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Final Copy of Case Study

LOCATION:
*Keeranatham,
Coimbatore, India*

YEAR:
2011

STATUS:
Laureate

CATEGORY:
*Business
Responsiveness*

ORGANIZATION:

AAA Northern California, Nevada & Utah

ORGANIZATION URL:

http://www.goAAA.com

PROJECT NAME:

Managed Testing Center at AAANCNU

PROJECT OVERVIEW

The Managed Testing Center (MTC) at AAANCNU was a transformational initiative to migrate into a centrally managed service model for quality assurance. This collaborative effort was aimed at achieving improved customer satisfaction, better cost efficiency, increased operational efficiency and process standardization & improvement. The objectives translated into reduced time to market, affordable pricing of member benefits and services, improved product range and increased end-user satisfaction. AAANCNU originally utilized a staff augmentation model internally and with vendors on quality assurance efforts. The resources were independently managed and program driven. This introduced multiple challenges in the area of process consistency, knowledge sharing, efficient resource utilization and ultimately more cost to the organization & diminishing customer satisfaction. To address these challenges, the MTC operates as a single body for quality assurance and features a core-flex staffing model utilizing a core team that focuses on application maintenance and a scalable flex team for new initiatives. The MTC provides a range of services to the organization as a centralized team - Test Automation: Automate tedious, repetitive work saving manual labor resulting in faster time to market and increased cost savings (ROI). Performance Testing: ensures optimal application performance resulting in better user experience and customer satisfaction. Web-security Testing: evaluates applications for vulnerability and penetration possibilities ensuring a secure platform for users. Other niche testing areas include data warehousing, SOA, PeopleSoft and IVR testing, offering dependable quality to the end-user. The MTC hosts a process center of excellence that governs testing policies and standards published as an MTC Handbook. This functions as the body of knowledge that defines MTC operations and its integration with the organization. The PCoE also offers centralized real-time reporting and tools administration services The MTC leverages industry best practices and in-house custom-built solution accelerators to realize efficiencies (i.e Capacity Tracker, Time-point tool). Risk based testing approaches detailed in further sections. The unique, centrally managed framework of the MTC posed significant challenges – 1) Operate as a single

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body: With a project-driven, staff augmentation model in place, transforming into a centrally managed testing center was a giant leap towards achieving more structure and flexibility. The challenge was overcome by conveying the operating model, purpose and benefits the organization can reap by supporting this initiative. 2) Resource Rationalization: Projects demanded onsite or co-located resources even though a distributed model could significantly reduce cost and improve productivity. Multiple processes and tools were used as catalysts to help business and IT teams across the globe to virtually connect and offer seamless interaction supporting an extended productivity window. 3) Non-Functional Testing (NFT): The importance of NFT was overlooked in the testing process even though it has significant bearing on an application's performance and user-experience. To improve user-experience the MTC defined performance benchmarks and conducted a thorough assessment on the application landscape. Test execution coverage increased from 20% to 73%. The MTC also offered security testing as a service supporting 12 (initially 5) applications per release.

SOCIETAL BENEFITS
The AAA brand is widely recognized in society and their internal motto is to never leave a member stranded. The MTC model enables AAA to offer stable, quality and affordable products that provide peace of mind through dependable service to members.

PROJECT IMPLEMENTATION COMPLETE?
Yes

PROJECT BENEFIT EXAMPLE
As an organization, AAANCNU benefits from utilizing the MTC in four key areas: 1) Speed to Market: A centrally managed testing center and the core-flex model enabled AAANCNU to be agile in delivering to the market. The core team focuses on supporting applications that are currently in production and available for the end-user. Core team resources are cross-trained and readily available to support planned and emergency releases. This model helped AAANCNU align to a monthly release plan versus a quarterly release schedule. This helps the organization serve its customers with cutting edge technology advantage and a better overall user experience with minimal lead time. The flex team is a scalable component of the MTC and consists of well-trained associates who shall be on-boarded with a reduced turnaround time to support major initiatives and large programs. This benefits the organization with a scalable solution that will incur cost depending on requirements and organization's vision/roadmap. 2) Customer Satisfaction: The MTC fosters talent retention, knowledge sharing and innovation. The core team consists of associates possessing multiple years (average 3+ years) of AAANCNU specific application knowledge and experience that significantly reduces the learning curve and increases test effectiveness resulting in a quality product. The MTC also features a preeminent online knowledge repository for increased knowledge retention & faster resource induction. The MTC hosts a Process Center of Excellence (PCoE) as a shared component in the framework and constitutes industry certified quality champions. This team establishes and enforces quality gates throughout the lifecycle to measure and improve quality. The PCoE manages templates, standards, process workflows and organizational methodology alignment. The PCoE also measures compliance for the various initiatives in the organization and provides an index (current index: 95%). This assures streamlined processes, implementation of industry best practices, effective quality assurance and minimal defect leakage resulting in an enhanced user experience and customer satisfaction 3) Cost Efficiency: The core-flex model has helped the organization move from a 48:52 (Onsite:Offshore) ratio to a 26:74 model saving over US $2M. The dedicated Automation CoE has helped in

effectively leveraging the test automation opportunities and increase automation coverage from an average of 60% to 80% on regression, rate testing and data setup activities offering significant cost efficiency. The MTC features a continuous improvement road map that drives the team to continually adopt best practices and develop solution accelerators (in-house and custom built tools) to improve operational efficiency while minimizing cost. The cost efficiency gained enables the organization to rise above industry competition and offer better service to society. Improved Visibility: The MTC streamlined metrics management across the organization and offers a rich set of metrics for all audience levels. This provides improved visibility with early alert signals on any deviations from plan.

IS THIS PROJECT AN INNOVATION, BEST PRACTICE? Yes

ADDITIONAL PROJECT INFORMATION

This section documents the key best practices and in-house custom-built solution accelerators that the MTC has leveraged to realize efficiencies. 1) Customized Quality Center: One of the most important elements of MTC operations is standardization of QA processes. Adoption of a common tool and standardization of its usage across various methodologies was a critical lever. HP Quality Center was identified and customized to meet AAANCNU PMO needs including projects on Agile methodology. The tool facilitated a pre-defined process and maintained essential documentation bringing consistency in the way quality is reported and managed across the organization. 2) Capacity Tracker: A tool that tightly integrates with the enterprise demand management team to align with demand signals and provides a work forecasting mechanism for better planning and resource utilization. It captures the core and flex teams effort by tracking total, booked and available capacity. The tool also predicts cash out-flow for better budget planning. 3) Risk Based Testing: Risk based testing approach was implemented across all MTC engagements to balance risk against project constraints like schecule, resource and cost. This reduces the time to market while ensuring optimal quality. Orthogonal Array Testing Strategy, a statistical testing tool for testing pair wise interactions resulting in optimized Test-set generation ensures a "Right" volume of testing ensuring "More Quality" at quicker rate to market. 4) End-to-End Automation Framework: A hybrid framework was developed to creatively speed up the testing process across all the complex applications ensuring coverage and quality in a reduced timeline across all the applications. The framework accelerates test execution while reducing cost and enabled the team stay on an aggressive schedule. 5) Timepoint Tool: Testing of real-time scenarios involves simulating production environment for different time points an Insurance policy would evolve through. This is a CICS based custom built tool that works by referentially moving dates corresponding to a policy to simulate aging. This has reduced the test execution timeline by over 40%. Time point tool ensures all customer scenarios are tested upfront and the insurers get error-free service by reducing overall testing timeline and effort enabling the product to reach the market quicker.