

# Rekomendasi integrasi pengembangan dan operasional perangkat lunak dengan mengadopsi konsep DevOps: studi kasus perusahaan penyedia teknologi telekomunikasi XYZ = Recommendations for the integration of software development and operation by adopting DevOps concept: case study of telecommunication technology provider company XYZ

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## Abstrak

Perusahaan penyedia teknologi telekomunikasi XYZ memiliki sistem informasi yang dibangun secara in-house, outsource, dan subscription untuk menjalankan aktivitas bisnis sehari-hari. Digital Project Management (DPM) merupakan salah satu sistem informasi yang dikembangkan secara in-house. DPM terbagi atas 3 sub-modul, salah satunya adalah Bill of Quantity and Material (BAM). BAM merupakan sistem supply chain management yang mencakup perencanaan sumber daya hingga logistik. Unit BAM mengharapkan bisnisnya untuk terus berkembang, memperluas pangsa pasar, dan menjaga kepercayaan pemangku kepentingan yang dimilikinya saat ini. Namun dalam mencapai harapan tersebut, unit BAM menghadapi kendala tidak dapat mencapai target waktu pengembangan yang telah ditetapkan. Salah satu penyebab dari kendala ini adalah tidak adanya kolaborasi antar tim pengembang dan tim operasional dalam BAM. Dalam menjawab permasalahan tersebut, dilakukan penelitian untuk menyusun rekomendasi yang dapat membantu menjawab permasalahan yang dihadapi oleh BAM dengan mengadopsi konsep DevOps. Penelitian ini berjenis applied research serta metode analisis data yang digunakan adalah explanatory sequential mixed-methods. Berdasarkan hasil penelitian, dari 28 konsep adopsi DevOps, 21 konsep dapat diaplikasikan di unit BAM. Rekomendasi untuk menjawab permasalahan yang dihadapi oleh unit BAM disusun berdasarkan konsep-konsep tersebut. Rekomendasi ini terdiri atas lima kategori, yaitu perubahan pola pikir (mindset change), perubahan proses pengembangan (development process change), peningkatan proses berbagi (sharing enhancement), perubahan keorganisasian (organizational change), serta pembuatan DevOps pipeline. Rancangan DevOps pipeline ini telah melewati proses validasi oleh project manager dan Global ICT DevOps Engineer.

.....Telecommunication technology provider company XYZ has an information system which was built by in-house, outsourced, or subscription to carry out daily business activities. Digital Project Management (DPM) system is one of the information systems developed in-house. DPM is divided into 3 sub-modules, one of which is the Bill of Quantity and Material (BAM). BAM is a supply chain management system that includes resource planning up to logistics. BAM unit expects its business to grow, expand market share, and maintain the trust of current stakeholders. But in achieving these expectations, BAM unit faces problem of not being able to achieve the development time targets that had been set. One of the causes of this problem is the absence of collaboration between developer teams and operation team in BAM unit. In answering these problems, research was conducted to develop recommendations that can help answer the problems faced by BAM unit by adopting the concept of DevOps. This research is characterized as applied research and the data analysis method is explanatory sequential mixed-methods. Based on the results of the study, from 28 concepts of DevOps adoption, BAM unit can apply 21 concepts. Recommendation to answer the problems faced by BAM unit were built based on these concepts. The recommendation is categorized into 5

categories, which are mindset change, development process change, sharing enhancement, organizational change, and creating a DevOps pipeline. The DevOps pipeline design has passed the validation process by the project manager and the Global ICT DevOps Engineer.