Evaluasi Proses Pengembangan Perangkat Lunak Berdasarkan Kerangka Kerja CMMI-Dev 1.3 untuk Meningkatkan Keandalan Perangkat Lunak: Studi Kasus Cash Management System (CMS) Bank XYZ = Evaluation of Software Development Process Based on CMMI-Dev 1.3 Framework to Improve Software Reliability: Case Study of Cash Management System (CMS) in XYZ Bank

Majesty Eksa Permana, author

Abstrak

Cash Management System (CMS) Bank XYZ merupakan perangkat lunak untuk nasabah segmen korporasi dalam melakukan monitoring, manajemen likuiditas serta transaksi keuangan melalui sistem yang terintegrasi dengan penyedia jasa perbankan. Saat ini keandalan sistem CMS belum memenuhi standar yang diharapkan, sehingga mendapatkan banyak komplain dari nasabah internal maupun eksternal. Masalah keandalan sistem CMS disinyalir akibat proses pengembangan perangkat lunak yang tidak optimal. Penelitian ini bertujuan untuk melakukan evaluasi dan memberikan rekomendasi perbaikan proses pengembangan perangkat lunak. Pada tahap awal dilakukan wawancara kepada vice president, tribe leader CMS, dan group head IT Operation untuk mendapatkan akar masalah terkait keandalan sistem CMS. Hasil pemeringkatan akar masalah menggunakan metode AHP didapatkan tiga akar masalah prioritas, yaitu penentuan prioritas pengembangan tidak jelas, tata kelola pengembangan tidak dilaksanakan sepenuhnya, dan evaluasi proses pengembangan sistem belum pernah dilakukan. Model IDEAL digunakan sebagai pendekatan perbaikan proses dikombinasikan dengan kerangka kerja software process improvement CMMI-Dev versi 1.3 dengan pendekatan continuous representation dan proses penilaian menggunakan SCAMPI-C. Project Planning, Requirement Management, Integrated Project Management, Requirement Development, dan Process and Product Quality Assurance adalah lima process area sebagai dasar dalam proses penilaian capability level. Penilaian yang dilakukan menghasilkan 34 dari total 43 specific practices telah terpenuhi. Sehingga terdapat sembilan kelemahan pada sembilan specific practices yang belum terpenuhi. Hasilnya CMS Bank XYZ masih berada pada capability level 0 atau incomplete. Berdasarkan PMBOK edisi ke-6, disusunlah lima rekomendasi solusi untuk mengatasi sembilan kelemahan tersebut dengan menyusun dokumen resource breakdown structure, resource requirement, requirement traceability matrix, lessons learned register, dan issue log untuk digunakan sebagai rujukan dalam proes pengembangan perangkat lunak.

..... Cash Management System (CMS) XYZ Bank is a website for corporate segment customers in monitoring, liquidity management, and financial transactions through a system that is integrated with banking service providers. Currently, the reliability of the CMS system has not met the expected standards, so it gets many complaints from internal and external customers. CMS system reliability issues are caused by the substandard software development process. This research aims to evaluate and provide recommendations on improving the software development process. In the early stages, interviews were conducted with the vice president, CMS tribe leader, and group head of IT Operation to get the root cause of the problems related to the reliability of CMS systems. The results have been rating using AHP method obtained three priority root cause, namely the determination of development priorities is not clear, the

procedure of development is not fully implemented, and the evaluation of the system development process has never been done. The IDEAL model is used as a process improvement approach combined with CMMI-Dev 1.3 with continuous representation approach and appraisal process using SCAMPI-C. Project Planning, Requirement Management, Integrated Project Management, Requirement Development, and Process and Product Quality Assurance are five process areas as the basis for the appraisal capability level. The appraisal process resulted in 34 out of 43 specific practices being complied with standards. There are nine weaknesses from nine specific practices that have not been complied with the standard. As a result, CMS XYZ Bank is still at capability level 0 or incomplete. Based on the 6th edition of PMBOK, five recommendations were prepared to overcome the nine weaknesses, includes resource breakdown structure, resource requirement, requirement traceability matrix, lessons learned register, and issue log, as point of interest in software development.