

ABSTRAK

Pengelolaan layanan Teknologi Informasi (TI) pada perguruan tinggi berperan penting dalam mendukung keberlangsungan aktivitas akademik dan administrasi. Namun, UPA TIK Universitas Pembangunan Nasional “Veteran” Jakarta (UPNVJ) masih mengelola permintaan layanan dan insiden teknis secara manual melalui WhatsApp atau interaksi langsung. Kondisi tersebut menyebabkan tidak adanya pencatatan tiket terstruktur, penumpukan permintaan, ketidakpastian waktu penyelesaian, serta rendahnya transparansi status layanan. Penelitian ini bertujuan merancang, membangun, dan menguji sistem service desk digital terpusat berbasis web bernama “OneServiceDesk” untuk mengotomatisasi pengelolaan insiden dan permintaan layanan di lingkungan UPNVJ. Pengembangan sistem menggunakan metodologi Agile Scrum melalui delapan tahapan sprint, sedangkan kerangka kerja ITIL 4 digunakan sebagai acuan tata kelola layanan TI, khususnya dalam penerapan metrik Service Level Agreement (SLA). Sistem dikembangkan menggunakan Next.js sebagai frontend, NestJS sebagai backend, dan PostgreSQL sebagai basis data. Pengumpulan data dilakukan melalui studi literatur, observasi, dan wawancara dengan staf UPA TIK UPNVJ. Pengujian sistem dilakukan secara empiris melalui User Acceptance Testing (UAT) berbasis black box bersama pengguna akhir dan white box testing menggunakan unit test pada framework Jest untuk memastikan reliabilitas dan akuntabilitas sistem.

Kata Kunci : *Agile Scrum*, ITIL 4, NestJS, Next.js, *Service Desk*.

ABSTRACT

Information Technology (IT) service management in higher education plays a crucial role in supporting the continuity of academic and administrative activities. However, the UPA ICT of the Veteran National Development University Jakarta (UPNVJ) still manages service requests and technical incidents manually via WhatsApp or face-to-face interaction. This situation results in the absence of structured ticket recording, a backlog of requests, uncertainty in resolution times, and low transparency of service status. This study aims to design, build, and test a centralized, web-based digital service desk system called “OneServiceDesk” to automate the management of incidents and service requests in the UPNVJ environment. The system was developed using the Agile Scrum methodology through eight sprint stages, while the ITIL 4 framework was used as a reference for IT service governance, particularly in the implementation of Service Level Agreement (SLA) metrics. The system was developed using Next.js as the frontend, NestJS as the backend, and PostgreSQL as the database. Data collection was conducted through literature studies, observations, and interviews with UPA ICT UPNVJ staff. System testing is conducted empirically through black box-based User Acceptance Testing (UAT) with end users and white box testing using unit tests on the Jest framework to ensure system reliability and accountability.

Keywords: Agile Scrum, ITIL 4, OneServiceDesk, NestJS, Next.js, Service Desk.