

5 Tips for Outsourcing Scientific Software Development

Outsourcing your scientific software development projects can yield great benefits for your company, including reduced costs, increased flexibility, and improved product quality.

If you choose to go this route, outsourcing should be approached deliberately. First, take steps to find the best fit for your specific needs, remembering that the best choice of provider may be an agency in another part of the world. From the U.S., you may want to explore [outsourcing companies in South America](#) because the time zone is close enough to facilitate effective communication.

Once you find a provider that's in alignment with your needs, lay out clear expectations and good communication strategies to reduce the risks and maximize the benefits. Below are some additional tips to guide you through a productive outsourcing journey.

Have a long-term business partner mindset.

Decide upfront what type of business relationship you want with the outsourcing team. While some companies look for a provider to work *for* them, finding someone to work *with* you as a partner can be more beneficial to your company in the long run. You can view the outsourcing provider as a business partner who will provide real value over time, rather than as just a low-cost alternative to get a few projects done.

There are ways you can promote a partner relationship with your outsourcing provider:

- Understand your own business needs, strengths, and weaknesses before seeking an outsourcing partner. The outsourcing company needs to understand your whole business well to know where they will fit in, and that can't happen if you don't understand it well first. Develop clear criteria for your project requirements, to ensure the outsourcing company's performance, capacity, and skills line up with your specific goals and needs.
- Be open to suggestions from the outsourcing team, as they may come up with creative solutions you haven't considered that will make your scientific software even stronger.
- Make sure your company and the software provider share the same basic values and long-term goals and have a compatible business culture.
- Keep in mind how you want the business relationship to function in the future, beyond just the initial projects.

Consider a trial project before selection.

It's essential to seek an outsourcing company that's right for your specific scientific software project needs. One way to ensure a good fit is to run through a risk-free trial project before making your final selection. The trial allows you to assess skills and abilities firsthand.

You can learn about the quality and expertise of the developers, your comfort level working together, and whether the business cultures mesh well. Include coding exercises as part of the assessment but don't expect the outsourcing provider to include the delivery of any new code in a free trial.

Define the terms of agreement.

Once you've made your selection, give sufficient thought to the terms of agreement. Be explicit about your expectations, goals, roles, and requirements for this business partnership. Make sure to include the following information:

Pricing

- Rates (hourly versus per project)
- What's included in the regular rate and what will cost extra
- The duration of the initial rate and when it will be re-negotiated

Security/confidentiality

- How the outsourcing provider will protect the code they produce for you
- How the outsourcer secures their physical premises to prevent theft
- Measures to keep your work confidential

Timing

- Clear deadlines for delivery of products
- Milestones to meet along the way
- Reporting systems to make sure work stays on track

Additional services

- Ramp up and down clauses to allow for fluctuation in your needs
- On-demand services available to you, in addition to contracted projects

Conduct an onboarding phase.

When you have a business partner mindset, with expectations of working together for the long term, be deliberate about how you integrate the outsourcing team into your company. You can accomplish this through an onboarding phase, during which the two companies get to know more about each other and how the work will proceed in practice.

Get the reporting and communication systems up and running early on. It might make sense to

schedule daily calls during this early phase. Many outsourcing companies have an established onboarding approach that can assist with this process.

Prioritize clear communication.

Good communication strategies are critical, especially when you're working with a geographically dispersed team. There are numerous digital tools to help, including video conferencing and project management apps. It's important, however, that both in-house and outsourced teams all use the same tools. The following are some additional communication strategies to include.

- Create and update task lists in progress tracking apps
- Conduct regularly scheduled calls with the outsource team
- Make onsite, in-person visits every 3-6 months
- Identify a dedicated point of contact in your company to oversee the outsourced projects

In Summary

Outsourcing your scientific software development is a smart business strategy, giving you the experts you need for as long as you need them. If you carefully select a provider, are explicit about roles and expectations, and keep the lines of communication open, a business partnership with an outsourcing provider can produce real value for your company for many years to come.