

# Evaluasi Tingkat Kematangan dan Rekomendasi Peningkatan Proses Pengujian Perangkat Lunak Berdasarkan Test Maturity Model Integration (TMMi): Studi Kasus PT Festival Citra Lestari = Evaluation of Maturity Level and Recommendations for Improvement of Software Testing Process Based on Test Maturity Model Integration (TMMi): A Case Study of PT Festival Citra Lestari

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## Abstrak

PT Festival Citra Lestari merupakan salah satu perusahaan yang menyediakan layanan Over-The-Top (OTT) bernama Genflix. Untuk dapat meningkatkan produk yang baik dari segi kualitas dan kepuasan pengguna, divisi Information Technology (IT) di PT Festival Citra Lestari mempunyai target pencapaian kinerja yang diukur dalam ketepatan waktu rilis dan banyaknya masalah kritis yang terjadi di lingkungan produksi Genflix. Namun pada realitanya, terjadi keterlambatan yang disebabkan adanya critical defect yang lolos ke lingkungan produksi. Setelah dianalisis dengan menggunakan diagram ishikawa, akar permasalahan difokuskan pada proses pengujian perangkat lunak yang kurang efektif. Penelitian ingin mengetahui tingkat kematangan dalam melakukan pengujian perangkat lunak dan rekomendasi yang dapat diberikan untuk meningkatkan kematangan proses pengujian perangkat lunak. Evaluasi tingkat kematangan dilakukan dengan kerangka kerja Test Maturity Model integration (TMMi) dengan metode pedoman penilaian TMMi Assesment Method Application Requirement (TAMAR). Penelitian dilakukan dengan metode kualitatif berupa studi kasus dengan applied research, dan pengumpulan data menggunakan metode Delphi dengan empat pemangku kepentingan dalam proses pengujian yaitu Head of Engineering, Engineering Manager, dan dua Quality Assurance sebagai narasumber. Penilaian dilakukan pada area proses di tingkat kematangan tingkat 2 yang menghasilkan rating P (Partially Achieved), sehingga tingkat kematangan proses pengujian perangkat lunak adalah tingkat 1 (Initial). Rekomendasi perbaikan proses disusun dengan metode Siklus Deming atau PDCA (Plan, Do, Act, Check). Rekomendasi disusun berdasarkan specific practices pada area proses Test Planning dan Test Environment agar mencapai tingkat kematangan 2 (Managed). Rekomendasi peningkatan proses pengujian yang diusulkan divalidasi oleh Head of Engineering agar bisa diterapkan pada proses pengujian yang dilakukan perusahaan sehingga pengujian lebih efektif.

.....PT Festival Citra Lestari is a company that provides an Over-The-Top (OTT) service called Genflix. To be able to improve products that are good in terms of quality and user satisfaction, the Information Technology (IT) division at PT Festival Citra Lestari has a performance achievement target that is measured in timeliness of release and the number of critical issues that occur in the Genflix production environment. But in reality, there is a delay caused by a critical defect that passes into the production environment. After being analyzed using an Ishikawa diagram, the root causes are focused on the ineffective software testing process. This research wants to know the level of maturity in conducting software testing and recommendations that can be given to increase the maturity of the software testing process. Maturity level evaluation is carried out using the Test Maturity Model integration (TMMi) framework using the TMMi Assesment Method Application Requirement (TAMAR) assessment guideline method. The research was conducted using a qualitative method in the form of case studies with applied research, and data collection

using the Delphi method with four stakeholders in the testing process, namely the Head of Engineering, Engineering Manager, and two Quality Assurances as resource persons. Assessment is carried out in the process area at the maturity level of level 2 which results in a P (Partially Achieved) rating, so that the maturity level of the software testing process is level 1 (Initial). Process improvement recommendations are prepared using the Deming Cycle or PDCA (Plan, Do, Act, Check) method. Recommendations are prepared based on specific practices in the Test Planning and Test Environment process areas in order to achieve maturity level 2 (Managed). The recommendations for improving the proposed testing process are validated by the Head of Engineering so that they can be applied to the testing process carried out by the company so that the testing is more effective.