



**Flexibility to Meet Changing
Requirements at a Fixed Price:
the Next Generation of Offshore
Application Outsourcing Contracts**

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Introduction

Offshore IT outsourcing has evolved from simple labor arbitrage – developer and programmer services purchased in a low-cost market and resold in a higher-cost market for a profit – to become a business practice that allows enterprises to compete on a global scale in a rapidly changing world. In the face of new regulations, a constantly shifting business climate and the convergence of formerly distinct businesses, companies must be able to respond quickly and effectively to market situations in order to remain competitive.

Technology can either enable a business to respond or it can prevent a business from responding to challenges and opportunities in the marketplace. Companies turn to outsourcing vendors for two reasons. First, outsourcers allow them to focus on their core competencies rather than on IT. Second, offshore outsourcing allows them to reduce total cost of ownership for information technology assets. Because of this, companies from every industry turn to global outsourcing vendors to empower them to compete.

Outsourcing vendors, however, can also either enable the business' strategic goals or hamper them. Much the same way their business customers have their unique culture and makeup, vendor companies themselves also have a unique DNA that guides their operations. Because of this, goal alignment between a client company and an outsourcing vendor is paramount to the success of a project.

Global outsourcing projects have a multitude of characteristics that effect their success or failure. Are the complete specifications known at the outset? Is the situation in the client's industry static or will it change during the course of the project? Is the client company able to actively participate in the project by responding to queries and testing the software? Is there a firm delivery target or will delays be tolerated? Will the client company's needs evolve during the project to take into account new market conditions and opportunities, or will the project as specified at the beginning still solve the problem upon delivery? These are some of the simpler questions to answer.

More difficult to answer are questions like: what are the rules and parameters governing the project? Will the development resources be located on-, near- or off-shore? How will decisions be made throughout the process? Who will do the testing – the end-user or a surrogate? Who decides whether changes will be accepted? How will success be measured? When is the project done?

These and many other questions determine whether a large IT outsourcing project with an offshore component will be successful, not only in delivering working solutions, but also furthering the client company's strategic business goals.

Offshore IT outsourcing projects can be managed in two ways: through the development methodology utilized and through the contractual terms of the project. These two variables will have the greatest impact on the outcome of the project. There are several traditional options for both development methodology and contractual terms.

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Development Methods

Waterfall and Agile are two development methods in wide use today.

Waterfall is a traditional serial method of developing software. In a Waterfall project, the requirements and specifications of the full project are outlined at the outset. The project is then undertaken in a sequential series of steps with rules and regulations for each step. A finished system is delivered at the culmination of the quality assurance and testing sequences. This process may require eighteen months to complete.

When changes are made to the specifications during the course of the project, they become more painful, and costly, the further along the changes are made in the process. An industry adage says that a change in the documentation phase costs \$1, a change during the development phase costs \$100 and a change once the system is in production costs \$1,000. Changes will also lead to delays in delivery of the finished system because of the additional, unplanned time and effort necessary to factor the changes into the serial process and integrate the new information effectively.

Agile development methodology, on the other hand, assumes that all the system details will not be known at the beginning. Agile is an iterative process, delivering tested, working solutions at regular intervals throughout the duration of the project.

The project begins by identifying the general nature of the system, the value proposition and the business outcome necessary to achieve the business' strategic goals. These high-level themes are boiled down into attributes that a successful development outcome must contain. The attributes are then ranked according to their business value and the effort it will take to develop them.

Because of the iterative character of an Agile project, it lends itself to changing requirements based on the business' need or developments in the marketplace. As such, the business can identify additional attributes for the project and they can be integrated into the development at any point. New attributes are ranked by their business value and relative effort and slotted into the larger project list, called a Product Backlog, pushing other attributes with lower business values down the list.

Waterfall development works well in situations where the requirements of the project won't change dramatically over time, and there is time for a long development process. Agile development works well in dynamic situations where the requirements will change over time and the delivery of functional software early in the process is important.

In addition, the choice of outsourcing vendor can have an impact on the development method used. The nature of the relationship between the vendor and client, as well as the development style of the vendor's team, often drives the choice of methodology. If a vendor isn't collaborative by nature, or prefers to work in larger batches, then Waterfall will be the best choice. If the vendor is more collaborative, then the client has the option to choose Agile methodology.



Commercial Terms

IT outsourcing contracts are priced using two broad arrangements: Time & Materials and Fixed Price terms. There are other models being deployed as well, such as revenue sharing, licensing and training, but these are fairly specialized models targeting small niche markets, and they are not viable for the vast majority of work that Fortune 500 companies want to outsource.

The Time & Materials pricing strategy is much like an a la carte menu with the developers available, the locations of those developers and the rates for each. A client company can choose what talent in what location at what rate they want to dedicate to the project. In this arrangement, the client is responsible for identifying the headcount they think will be necessary to complete the project. The client can estimate their relative cost based on the menu pricing and the length of the project if that's known up front.

The Time & Materials model is often employed for application maintenance and strategic outsourcing work, but it can be a volatile model for the customer. These contracts pose the most risk for the customer, since neither their budget, nor their delivery schedule is reliable and the outsourcing provider is not contractually obligated to deliver a working solution, just a certain headcount.

A subset of the Time & Materials pricing strategy is the Time & Materials Not to Exceed. This uses the same menu theory, but puts a cap on the amount of money spent on the project. Terms are established based on money rather than an IT solution that meets the customer's business needs. There is no guarantee that enough business value will be present by the time the spend ceiling is reached. The risk and the management of this approach reside entirely with the customer in this model.

The Fixed Price pricing strategy looks at the entire project scope and determines a price and deadline for its completion. Fixed Price contracts are based upon the delivery of an agreed-upon outcome, rather than just man-hours applied to the project. The outsourcing provider then meets with the internal team to determine what resources are available for the project, how to staff the team and how to provide a reasonable development roadmap. The project development roadmap includes specific points at which the customer is able to submit change orders without impacting the overall timeline or budget. It represents a text-book business model on paper, but in practice it falls short due mainly to the reality of change orders.

A change order is any request from a customer that deviates from the original project scope. Common change orders originate from new functionality, adoption of newer technologies, integration with additional platforms, and a host of other major technology redirections. Business rules often create change orders – government regulations, competitive forces, and new markets opening up. All fixed-price contracts build in room for a predictable number of change orders, as defined by the provider, rather than the customer. As long as the customer limits adjustments to the terms of the contract, the pricing estimate is reliable.

These three commercial terms can be applied to each of the development methodologies, but the bulk of the work done in the industry today is priced using a Fixed Price Waterfall arrangement. Traditional Agile projects have been contracted using the Time & Materials Not to Exceed arrangement.



Since specifications can be identified up front and development phases can be mapped out in a Waterfall project, the Fixed Price terms many times make sense for both the client and the vendor. However, any changes made during the project can lead to both costly change orders and delays in delivery, leaving the client and the vendor at odds and possibly resulting in disgruntled and disappointed clients.

Further, the Agile development process may be more nimble, but contract arrangements based on headcount and pricing would seem to undercut the development methodology's focus on delivering systems that provide business value.

Global Resources

In today's market, the demand for IT developer talent far outstrips the domestic supply. The only way to meet the demand is to engage a global talent pool. Utilizing these resources allows companies with IT outsourcing needs to benefit from the skills of a global labor pool, as well as cost savings realized when supply and demand reach equilibrium.

However, not every outsourcing vendor is as effective with offshore resources as they are with local resources. Employing talent from around the globe comes with issues of culture, language and time-zone differences, which can be barriers to effective collaboration. Market-leading offshore outsourcing vendors overcome these issues through a strong process, constant communication and the use of advanced collaboration tools.

A New Approach

A new commercial strategy is emerging in the industry. It marries Fixed Price Terms with Agile development methods and offshore development resources. It embraces change while aligning the vendor's priorities and measures of success with their clients.

In a Fixed Price Agile project, the outsourcing vendor is focused on delivering the full project at a certain price by a pre-determined date. As we have seen, Agile development methodologies embrace change during a project. Market-leading Agile practitioners have found a way to marry the security of Fixed Price arrangement with the high change characteristic of an Agile project. This innovative model is ideal for companies with dynamic development needs that are willing to actively engage in the process.

Fixed Price Agile plans can be described in three steps: Discovery, Requirements Gathering and Delivery.

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Discovery

In this phase, the outsourcing provider will attempt to understand the objectives of the client company as they relate to its cultural disposition, environmental factors and engagement ability. Is the IT department open to new ideas and working in a collaborative way to improve on past development projects? How involved is the business side of the company willing to get with the project on a regular basis? Do the IT and business teams have a collegial or adversarial working relationship?

The answers to these and many other questions will predict the probability of a successful outcome for the project. Agile development projects depend upon a positive working relationship within the enterprise as well as between a provider and their client. With iterative development, the client must be involved on an ongoing basis, testing each iteration and providing substantive and timely feedback on whether it addresses the business goals. Additionally, the IT and business sides of the client organization must work together to balance the software functionality with the business' strategic goals.

During the discovery phase, a multi-disciplinary client team is assembled and educated about the Agile methodology and its ceremonies and documentation. Ceremonies include sprint planning, sprint review and daily scrum meetings to guide each iteration. Documents including the Product Backlog, Sprint Backlog and Burndown Chart inform the work in each sprint. The project teams must be prepared, structured and trained for the rigor and velocity of Agile development.

When utilizing an offshore, or combined on- and offshore, outsourcing team, it is important to note that the team is not entirely remote. Although the team may be working in an offshore location, there is representation onsite at the client company. Usually, an onshore representative for the project will be indigenous to the client location to facilitate any cultural and language issues as well as bridge communication between the client and the offshore resources.

The discovery phase is primarily conducted by the in-country representative(s). In later stages, the offshore team meets directly with the client to amplify collaboration.

Requirements Gathering

During this phase of the project the cross-functional team meets to capture the features and requirements of a successful product. At this point, these features are detailed as non-technical statements called Stories. Each Story is given a ranking based on the relative weight of the amount of effort necessary to develop it; this ranking represents the feature's Story Points value. The full list of features is called the Product Backlog. It is ranked based on the business values assigned to each attribute.

When an Agile development team is assembled, a calculation is made as to how productive they can ideally be based on team size, talent and time available, among other things. This calculation allows the team to identify how many of the Stories can be developed in each working period.



During each working period, called a sprint, the Agile team will work on developing those Stories with the highest business value. The product of each sprint, the iteration, will be a fully functional software product. Each subsequent iteration will build upon what has already been delivered. The effort it takes to develop each Story will determine how much the Agile team can deliver at the end of any given sprint. In this way, the team leader can determine, based on the relative business value and the effort necessary for development, which Stories can be delivered in which sprints.

With each sprint, the Agile team delivers additional features, thereby checking them off the Product Backlog list. The rate at which the team can check items off is called the Burndown Rate and provides the client a picture of the length of the full project.

One of the important products of this phase is the Statement of Work Document, which comprises the product planning process and requires the most collaboration between the client company and the outsourcing partner. This document sets the project milestones and establishes a fixed-price for the project. Pricing, velocity and milestones are tied to the Story Point blueprint. In effect, the customer is paying for a certain number of Story Points. This blueprint will serve as the backbone to accomplishing a high degree of change in a fixed-price program.

In effect, a client can articulate as many changes as they'd like as long as, when the changes are ranked by business value, the corresponding number of Story Points are removed from the bottom of the list.

The outsourcing vendor will compare the Story Points with the equivalent time and staff needed to complete them, and organize a series of sprints based on these factors. Each sprint will produce a certain, agreed-upon number of story points which will determine velocity for that sprint. The Product Backlog for each sprint attempts to match the programming velocity of the team with the number of story points that can be developed in the timeframe allotted. The features developed in each sprint are crossed off the Product Backlog during the next sprint planning meeting.

This pattern becomes the backbone for integrating change orders into the project.

In projects utilizing an offshore team, the efforts are coordinated using simple tools such as overlapping business days, so that the end of one team's day overlaps the beginning of another team's day to facilitate collaboration and hand-off to the next step. Teams also make use of more advanced collaboration tools as well to ensure the highest degree of collaboration and communication. Done well, the use of an offshore development team will have no effect on the velocity of the project.

Delivery

Sprints are short, intense work periods and typically last between two and three weeks. Each sprint includes many aspects of a complete development lifecycle to ensure the delivery of working code for acceptance testing.

User Story acceptance is a critical component of each sprint, which is why it is crucial that the

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client decision makers be available to participate in an Agile project throughout the entire process. With features being delivered at regular intervals, the acceptance group must be prepared for the velocity of delivery. Accepted features are documented, approved and removed from the Product Backlog. This burndown of the Product Backlog reduces the number of Story Points remaining in the full project. As features are checked off the Product Backlog, the team can measure its progress against the remaining project scope. By projecting the Burndown Rate, the team can measure whether the project is on schedule.

New features requirements or changes can be introduced between each sprint. The team documents and estimates the size of the requirements in the same way as the original Product Backlog and determines which low-priority features are no longer in scope. By removing low business value features with Story Points equivalent to higher priority features being added, the team maintains the scope of the project and changes are incorporated at no additional charge. The fixed-price and incremental delivery timelines remain intact as long as the story point total remains constant.

Continued coordination with the offshore development team is critical as the features are accepted and the backlog is reduced.

If the customer is unable to remove features from the bottom of the list, the scope of the project changes and the contract is renegotiated. Either way, the customer is in complete control of the project and bears a much lower risk than other contractual arrangements since each sprint will produce working software that represents the highest value to the business.

Market-leading providers are finding ways to share the risk of the project with their clients by monitoring and managing the project in ways that guarantee both clear communication and rock-solid delivery dates. Whether the vendor has misinterpreted any of the original requirements, or underestimated the amount of time or resources it will take to reach a milestone, the remedies necessary to stay on track are borne completely by the vendor. By doing this, these outsourcing vendors shoulder the highest level of shared risk in the industry. In a Fixed Price Agile project, the vendor is financially and contractually incented to produce what the client wants when they want it. Any deviation from that outcome eats directly into their profits.

Early Completion

It is well-known that the majority of the value of an IT application is delivered by the minority of the features. During an Agile project, the delivery of working software at regular intervals and the user involvement in testing the product may well produce a sufficient number of features, and their corresponding business value, sooner than the full project schedule calls for. By incorporating features with the highest value to the business at the beginning of each sprint, the team is always working on the highest value priorities.

One of the major benefits of an Agile development process is, at the end of any sprint, the company has working software. Additional features are developed and delivered incrementally, rather than in one chunk at the end. This allows early completion of a project to be possible in an Agile environment.



If, at the end of any sprint, the client determines that the application demonstrates enough functionality and that the remainder of the Product Backlog is relatively superfluous, the project sponsors can declare the project complete. In such case, the project is concluded with a nominal completion fee that is specific to each project, determined during the bid process and stipulated in the contract.

For example, if a company has a \$10 million Fixed Price Agile development project with a 20 percent early-completion fee and the project is deemed complete halfway through, the company would pay only \$6 million for that project, \$5 million, plus the 20 percent fee. The client team is then able to report to their superiors that the project was finished early and under budget, but still delivered working software with the critical business value that will further the company's strategic goals.

Necessary DNA

The Fixed Price Agile model is compelling for companies that have dynamic development needs and are willing to engage with their outsourcing provider for the length of the project. However, certain characteristics must be present in both the client company and the outsourcing provider to ensure a positive result.

Not all companies are prepared to respond to the demands of an Agile project. The business will need to be available to test the software at the end of each sprint, not simply at the end of the development process. Further, the business will need to commit to providing timely feedback and a collaborative team, plus the availability of expert resources, in order to work effectively in an Agile environment.

In addition, not all vendors are functionally or culturally able to conduct a Fixed Price Agile project that meets the customer's needs. Whether it's amassing and training the talent necessary to complete the project, or coordinating the team across time zones, some global outsourcing vendors are better equipped to deliver using this new model.

Exigen® Services

Exigen Services is a global outsourcing company with expertise in development methodologies, industry experience and the commercial terms necessary to share the risk and maximize the probability of successful systems development and implementation. Exigen is a pioneer in the use of Agile methodology by a team distributed across the globe.

Flex-agilitySM is Exigen Services' Fixed-Price Agile service offering, which promises flexible change options, offshore resources and guaranteed velocity for a fixed price.

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Conclusion

Offshore outsourcing projects completed using traditional methods are less efficient and, many times, lead to project failures. There are new methods emerging that allow outsourcing providers to keep pace with their customers by aligning with their needs, becoming strategic partners, sharing a larger portion of the risk and improving delivery times. Existing engagement models do not allow for this transition, so change is needed. The next generation of application outsourcing engagement models will be built around partnership, advanced development methodologies and shared risk. The Fixed Price Agile model is a clear path to a true fixed-price engagement that embraces the inevitable change, whether in the marketplace or determined by the company, that takes place during a development project.

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