Abstract

Digital transformation is disrupting the banking industry, and Service Oriented Architecture (SOA) is recognized as one of the key enablers. Interestingly, however, performance considerations are quoted by some on the pro side, but others, the con. This paper examines from the what, why and then the how, and specifically, how to accelerating digital transformation with SOA and predictive performance engineering. One of the top agenda items of digital transformation is customer experience. There are three challenges fundamental to legacy transformation and modernization initiatives – a) how to effectively leverage the existing assets in terms of logic and data, b) how we sustain the changes and c) how to ensure the improving customer experience by building high performance applications. The first challenge focuses on integration; second focusses on modernization and the third focusses on predicting and building high performance applications SOA is taking hold in the industry as the preferred new way of integration and modernization. For some banks, the big question remains: Will SOA die out as new technological innovations come out? This is alluding to financial derivatives that led to the financial market crush. One of such innovation is Micro Service proposition. Our research
reveals that even sound architecture like SOA can be of hype for some banks unless a roadmap based on engineering principles is established and implemented. This paper reviews some of the failure and success factors across the industry and proposes a template to develop such a roadmap. What differentiates this paper from others is, however, a set of pressures or pain points, technical and business drivers, proven solutions and enablers (SDEP) that the authors summarized from their in-the-field and on-the-project experiences. Also, the authors have outlined the performance modelling exercise using Queuing Petri Nets.

References


**Index Terms**

Computer Science  
Information Sciences

**Keywords**

Software Architecture, Service Oriented Architecture, Data Models, Canonical Data, transformation, Queueing Petri Nets and QoS