

Analisis Tingkat Kematangan dan Rekomendasi Perbaikan Proses Pengujian Perangkat Lunak Berdasarkan Test Maturity Model Integration (TMMi): Studi Kasus PT KPEI = Maturity Level Analysis and Recommendations for Software Testing Process Improvement Based on Test Maturity Model Integration (TMMi): Case Study of PT KPEI

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Abstrak

PT Kliring Penjaminan Efek Indonesia (KPEI) merupakan lembaga kliring dan penjaminan di pasar modal Indonesia. Dalam mencapai visi dan misinya diperlukan layanan sistem berkualitas yang ditandai dengan tercapainya zero defect sistem di lingkungan produksi. Kenyataannya, gangguan terhadap sistem bisnis utama telah menjadi top risk organisasi karena terjadi 36 kali dalam setahun terakhir ini yang berdampak terhadap finansial dan reputasi organisasi. Berdasarkan hal tersebut, diketahui bahwa permasalahan utama yang dihadapi organisasi adalah kurangnya proses pengujian. Untuk mengatasi hal ini, dilakukan penilaian tingkat kematangan dan memberikan rekomendasi perbaikan proses pengujian. Penilaian tingkat kematangan proses pengujian perangkat lunak dilakukan menggunakan Test Maturity Model Integration (TMMi) pada tingkat kematangan 2 (managed) dan mengacu pada ketentuan TMMi Assessment Method Accreditation Requirements (TAMAR). Praktik yang belum dipenuhi akan menjadi rekomendasi perbaikan proses menggunakan metode deming cycle (PDCA). Berdasarkan hasil penilaian diperoleh bahwa PT KPEI masih berada pada tingkat kematangan 1 (initial). Area proses yang memperoleh nilai terendah adalah test planning (PA 2.2) dengan nilai partially achieved. Rekomendasi perbaikan yang perlu dilakukan yaitu penyusunan test plan secara konsisten dan ditinjau secara berkala serta perbaikan isi dokumen test plan. Rekomendasi perbaikan proses pengujian ini diharapkan dapat mengurangi kemunculan bugs sistem di lingkungan produksi.

.....PT Kliring Penjaminan Efek Indonesia (KPEI) is a clearing and guarantee institution in the Indonesian capital market. In achieving its vision and mission, a quality system service is needed, which is marked by the achievement of zero-defect systems in the production environment. In fact, disruption to key business systems has become an organization's top risk because it has occurred 36 times in the past year, which has an impact on the organization's finances and reputation. Based on this, it is known that the main problem faced by the organization is the lack of a testing process. To overcome this, an assessment of the maturity level is carried out and provides recommendations for improvement of the testing process. The assessment of the maturity level of the software testing process is carried out using the Test Maturity Model Integration (TMMi) at maturity level 2 (managed) and refers to the provisions of the TMMi Assessment Method Accreditation Requirements (TAMAR). Practices that have not been met will be included as recommendations for process improvement using the Deming Cycle (PDCA) method. Based on the results of the assessment, it was found that PT KPEI is still at maturity level 1 (initial). The process area that obtained the lowest score was test planning (PA 2.2) with a partially achieved value. Recommendations for improvements that need to be made are the preparation of a test plan consistently and reviewed periodically as well as improvements to the contents of the test plan document. Recommendations for improving the

testing process are expected to reduce the appearance of system bugs in the production environment.