CAPTECH VS. OFFSHORE

EXECUTIVE SUMMARY

CapTech's small, nimble Agile team worked side-by-side with a significantly larger offshore team on a website design/build project. CapTech consultants had higher hourly rates, but the CapTech Agile team's delivery costs were 64% lower than the larger offshore team. In other words, the CapTech team was able to deliver more value with fewer resources at a lower overall cost.

Not only was CapTech a better value, the team also delivered more predictable results as evidenced by the steady delivery velocity from sprint to sprint. As a result, the company decided to replace all offshore team members with a senior CapTech architect and to extend the CapTech team for the life of the project. CapTech also provided the company with a fixed-price-per-point model that guaranteed the company a certain velocity target for each sprint, while the offshore team was not able to make any such guarantee.

BUSINESS CASE

A Fortune 500 Financial Services company needed to replace its aging producer web site. This site allowed registered producers to log in and view their clients' policies, run illustrations, view their own commissions, and understand their licensing requirements, among other features. Over time the technologies used to build the site became outdated, and the company needed to move away from the Java web server platform to avoid a costly upgrade. Additionally, the site was plagued by slow response times, inconsistent user experience across lines of business, and a lack of mobile device optimization that made it difficult to use on tablets and smartphones.

To address these issues, the company initiated a project that would keep the core functionality of the site intact, but would re-write the code using modern Java and web tech-

nologies, including RESTful Application Programming Interfaces (API's), the Angular JavaScript Model View Controller (MVC) framework, and a fluid site design that would provide a better mobile viewing experience. The company also invested in User Experience (UX) research and analysis to determine the site navigation structure and consistent user interface (UI) design patterns that would be used across all lines of business and features.

The company decided to deliver the project using the Scrum methodology, releasing features in three-week increments, and building the new site alongside the existing site so that customers could get comfortable with the new design. Initially the project consisted of one large Scrum team of about fifteen people, most of whom were contractors. This large team that was split between onshore and offshore resources struggled to implement the Scrum methodology, and was not delivering working features after each sprint. The team was not accustomed to breaking down complex projects into smaller features that could be delivered incrementally, and the first sprints did not produce anything that could be considered a potentially shippable product.

It is important to note that the company was heavily invested in the offshore development model and had over twenty years of experience delivering products with offshore resources. All technology projects consisted of teams from offshore vendors, with the majority of team members offshore.

SOLUTION: ADDING A CAPTECH TEAM

CapTech recommended that a small CapTech team work on the project alongside the existing contractor team. The CapTech team consisted of two developers and one tester. This team worked from the same product backlog as the larger seven person contractor team. This would allow the

company to see a direct comparison of CapTech to the off-shore contractors.

Initially the company was hesitant because of the per-person price disparity between CapTech and its near-shore contractors. CapTech recommended that the company give CapTech four three-week sprints to prove that the smaller CapTech team could deliver more value at a lower overall cost than the larger offshore team. Both teams used the same product backlog of features and the same relative scale for estimating work (story points — a relative effort of feature complexity), so teams could be compared by story points completed in each sprint.

RESULTS

At the end of the evaluation period, the three person CapTech team had consistently delivered more story points than the existing seven person team. The CapTech team proved that it provided greater value, measured in cost per story point, than the larger team.

Cost Per Story Point
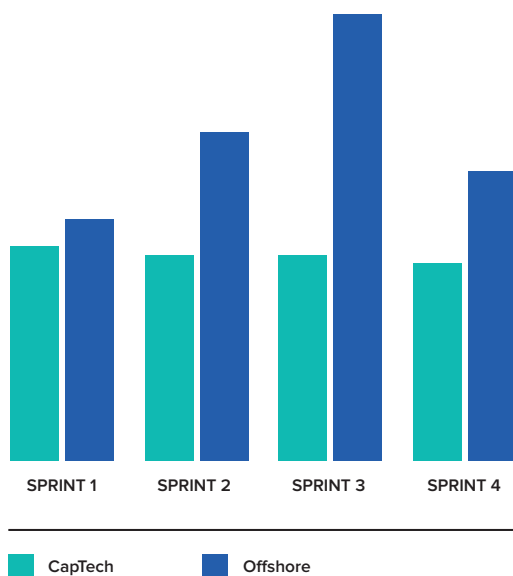
| | CapTech | | Offshore |

Not only did the CapTech team deliver more value, it also delivered results consistently while the offshore team had major swings in delivery from sprint to sprint. The CapTech team was nearly a year behind the offshore in company, system and project knowledge, but still was able to get up to speed immediately and deliver more value from its first sprint.

CapTech proved that it could deliver better results, more consistently, at a cost 64% lower than the incumbent off-shore team. As a direct result of proving that our value is greater, the company decided to replace all offshore team members with one senior CapTech Java architect. The company also decided to extend the three person CapTech team for the life of the project.

QUALITY

In addition to delivering more value with greater consistenty, the CapTech team also demonstrably increased the quality of the code, providing the company with an upgraded technology platform built on a clean, lightweight, maintainable codebase with extensive automated unit test coverage.

In the table below, the old website is the legacy application that had to be moved from an unsupported platform, while the new website is the rebuilt, re-platformed application that the CapTech team delivered, partnering with the company. The client used an automated code quality inspection tool called Sonar that provided the information below.

CapTech's experienced developers were able to rebuild the application with 75% fewer lines of code, which resulted in far fewer defects, less code to maintain, simpler features and a platform that was exponentially easier to enhance. Throughout the project, CapTech's relentless focus of soft-

SONAR CODE QUALITY REPORT

	Old Website	New Website
Lines of Code	227,694	57,507 (-75%)
Technical Debt	$1,006,504 or 2,013 man days	$27,532 or 55 man days (-98%)
Unit Test Coverage	15.3%	77.5% (+62.2%)
Code Base(s)	20	2 (UI, Back End)
Deployments	Manual, up to 2 days	Automated, 10 minutes

ware craftsmanship brought the technical debt down 98% from the original code base. Comprehensive automated unit test coverage was another benefit that allowed the CapTech team to move faster, deliver new features with confidence and refactor regularly to keep the code quality top notch.