

Driving Growth in a Competitive Labor Market Through Strategic Software Development Staffing

"In every region of the country, there are more software developer openings than qualified people to fill them." - ArcGIS

Caught between wage disparities and demanding schedules, many businesses are turning to alternative staffing options to support their software development work loads. Depending on the niche, strategic staffing alternatives such as nearshoring and offshoring can prove profoundly helpful in tackling the obstacles associated with a tight labor market.

PRESSURE POINTS IN TODAY'S LABOR MARKET

The current lav of the labor market is indicative of the dramatic shift in emphasis from physical labor to technological development occurring across industries. As robotics and automation revolutionize sectors such as manufacturing and retail, facilitating the administration and design of advanced technology demands higher levels of resources than ever before.

In the area of software development, specifically, ongoing pressure in the labor market is creating significant challenges for employers. The primary problems facing recruiters in the software development space can be summarized in two ways:

- 1. A Shortage of Talent
- 2. Rising Demand = Rising Wages

As the need for skilled software developers rises around the world, so too do the challenges companies face in acquiring them. Hiring top talent is never easy, but tech recruiters now find themselves confronted with a challenge faced by few other industries: There are simply not enough developers to go around.

Evans Data Corporation (EDC) estimates the world's current developer population at 23.9 million individuals (this number is expected to balloon to as many as 28.7 million developers by the year 2024, according to their methodology). However, despite such strong growth in the sector, the need for talent continues to outpace the availability of developers by a considerable margin.

According to Code.org, over 500,000 new jobs are open in the computational sector across multiple industries at any given time, yet no more than 64,000 computer science graduates entered the U.S. workforce last year. This staggering figure sheds light on the very real talent shortage that currently exists in software development.

COMPANIES NEED GOOD TALENT. QUICKLY

Securing great developers is not only more difficult than ever before, but also more critical to companies' missions as well.

Tight deadlines and fast-paced trends in the consumer tech space present businesses with very real challenges when it comes to keeping up with the market without overworking their inhouse developers. IT teams are often expected to innovate at a faster pace than is desirable, and the added pressure to assume multiple roles and shoulder various responsibilities found in many companies contributes to the relatively high turnover rate seen in this space.

Difficulty Managing Developing Teams

Agility in development is of the utmost importance in a number of scenarios. However, a lagging, understaffed development team can slow growth to a crawl as technical debt builds and short cuts and hacks that do not scale are introduced. Mitigating such factors not only requires that



companies acquire and retain more developers to keep up, but also that they invest additional funds in implementing the right mix of development tools to facilitate effective cooperation.

EDC reports issues arising even within established DevOps operations due to a lack of the automation technology needed to aid in collaboration. This further contributes to mounting costs and tighter development budgets.

Great Talent is Scarce

Exceptional talent in any niche of modern software development is difficult to bring on at the entry level, as available graduates often lack the knowledge of bleeding edge technical topics that comes from hands-on experience in the field.

As a result, the demand for senior-level developers far exceeds the number that are actually available in the current labor market.

Talent Costs More

The difficulties companies face in finding the right developer talent for the job play into making the software development field one of the most highly paid professions at present. In fact, Arcgis.com data suggests that the average national salary in the U.S. for software developers is \$104,425 often more than twice the average regional salary in many communities.

Yet, all of this doom and gloom for employers looking to expand their tech and software development teams comes with a silver lining. Numerous creative options exist for maximizing the value of each hired hand in your business, retaining talent over the long term and developing a winning technical workforce - if you're willing to get creative and consider all the options that are available to you.

HIRING AND TALENT ACQUISITION **OPTIONS FOR TODAY'S LABOR MARKET**

The following approaches to solving your company's hiring struggles are not mutually exclusive. In fact, your business could benefit from a combination of two or all three options in order to operate most efficiently.

- 1. Onshoring: Working with talent, consultancies and companies local to your area or state (or with any company with U.S.based consultants)
- **2. Offshoring:** Engaging talent, consultancies and companies that are far removed from your country (typically in areas with dramatically lower costs of living)
- 3. **Nearshoring:** Contracting with talent, consultancies and companies from neighboring countries and territories in the same or similar time zones

ONSHORING

Depending on your needs, confining your company's operations to local professionals can help or hurt your progress. The positives and negatives are relatively easy to assess.

Onshoring Eliminates Language and Culture Barriers

Working with a team that is physically near to your headquarters poses a number of benefits in terms of communication. Quite literally speaking the same language can help ease pressures during intensive development periods.

Cultural similarities between in-house and onshore personnel also allows for unspoken customs regarding communication norms and frequencies to be understood without further explanation.



Consider posing the following questions to onshoring providers to better determine if they're a good fit for your company's objectives:

Does the partner's leadership team have engineering experience?

A partner whose leadership team lacks direct engineering experience could end up over-promising on deliverables. A true partner, on the other hand, is one that is readily available to offer input, that can communicate project variables clearly, and that can be trusted to provide thoughtful guidance based on realworld experience.

Does the partner understand not just the technical requirements, but the "bigger picture" of the

Think beyond your initial engagement with a partner. Does the partner understand how to architect a solution that will scale and grow with the company and that can easily transfer to be maintained in house or through another partner? If not, you may expect to face significant costs to rework the project in the future.

Onshoring Costs More

Of the three options explored in this paper, onshoring tends to be the most expensive. Teams working out of locations adjacent to yours will be bound by a wage structure similar to your own. A bit of research can go a long way in finding a relatively inexpensive team to work with, but offshoring and nearshoring are far more likely to cost less than onshoring.

Onshoring Resembles Full-Time Hiring

Taking on talent in an onshore capacity can often resemble the process of hiring full-time employees. The strongest resemblance is, again, in price. Standardized benefits and requirements in your area are likely to apply to your onshore team as well, meaning such costs might be passed on to you for their services.





OFFSHORING

Although this option presents teams with the largest gap in physical distance between their company and their chosen team (s), there are upsides to the approach.

Offshoring is Cheap

On the surface, offshoring stands out as the least costly of the three available options, thanks to the offshore team's location. This symptom of geo-arbitrage can work out guite favorably for a burgeoning business's bottom line, but the quality of work the team produces must still be passable to avoid incurring additional costs to patch problems later on.

Time Discrepancies Can be Used Creatively

Time differences can be capitalized on across multiple offshore teams to distribute delegated functions more effectively. For instance, when one team finishes a day of development, another can get started with testing. In essence, this approach facilitates round-the-clock productivity, which may not be possible with onshore or nearshore teams.

Ask the following questions when evaluating potential offshore partners:

Is the partner concerned with the ROI of my project?

Does the partner understand that the business needs to produce positive ROI on the large investment they are making in technology? These questions are especially important for companies looking to launch entirely new products. A clear understanding of your company's goals is pivotal to piecing together functionality and feel in a way that produces tangible business results.

Does the partner say "yes" to everything?

A 'yes-man' can seem encouraging at a project's offset, only to deliver entirely different results down the line than those agreed upon. If your chosen partner is responding in the affirmative to all of your development whims and inquiries without question, there may be an issue with reliability in the future.

That said, some aspects of offshoring can legitimately cause issues for your business. There are, for example, development scenarios that do not translate well across such wide cultural gaps.

The Potential for Sub-Par Work

Patching up problem code can be a serious issue if the offshore team is producing particularly inadequate work. Their services could even represent a fiscal net negative, should extensive code reparations be needed.





The Fatal Consequences of Boeing's Offshore Development Choices

A tragic example of poor outsourcing practices can be found in the case of Boeing's 2018 issues with its thennew 737 Max 8 model aircraft, including two crashes resulting in the death of 346 people.

With the 737 Max 8 planes, which were grounded for nearly 20 months, it was discovered that faulty components, including cockpit warning lights and a stabilization feature called MCAS, were to blame. However, further compounding the issue was the company's use of offshore software developers to complete coding work on critical parts of the planes' controls.

Although an extreme case, Boeing's example accurately represents the limitations of offshoring as they pertain to completing particularly sensitive work. In such cases, the monetary savings can end up overshadowed by catastrophic failings in performance.

Language Barriers and Cultural Disconnects

Both language and culture come into play in any kind of business relationship. Navigating a discrepancy of tongue or cultural temperament requires finesse and may prove beyond the capacity or willingness of your in-house team.

Time Zone Troubles

Just as differences in time zones can prove beneficial when handled creatively by multiple high quality teams, they can just as quickly morph into obstacles to your company's progress. Communication delays lead the pack of potential pitfalls governing this kind of setup. Should your project require time-sensitive attention during your own working hours, then offshoring might pose more of a threat to your company's development than a benefit.

NEARSHORING

Although both offshoring and onshoring may seem like diametrically opposed processes with little space in between, the option of a hybridized approach through nearshoring does exist - and it could be a great fit for your organization.

Nearshoring Can Be the Best of Both Worlds

Nearshoring can provide a combination of both offshoring's economic value and onshoring's minimized cultural divide. With a nearshore team working in tandem with your own staff, a variety of workloads can be accommodated at reduced rates, yet with similar control over the development process to onshore teams.

The Language Barrier is Low

Although nearshoring implies some cultural differences due to teams being located in other countries, their relative proximity to your own location in comparison to offshore options allows for far greater comprehension and communication potential in most cases.

In the case of Latin American locations and countries like Colombia, Argentina and Uruguay, English is often a second language, and Western customs are widely understood. Such commonalities of customs and speech can bridge the minor distance gap between your teams through a mutual understanding of your underlying business goals and your industry's requirements.



Meeting Face-to-Face is Possible

Arriving on site for a face-to-face meeting is much easier to manage with nearshore teams than offshore ones. This proximity can make a major difference for businesses that require confidential documents and information to be exchanged in person.

Potential for Time Zone Overlap

Although your chosen nearshore team will be located in another territory, their proximity ensures there will be at least some overlap in time zones, allowing for more comfortable active communication practices.

For example, consider nearshoring to teams based in Monterrey, Mexico. Because the city operates on Central Standard time (CST), U.S. teams on the East Coast are only one time zone apart, while those on the West Coast are off by only two time zones. As a result, U.S. teams working with nearshore providers in the city never have a gap in time zones of more than two hours.

Hire Only as Many as are Needed

Nearshore operations benefit from the same ondemand outsourcing model as do the other options described in this paper, allowing you to select the right amount of manpower for the task at hand. This frees up resources that might have been spent on maintaining an over-sized, full-time team for more pressing purposes.

With nearshoring, there is no need to go 'all-in' at any time, and available staff can be provided, should you need them for a spike in activity. Once your needs have been met by your nearshoring team, you can reduce its size to fit your preferences, minimizing your overall investment in necessary talent without negatively impacting your ability to react to shifting developmental goalposts.

Immediate Onboarding at Lower Costs

As opposed to traditional hiring methods, the need for months of recruitment and onboarding is eliminated in favor of immediate team utility. Through a nearshoring approach, a larger number of team members can be brought onboard a given project for less upfront expense and quickly given instruction on the task at hand.

An Example of Savings Potential

With wages for software developers sitting at roughly \$100,000 in the U.S., outsourcing to nearshoring consulting companies can practically cut expenses in half, compared to working with an onshore consultancy.

By pairing a nearshore approach with in-house development and hiring processes, you can maintain a high level of productivity while available full-time positions are filled by your recruiters.

Investor Reassurance

Nearshoring allows teams to keep questioning investors happier, thanks to visible proof of progress - even if understaffed in-house - through the use of a nearshore team.

Intellectual Property Risks

Secretive developmental work could potentially fall into the wrong hands when shared with a third party development partner, making nearshoring alternatives potentially more hazardous for critical arrangements than hiring in-house developers. However, unlike offshoring, nearshoring can help mitigate such concerns, thanks to its greater proximity and the higher implicit accountability that comes along with shared cultural expectations.



Less Accessible Than Onshore Teams

Under most circumstances, nearshore teams will be a bit farther out of the way than onshore teams which could complicate regular in-person communication. However, similar time-zones may reduce the need for such meetings substantially.

Consider asking the following questions to gauge if a nearshore team can help you:

How easily will I be able to communicate with my partner's developers?

Having immediate access to your chosen team's developers for important discussions and one-on-one sessions can make a monumental difference in development speed and accuracy. The importance of such accessibility is magnified when it comes to reaching team leaders and technical experts.

Facilitating ample communication opportunities between your own Director of IT or VP of IT and the technical leads of your outsourced teams should be a top priority. Language plays a significant role here as well; lack of a shared language with individual team members can create disconnects and misinterpretations of business goals along the way.

Will I have a direct point of contact in case issues arise?

Besides being able to reach individual developers working on your project, having access to a team leader for expedient issue resolving makes mitigating serious risks and introducing time-sensitive changes possible.

HOW TO VALIDATE POTENTIAL PROVIDERS

Although the differences described so far between onshore, offshore and nearshore staffing solutions provide an accurate overview of each, it is important to note that within each designation exists a range of service providers. Some are most assuredly better than others, and all present their own strengths and shortcomings.

Such differentiating details as exact locations, total number of available personnel, and specific fields of expertise must be considered before settling on any single company to work with.

Asking a few simple questions can help tremendously in validating potential outsourcing partners beyond the points covered above. The following questions touch on critical aspects of an outsourcing service that should be addressed upfront before pursuing an active business relationship:

How does the partner vet and retain their talent?

Take talent vetting by your strategic staffing partner as seriously as you would take it within your own organization. Teams that attract low quality talent or that fail to weed out those who are likely to have performance issues often suffer from higher-than-average turnover. This, in turn, increases your costs, if projects are slowed down by the need to replace developers that have either quit or been terminated.

A few key questions to ask when investigating vetting standards include:

What percentage of the team have been recruited through referrals?



- What is the average retention rate of the team?
- What does the interview process look like?
- What standards are candidates held to throughout the recruitment and onboarding processes?
- How is internal turnover managed so as to not disrupt production schedules?

Does the partner's team have the specific technical expertise I need?

Outsourcing critical technical development work in Ruby or Javascript to a team that specializes in neither will only hurt your progress in the long run. If a team does not have core competencies working in Java, for example, it should be willing to turn down projects in this development niche to avoid producing poor outcomes for its clients.

Does the partner mention of DevOps, cloud development or other important concepts?

Certainly, if you aren't hiring out a DevOps project, hearing this particular buzzword may not be a true red flag. What's most important is that the language the partner users in early conversations with your company indicates that they're familiar with modern development trends and that they continually invest in professional development to stay on top of changes.

Does the partner's team have experience in my industry?

Having experience in your industry goes deeper than subject matter expertise. Profound knowledge of common goals increases the likelihood of successful outcomes. If you're a manufacturing company, for example, a software development partner with specific experience in manufacturing solutions may be better positioned to support your needs than one with a history of consumer app development.

Can the partner provide project leadership, in addition to technical expertise?

Driving growth at some companies may simply require the addition of 'feets in seats' that can scale up capacity quickly. In others, however, it can be beneficial to outsource more than code work. Having a suitable partner who is able to provide not just development support, but insight into business and design planning as well, can speed up development considerably, while simultaneously strengthening your final product.

Does the partner offer insight into whether your proposed budgets and/or timelines are reasonable?

Gauging how much work can be done in a given period with the manpower vou've contracted should be a routine occurrence for any experienced partner. Reliable consultants will bring issues of time and budget to your attention immediately, should your expectations outpace their capabilities.

MOVING FORWARD WITH A STRATEGIC STAFFING APPROACH

When it comes to identifying the appropriate staffing approach to drive growth in tight labor markets, there truly are no 'black and white' answers that are applicable to all companies. In-house recruitment, onshoring, nearshoring, and offshoring may all play a role - alone or in combination - when it comes to meeting critical development objectives.

It is only through a careful evaluation of your needs, complete research into the partners that may be available to support you, and a thorough vetting process that the staffing solutions most likely to drive project success will reveal themselves.





About Simpat

Simpat is an Austin, Texas-based custom software consulting company with a state-of-the-art software delivery center in Monterrey, Mexico made up by a team of innovative software professionals who thrive on solving our clients' most complex challenges and mission-critical goals. Through our high level experience and strategic vision, we create successful, simple and manageable software experiences.

To learn more about Simpat's nearshore software development, implementation, resources and consulting solutions, reach out to:

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