Diligent Consulting Reduces Recurring Errors to Zero with CMMI

Company Background

A Service Disabled, Veteran-Owned, Small Business (SDVOSB) headquartered in San Antonio, Texas, Diligent Consulting Inc. (Diligent) is a service-oriented information technology (IT) solutions provider that nurtures the highest quality customer relationships with a dedication to providing sound and effective lifecycle IT software development and engineering.

Diligent delivers full life cycle engineering and technical support in disciplines such as enterprise architecture, software development and modernization, system engineering, test and evaluation, training, delivery and installation, maintenance and site support, configuration management, information assurance, software certification, cyber security, Enterprise Resource Planning Operations & Management (ERP O&M), and program management.

For more information on Diligent Consulting Inc., visit:

www.diligent-us.com

THE BUSINESS NEED

Diligent had a problem with trouble shooting. As focused as they were on targeting and responding to problems, they noticed that the same ones kept returning. Diligent was responsive, but reactive, "putting out the fire" when performance varied from requirements. While monitoring and controlling project performance to meet customer requirements, Diligent realized that while they were taking action to correct problems as they came up, they were not always correcting the root cause of the nonconformance to prevent its reoccurrence.

THE SOLUTION

One key to the Diligent team's continued success is strict adherence to their accredited quality management system, appraised three times to Maturity Level 3 using CMMI for Development (CMMI-DEV). Diligent's implementation of CMMI-DEV covers the full project lifecycle from conception through delivery and sustainment. Diligent VP of Operations, Steven Russell, notes of their implementation "Since implementing CMMI-DEV, I have experienced a tremendous increase in teamwork and supportiveness, since implementing [Root Cause Analysis] focuses on the process and not the people involved." As a previously appraised organization, Diligent turned to what they knew would work to solve their problem with reoccurring nonconformance.

> **" I have witnessed an improved framework for accomplishing improvements and a structure that allows growth since Diligent has institutionalized CMMI-DEV. "**
>
> **– Steven Russell, VP of Operations, Diligent Consulting**

CMMI® Institute

Diligent's familiarity with CMMI helped them to narrow their focus to CMMI for Development's Project Monitoring and Control process area. They determined that the issue lay with their implementation of a Corrective and Preventive Actions (CAPA) feedback loop and were determined to improve their method to preventing reoccurrence. After thorough examination, Diligent realized that they needed to add Root Cause Analysis (RCA) as a requirement to their process and template and require follow-up actions. Their research determined that there was no "one-size-fits-all" corrective action plan, so after deliberation, Diligent chose the "5 Whys" Root Cause Analysis method, recognized as one of the most effective methods.

After the root cause has been discovered, Diligent now:

- Determines and implements the appropriate corrective action plan
- Performs verification assessment and determines resulting actions are effective
- Confirms that the root cause has truly been addressed through continuous monitoring and follow up
- Verifies that all stakeholders know and are following revised procedures

As part of their process, Diligent developed Root Cause Analysis Training slides with real-life examples from internal and external projects, and provided these slides to employees.

RESULTS

By integrating Root Cause Analysis into their Corrective and Preventive Actions, Diligent ensured complete solutions, increased the thoroughness of their nonconformance correction and resolution, prevented reoccurrence, and added an aspect of continual improvement.

Since implementing Root Cause Analysis, Diligent has achieved a:

- **100% error non-reoccurrence rate:** Since implementation in October of 2015, none of the identified seven nonconformances resolved using Root Cause Analysis have reoccurred.
- **Increase in customer satisfaction:** Customer kudos have been streaming in for Diligent's timeliness and complete resolution of long-standing technical issues. One Diligent customer recognized Diligent's use of CMMI-DEV to produce an "outstanding Primavera solution".
- **High government rating:** Contractor Performance Assessment Reporting System (CPARS) reports are annual ratings that the government uses to evaluate contractor performance. Diligent's 2015 CPARS includes quality rankings of Exceptional, Excellent, and Very Good.

While implementing CMMI, Diligent learned that a Root Cause Analysis must be included in their Corrective and Preventive Actions method to be totally effective when taking corrective and preventive actions. Using this philosophy, Diligent:

- Reduced the reoccurrence risk of issues and errors to a minimum
- Ensured consistent, repeatable, and proven processes
- Better met customer requirements and needs

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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