ABSTRACT

In supporting the digital transformation activities of PT Indonesia Kendaraan Terminal through the Directorate General of Customs and Excise Regulation Number PER-10/BC/2020 regarding the implementation of autogate, a system is required to enhance customs efficiency within the autogate area in accordance with the autogate implementation regulation. The development of this system must be integrated with the Customs and Excise Information System (CEISA) and also connected to the operational system of the Indonesia Vehicle Terminal Port (CARTOS) to be accessible to customers. This system can directly connect with customs-affiliated customers through web services, and for non-affiliated customers, access can be achieved through Integration Apps (Intapps) in the form of a website. The construction of this system follows the waterfall methodology and adopts the service-oriented architecture (SOA) concept using TIBCO Enterprise Service Bus (ESB). The use of SOA is driven by its interoperability nature, enabling systems or services to communicate, operate, and collaborate seamlessly with other systems or services without significant obstacles or constraints. The implementation resulted in a significant time efficiency for customs processes, with an 803% improvement for export activities, reducing the average time from 660 seconds to 5,294 seconds. Similarly, for import activities, there was a 1925% improvement, reducing the average time from 132 seconds to 2,547 seconds.

Keyword: ESB, SOA, Efficiency, API, Integration