need the software to do?**

This is related to the first general question, but involves more detail. What specific business functions do you need to support or automate?

While you are defining the software's capabilities, it's also useful to ask yourself: Why do we have these business processes in the first place? If they are unique to your business and not industry best practices, you should question whether they are so important to your business that you are willing spend the time, money, and resources to build a custom software solution to support them. You might find that it's more cost effective to adopt industry best practices that can be supported by a COTS solution than to try to build a custom solution for your unique problem.

### **Is there already a product available on the market that can fulfill those needs?**

Chances are good that no COTS solution will address all of your needs, but it's unlikely that there's nothing out there that can cover at least some of them. If you can get 80 or 90% of what you need from a COTS solution, you might be able to build something to cover the rest.

## If not, is your team capable of developing software that can fulfill those needs?

This question applies to both internal and external developers. A team that is accustomed to working on software to support scientific research, for example, may not have enough domain knowledge to automate a manufacturing, logistics, or finance process. If you are shopping for external development consultants, make sure they have experience with the type of business problem you need to solve, and get references who can back up their claims.

# Build, Buy, and Hybrid Pros and Cons of Each Approach

Here is a summary of the advantages and disadvantages of the build, buy, and hybrid approaches.

## BUILD

### PROS

- You own and control the source code.
- You enjoy greater flexibility and agility for modifying or expanding the software's capabilities and features.
- You can build more integrated functionality with existing software.
- You prioritize the features based on your specific needs and unique processes.
- You can implement advanced analytics and reporting capabilities to meet your exact needs.
- You can design for scalability based on your specific growth projections.
- With a unique solution that none of your competitors has, you gain potential competitive advantage.
- You may realize long-term savings compared to a COTS solution.

### CONS

- Development and implementation cycle requires more time, resources, and planning compared to a COTS solution.
- The project is susceptible to scope creep and exceeding budget and project timeliness.
- It may be more difficult to keep the solution current in the face of rapidly changing technology, such as new desktop and mobile OSs and support for underlying frameworks.
- The project may incur higher initial expenses.
- Customer support can vary and may not be as robust or available as that for a COTS solution.

## BUY

### PROS

- Ready-made solutions are available when needed (no development-test-deployment cycle).
- Implementation time is shorter.
- Upfront costs are lower and it's easier to calculate your TCO.
- Training and hosting (if needed) are provided by the vendor.
- The solution has established scalability and has been tested and used by other businesses .
- Dedicated product development teams are constantly improving the software and providing updates.
- Customer support and community forums are available.
- COTS software has established security and regular security updates.

### CONS

- Software may not have all of the key features needed to address your unique business needs.
- You depend on the vendor for support, upgrades, and new features.
- It may cost more in the long term because of high ongoing support and maintenance costs.
- Any competitor can buy the same software, which reduces the opportunity to gain a competitive advantage.
- The vendor owns the source code. You can't change it.
- Product functionality is determined by the vendor, not you.
- The solution may never fit your exact needs even with some modifications.

### PROS

- You may be able to capture many of the advantages of both approaches: a ready-made, market-tested, industry specific solution with customizations to address your specific needs.
- You may assume less risk and gain greater business alignment.
- You can build integrated functionality with key existing software and systems.
- You can tailor specific functionality and unique business processes.
- Customization and support costs may be lower.

### CONS

- Not all COTS solutions can be customized or have APIs for integration with custom software.
- Your customizations may break when the COTS solution is updated or upgraded.
- Even with customizations, the solution may never fit 100% of your exact needs.
- Customization requires time, resources, and planning.
- The COTS vendor may not know about or provide support for your customizations.

## HYBRID (CUSTOMIZED COTS)



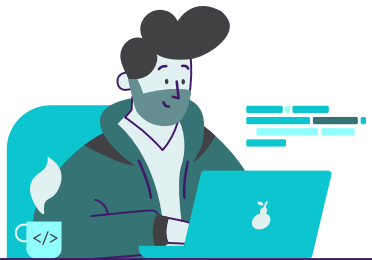
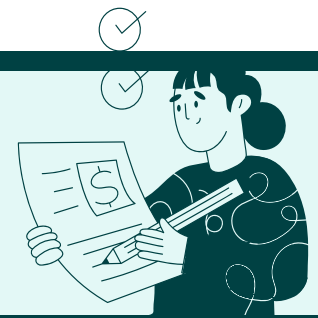
# Tips for Making the Decision

As you can see, making a build-vs.-buy decision is a complex undertaking that involves many factors and multiple stakeholders. Here are some tips for making the best decision:



**Don't rule out any options (at first):** Keep all options on the table until you fully understand the pros, cons, costs, risks, and benefits of each.

**Know the initial and ongoing costs of each option:** Don't forget the "hidden" costs of maintenance and support over the long term.



**Talk to different software developers:** Get different perspectives from developers who have been through this process before. The good ones won't be afraid to recommend choosing a COTS solution over their services if they think that's the best option for you. The really good ones won't be afraid to tell you if you're wasting your time trying to automate a process you shouldn't be doing at all.

**Focus on your needs first and understand your biggest priorities:**

Solve the biggest challenges first, but strike a balance between your pain points and the complexity of the system. You might need to aim lower for the first phase to reduce complexity and increase the chances of success.



**Think long-term:** Digital transformation is a journey. You will not solve all your problems in one project. Establish a roadmap based on both your current, prioritized pain points and the expected growth and evolution of your business.



# Advantages of Engaging a Custom Software Development Firm

Whether you decide to build a complete custom solution from scratch or pursue a hybrid approach, you will need to decide who is going to do the actual development work. If you don't already have an in-house development team, and have no immediate plans to assemble one, your best course of action is to engage the services of a custom software development firm. Some advantages of doing so include:



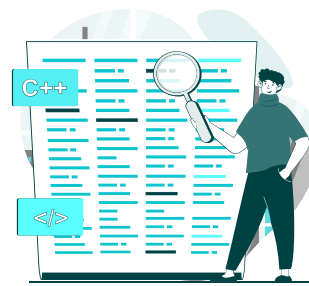
## Wide-ranging industry expertise:

For almost any industry, there are custom software development firms that are knowledgeable in the business processes and challenges facing businesses in that industry. Larger firms may serve multiple industries, whereas some “boutique” firms may specialize in only one.



## Experience with multiple technologies:

Most custom software development firms have experience in multiple technologies and can help you choose the right one for your particular business needs.



## Tried and true development process:

Many custom software development firms have established and perfected development processes that maximize their success rate.



## Support and maintenance options:

A good custom development firm stands by its work and will offer support options to provide training, day-to-day support, and ongoing maintenance and enhancements for your custom or hybrid solution.



Talking to us about your project is easy.



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