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Trends in Onshore Vs Offshore Software Development 2022-2023

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Introduction

Digital Transformation is arguably the top trend of this decade as companies accelerate software development and application modernization to meet the new demands of employees and customers. Remote and hybrid work has mandated that companies invest in building digital collaboration capabilities.

As companies pursue digital opportunities, capacity planning helps executives decide on whether to develop software in-house or outsource. Top performing companies with in-house software development capabilities are contending with the tech talent shortage. Offshoring continues to be among the top priorities of CIOs.

Boeing, a top US exporter and a global aerospace company, announced last year that they will outsource a significant portion of their IT operations to Dell which will include onshore and offshore components of managed services.

According to news reports, 600 jobs in IT Support such as Cloud Services, Databases, IT Security and User Management, are being outsourced as part of this contract.

3M has been consistently stepping up its investment in augmenting data analytics capabilities to improve operational efficiency and offer a better customer experience. They recently announced setting up a technology center in Bengaluru, India and employing more than 1000 engineers. These engineers will be working on data analytics projects to ensure "seamless operations, improved customer experience, and enhanced digital capabilities."

In a recent interview, Thomas Ulm, the chairman of Daimler Truck Innovation Center India, said, "When we thought about the footprint for our future R&D, it was mainly software, electronics and IT and so we decided to set this up in India where there is a highly educated, large talent pool and a very stable political and legal environment."

Companies like IBM, GE, American Express, CISCO and Ford have preferred India and Philippines to outsource software development and customer support services for more than 20 years. Indian software development outsourcing companies have largely adopted Agile Development which "brings down the time for development from 9-12 weeks to 4-12 weeks," according to a PWC report.

A recent Gartner study shows that, "by 2023, 65% of larger enterprises using captive offshore or nearshore service delivery centers will have adopted a multi-country sourcing strategy for these services." This sourcing strategy is part of their ongoing risk mitigation planning to protect their companies from geopolitical risks.

Challenges in Onshore versus Offshore Software Development

In choosing the right approach to developing software or modernizing their application portfolio, companies must take into consideration the following factors:

Demand-Supply Gap

According to the US Bureau of Labor Statistics, "employment of software developers, quality assurance analysts, and testers is projected to grow 22 percent from 2020 to 2030, much faster than the average for all occupations. About 189,200 openings for software developers, quality assurance analysts, and testers are projected each year, on average, over the decade."

When you opt for onshore software development, you compete against local companies to hire engineers with skill sets that are highly in demand. There will be constant churn and higher attrition due to the demand-supply gap. Costs will escalate, and you will lose predictability. While your competitors are busy implementing digital transformation initiatives, you will be forever on the lookout for hiring local talents who can help you build and integrate apps.

Does this mean that offshore software development does not have pain points?

Certainly not. Offshore software development might mitigate the risks associated with onshoring, but it comes with its own set of challenges such as:

Cost overruns due to scope creep:

When you keep shifting the goal posts and modifying the scope of offshore software development projects midway through, then there will be cost overruns that were not factored in at the beginning. That being said, overruns are not unique to outsourcing models. According to a McKinsey report, "66% of enterprise software projects have cost overruns." Here is a list of custom software projects that suffer from cost overruns and includes in-house and outsourced development.

Choosing the wrong offshoring engagement model:

Offshore software development companies offer three types ofengagement. Their customers can:

- Hire individuals with specific skill requirements – **IT Staff Augmentation**
- Hire a dedicated team comprising of varied competencies – **Dedicated IT Teams**
- Outsource end-to-end development including design, architecture, build, test, maintain, and provide ongoing support – **Project Outsourcing**

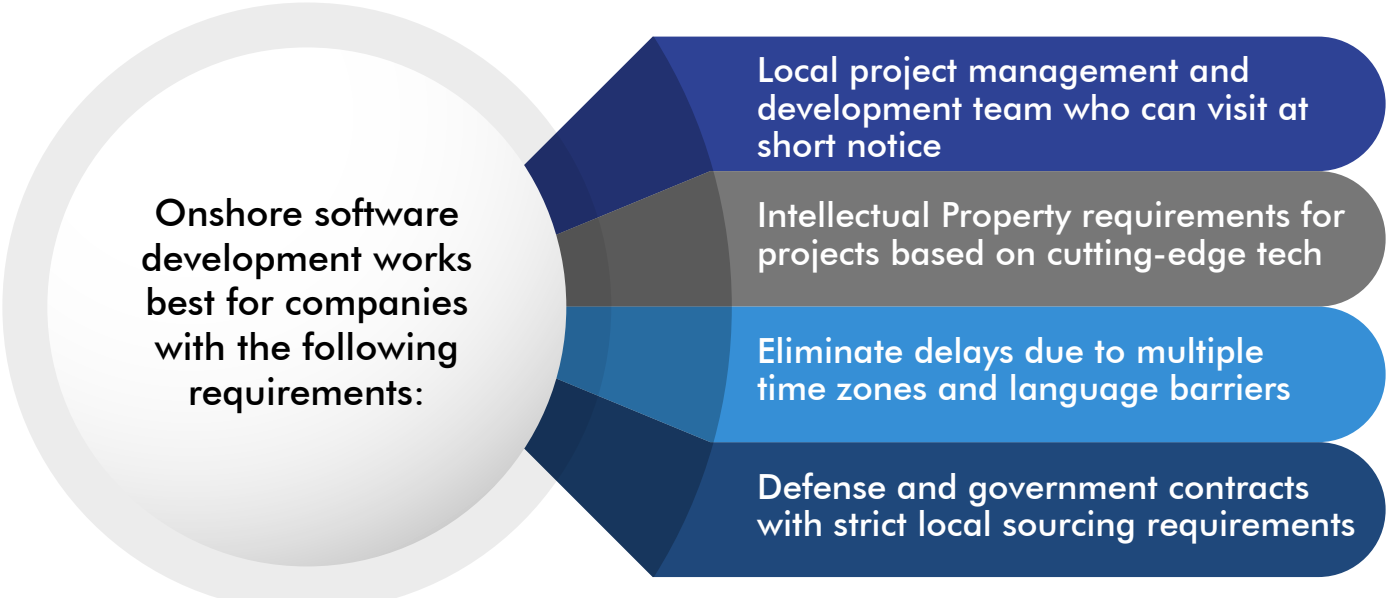
Customers need to make informed decisions while choosing the engagement model. Companies with in-house software development capabilities will benefit from IT Staff Augmentation and Dedicated Teams for undertaking short-term growth projects. Software Project Outsourcing is best suited for companies wanting to focus on core competencies while leveraging the expertise of a software development company for developing and managing their application portfolio.

Unavailability of collaboration tools:

Lack of modern, cloud-based collaboration, project management, and automation tools will increase the project complexity leading to time delays and disagreements over budgeted expenses.

Let us now look at the ways to mitigate these risks and make the best use of outsourcing software development:

Latest Trends in Onshore versus Offshore Software Development



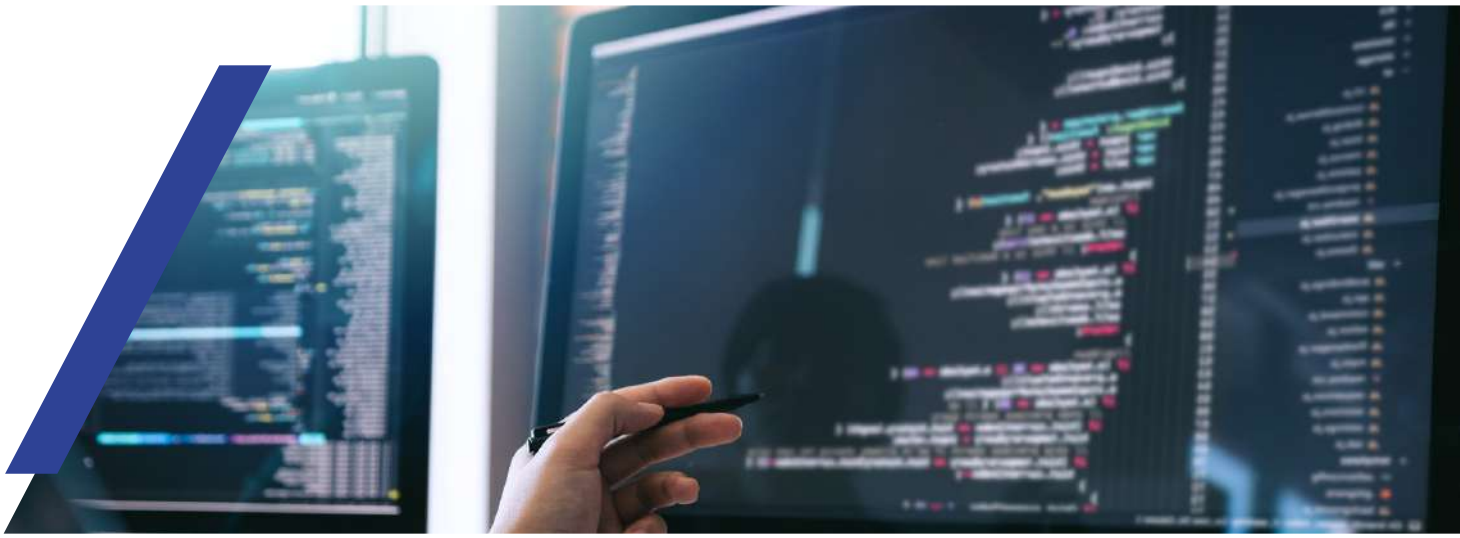
Top reasons why companies outsource software development to offshore partners:

- Focus on core competencies
- Reduce cost of software development
- Plug skill gaps
- Leverage industry and domain experience
- Rapid Application Development capabilities
- Proven Agile Process for iterative development
- Leverage DevOps for Continuous Testing, Integration and Delivery
- Flexible engagement models and transparent pricing

Nearshoring combines the best of both worlds where companies can benefit from a lower cost of software development while retaining the ability to make the project management and development team visit the client on short notice for any stakeholder presentations including proof-of-concepts and final project handover.

Onshore Software Development Trends:

In a recent webinar on the Gartner CIO Leadership Vision 2022, Janelle Hill, Distinguished Analyst, said, "Expectations continue to rise for CIOs to generate more value from digital investments while enabling desired outcomes. Combined with a talent shortage, the question becomes, how do CIOs maintain the momentum of their enterprise's digital journey?"



The answer to this question lies in how effectively companies leverage software development outsourcing to build digital solutions for their employees and customers. Let us look at the top benefits of outsourcing software development to an onshore partner:

- Tap into niche programming skillsets available onshore
- Strengthen Platform Capabilities
- Standardize Processes using Collaboration Tools
- Leverage Top Technologies such as Cloud, Smart Factory and Automation
- Use modern frameworks to build apps
- Mitigate Tech Talent Shortage*
- Reduce cost of development

Low-Code and No-Code Development: 4 out of 5 companies in the US leverage low-code development and globally the market is expected to grow at 29.5% compounded annual growth rate. Some of the popular low-code and no-code platforms are: ServiceNow, Zoho Creator, Appian, Salesforce Platform, Mendix, and Botmock. Botmock, for example, is used by companies such as Walmart to build and deploy conversational applications to enable customers to build their grocery cart using voice.

Sources: 2021 Developer Survey by Stack Overflow and US Bureau of Labor Statistics, April 2021

*1.2 million predicted shortages of US Engineers by 2026. This figure stands at 900,000 currently.

Offshore Software Development Trends:

Top Countries for Offshore Software Development:

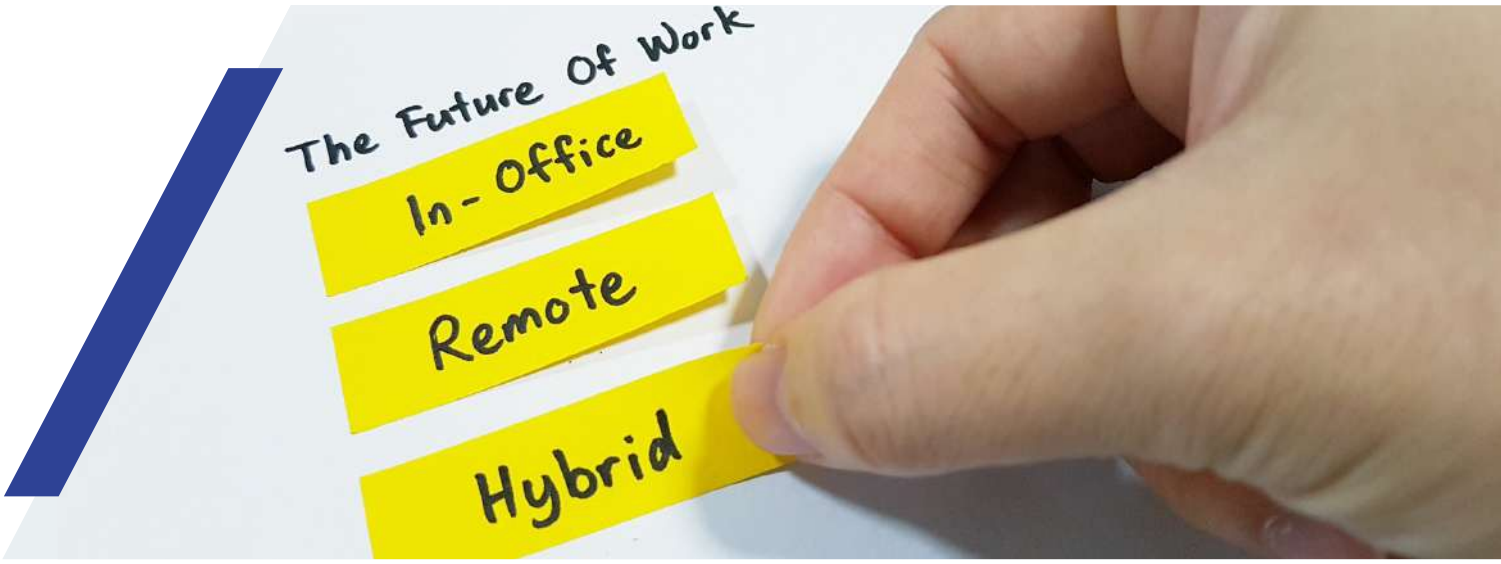
- South and Southeast Asia - India, Bangladesh, China, Vietnam, Hong Kong, China, Thailand, Malaysia, Singapore, and the Philippines.
- Latin America – time zone alignment with the US and Canada and higher level of English proficiency in countries like Peru, Ecuador, Chile, Brazil, and Mexico

Services offered by Offshore Software Development Companies:

- UX Design and Prototyping
- Cloud, Web, and Mobile App Development
- Data Integration and Visualization
- Legacy Application Modernization and Application Integration
- IT Managed Services, Testing-as-a-Service, Support-as-a-Service

Regular, Remote, and Hybrid Work:

Engineers have the flexibility to work from anywhere and collaborate with employees and clients through apps such as Zoom, Microsoft Teams, Google Meet, Slack, Asana, Trello, and Base Camp.



Offshore Competency Development Trends:

Offshore Software Development companies, in the past, were focused on developing "I-shaped" engineers where the emphasis was more on depth of skills. Roles such as analyst, programmer, tester, web designer, and system engineers had skills that were not interchangeable.

Now the focus is shifting towards training and developing "T-shaped" engineers who can transition between roles based on project requirements. Bain and Company coined the term "expert generalist" for resources who are capable of handling responsibilities related to project management, development, and support.

ANALYST	PROGRAMMER	TEST ENGINEER	WEB DESIGNER	SYSTEM ENGINEER
Write executable documents	Unit tests	Automated tests	UX design	DevOps
Requirements engineering	Production code	Functional testing	Image, icon, logo design	Pyhton, Perl, Go, Shell
Write user manuals	System architecture	Test plan	JavaScript, HTML, CSS	Sysytem & OS
...	...	...	...	...

BROAD

DEEP

Image Source: medium.com

Conclusion

According to the PwC Pulse Survey: Executive Views on Business in 2022, while 77% of executives say hiring and retaining talent is their most critical growth driver in 2022, 60% also identified digital transformation as an equally important factor in achieving growth. It is also interesting that not more than 30% of the C-Suite Executives say tech talent shortages will ease this year. These data points prove that outsourcing will remain important for companies as they compete with each other to expand their market share. Onshore versus offshore software development is a debate that extends beyond time and cost savings.

Factors that influence executive decisions concerning offshoring or nearshoring:

Cultural Integration:

Success of a software outsourcing engagement depends on how well the team understands the values, objectives, and priorities, regardless of where the team members are located.

Choosing the Right Strategy:

Identifying the pain points such as lack of an in-house software engineering team or shortage of bandwidth will help in choosing the right strategy such as IT Staff Augmentation, Dedicated Software Development Teams, or Software Project Outsourcing.

Key Performance Indicators:

KPIs such as Total Cost of Ownership (TCO), Time to Market (TTM), Low Code Churn for Efficiency, Product Backlog Refinement, Business Process Automation, and Expected Business Value.

Shared Responsibilities:

Clear definition of responsibilities of onshore and offshore development teams for Project Management, Team Management, Quality Control, and Risk Management.

The first prime minister of Singapore famously said, "If you deprive yourself of outsourcing and your competitors do not, you're putting yourself out of business."

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