Perficient Offshore Delivery Centers, Increases Agile Adaptability Across the Enterprise Using CMMI® Framework

Company Background

Perficient is the leading digital transformation consulting firm, serving Global 2000 and enterprise customers throughout North America. Its information technology, management consulting, and creative capabilities equip the company and its digital agency to deliver vision, execution, and value with outstanding digital experience, business optimization, and industry solutions. The company's work enables clients to improve productivity and competitiveness; grow and strengthen relationships with customers, suppliers, and partners; and reduce costs. Perficient's professionals serve clients from a network of offices across North America and offshore locations in India and China.

THE BUSINESS NEED

Perficient Inc has been committed to Agile methodology for over 20 years. Perficient's global delivery centers, adopted these Agile practices at the very early stages, as it was extremely critical that the products delivered out of our centers should demonstrate high consistency and quality.

This case study is specifically about Perficient's Chennai, India global delivery center's pioneering journey to CMMI-L5 using an Agile methodology. Perficient China (located in Hangzhou, China) also operates at CMMI-L5, also using the same, company-wide Agile methodology.

To ensure that the Agile best practices are followed consistently across the organization, Perficient Chennai needed to improve its Agile Quality Management System (QMS) and expand its application across projects. The company established a baseline on Measure of Productivity & Quality Metrics to better monitor and control projects, resulting in Delivery Excellence.

Project teams were following various agile project management methodologies such as Scrum, test-driven development and extreme programming practices in executing projects. While such practices adhered to the agile principles such as People focus,

Communications, Product, Flexibility, but it still brought in several challenges:

1. The teams had been spending a considerable amount of time tailoring processes to suit individual projects and make them align to the organization's QMS.

2. The onshore-offshore model of project execution, with software being developed between multiple global development centers, which had its own set of practices and procedures.

3. Each project had its own best practices, but those were not scalable at Organization level.

Therefore it was crucial that Perficient Chennai established baseline process, procedures & practices, which were mature & well defined, such that those can be scaled to deliver diverse Projects, across various Technologies and implemented throughout the Organization.

THE SOLUTION

All Perficient Global Delivery Centers have adopted CMMI® for Development, to establish standard processes necessary to meet strategic objectives around consistency & quality across the enterprise, for its Agile Implementations. Perficient deployed CMMI® for Development (CMMI-DEV, V1.3) to earn a Capability Maturity Model Integration (CMMI) Maturity Level 3 rating in 2013.

Perficient Chennai (and Perficient China) have both been appraised as operating at an Optimized Maturity Level 5, which is the highest maturity level an Organization can attain and is now amongst an elite number of companies which operate at Level 5, across the Globe.

Perficient Chennai applied CMMI to build capabilities, for continuous improvement, to deliver with high consistency and quality. Some of the key factors for Perficient Chennai achieving the highest maturity state were to:

- Identify key members of the organization to execute on the Agile vision
- Analyzing the organization's existing agile methodologies
- Identifying the strengths and weaknesses in the Organizational QMS
- Mapped process areas to specific agile practices
- Identifying Agile best practices in each PA and implementing those to set benchmarks for future projects
- Establishing a functional software quality assurance team that would be responsible for spreading awareness of agile best practices coupled with Quality Management Systems in the day to day implementation of Projects, and executing quality checks to control & monitor all projects
- Using automation tools for certain practices to help reduce human efforts, increase accuracy when gathering information and mapping the benefits to the maturity model requirements
- Tailoring the processes to use additional automation tools while still adhering to the required practices and procedures
- Implementing a library to archive project knowledge and assets

Perficient Chennai also uses the process improvement framework to enhance the following areas that were not included in its agile methodologies:

- Establishing a centre within the organization that supports the cross-training of team members
- Applying configuration management processes
- Initiating process tailoring across different projects

> " Our Organization pursuit to epitome is bundled by the fact that excellence is not a choice but a way of life, consistent high-velocity product delivery is not an option, but a must; where resources are not infinite but limited; innovation and optimization are the key elements for sustained business growth. CMMI tagged with Agile, enabled Perficient Chennai to achieve delivery excellence, returning higher ROI for customers and our business propulsion being a direct by-product of that delivery excellence. "
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> **-Prakash Chembai,** Managing Director (Perficient India Pvt Ltd) and General Manager for Perficient, Chennai.

RESULTS

With CMMI in place, Perficient Global Delivery is able to control and manage KPI's, Delivering consistent high-Quality products and at a greater value for money for its customers. CMMI has also enabled Perficient to introduce more automation and standardize agile QMS processes for its projects across the organization.

Specific Perficient Chennai results and KPIs are self-evident:

- Reduced nonconformities reported on projects by 70 percent
- Implemented consistent agile practices on 80 percent of the company's projects
- 90 percent of the company's workforce has adopted agile best practices
- Implemented a managed process that is tailored to best practices from the   organization's agile QMS in 100 percent of projects
- Nearly 85 percent of the Perficient Chennai project teams follow CMMI maturity level 4 and 5 Practices for predicting project sprint velocity
- Achieved better monitoring & control of team member productivity, which enhanced the productivity at the Org level.
- Verified process compliance in 90 percent of projects

Additionally, agile metrics are used for Trend Analysis, measuring internal Defect Density and tracking velocity of the scrum team during a sprint.

BUSINESS BENEFITS

Operating at CMMI Maturity Level 5 has enabled Perficient Global Delivery in Identifying & Predicting Key Sprint Velocity influencing factors, resulting in higher Productivity at the Org level.

LESSONS LEARNED

Tailoring the company's agile QMS gives project teams the necessary freedom to choose best practices without compromising core values of process areas.

Identifying key members of the organization to carry out processes and standards, as well as appointing a software quality assurance team to spread awareness of best practices, ensures nonconformities are reduced.

Ensuring consistent best practices are followed across the company enables teams to share learnings and improve overall performance.

About CMMI® Institute

As the organization behind the Capability Maturity Model Integration (CMMI)®, a capability improvement framework that guides organizations in high-performance operations, the CMMI Institute advances the state of the practice, accelerates the development and adoption of best practices, and provides new and evolved solutions to meet the emerging needs of businesses around the world. The CMMI Institute supports the worldwide adoption of its solutions in small and large organizations alike in a variety of industries, including aerospace, finance, health services, software, defense, transportation, and telecommunications.

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