

Penyusunan metodologi pengembangan perangkat lunak berbasis essence framework dan strategi penerapannya: studi kasus Jakarta smart city = Composing a software development methodology based on essence framework and its implementation strategy: Jakarta smart city case

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Abstrak

Pengembangan Perangkat lunak berhasil apabila sesuai dengan batasan yang ditentukan, tepat waktu, dan sesuai dengan anggaran yang dialokasikan. Laporan rekapitulasi capaian proyek di Jakarta Smart City (JSC) tahun 2020-2021 menunjukkan fakta bahwa proyek yang berhasil diselesaikan tepat waktu hanya 46.67%, sedangkan 30% diselesaikan terlambat dan 43.33% tidak selesai. Melalui identifikasi permasalahan menggunakan diagram fishbone, pada domain process disebutkan bahwa di JSC tidak ada standarisasi metode pengembangan perangkat lunak yang digunakan. Hal ini mendorong penulis melakukan penelitian berfokus pada pengembangan metodologi pengembangan perangkat lunak yang tepat di JSC menggunakan Essence Framework dan Agile Transition Framework dengan metode penelitian design science research (DSR). Identifikasi masalah dilakukan melalui wawancara dengan Kepala Divisi Pengembangan dan Manajer Proyek. Penyusunan metode melibatkan seluruh Team Lead Divisi Pengembangan melalui kegiatan focus group discussion (FGD). Kemudian dilakukan validasi dengan expert judgement oleh 3 pakar agile dari eksternal. Berdasarkan penelitian yang dilakukan, dari 99 praktik yang berasal dari 10 metode Agile, dihasilkan sebuah metodologi pengembangan perangkat lunak yang terdiri dari 20 praktik yang dipetakan dalam 10 aktivitas yang berasal dari 6 metode Agile (Scrum, Nexus, Kanban, Xtreme Programming) dan Scaling Agile (LeSS dan SAFe). Penerapan metodologi pengembangan perangkat lunak tersebut di JSC menggunakan strategi model ADAPT.

.....The success of software development if is in accordance with the specified scope, on time, and in accordance with the allocated budget. Based on the recapitulation report of project achievements in Jakarta Smart City (JSC) for 2020-2021, it was found that only 46.67% of projects were completed on time, while 30% were overdue and 43.33% were unfinished. Through problem identification using fishbone diagrams, it is stated in the process domain that at JSC there is no standard of software development methods. This prompted the author to conduct research focusing on the compose of appropriate software development methods in JSC. The composing the software development method based on the Essence Framework and the Agile Transition Framework, then combined it with the design science research (DSR). Problem identification was carried out through interview with the Head of Development Division and the Project Manager. It is involving all Team Leads from the Development Division through focus group discussions (FGD). The validation includes the expert judgment of 3 external agile experts / practitioners. Based on the conducted research, from 99 practices in which is derived from 10 the Agile methods, a software method was composed of 20 practices mapped into 10 activities derived from 6 Agile methods (Scrum, Nexus, Kanban, Xtreme Programming) and Scaling Agile (LeSS and SAFe). Furthermore, for the implementation of the software development method at JSC, follow the ADAPT model strategy.