

ABSTRACT

In facing the challenges of the industry 4.0 era, companies must adapt in order to survive and remain competitive, one of which is through digital transformation. Bio Farma, as one of the leading vaccine manufacturers in Indonesia, is currently undergoing a digital transformation process. Appointed by the Ministry of State-Owned Enterprises (BUMN) as the parent of the BUMN Pharmaceutical Holding (Bio Farma Group), the company oversees subsidiaries such as Kimia Farma, Indofarma, and INUKI. To support this transformation, Bio Farma established the Directorate of Transformation and Digital (now the Deputy Main Directorate) to coordinate digital initiatives across all lines of the company and accelerate integrated digital adoption from upstream to downstream.

This study aims to explore and analyze the factors that serve as challenges in the digital transformation of Bio Farma. The research employed a mixed method with an exploratory sequential design, involving interviews with 5 (five) key informants and a questionnaire distributed to 327 (three hundred twenty-seven) employees of the Bio Farma Group. The data were analyzed both qualitatively and quantitatively using a factor analysis approach.

Data collection was conducted through in-depth interviews, questionnaires, review of internal documents, and literature related to digital transformation. Keywords derived from the interviews were developed into questionnaire items. The quantitative data were then analyzed using Exploratory Factor Analysis (EFA) to identify the key challenge factors in the digital transformation of Bio Farma Group.

The analysis revealed 13 (thirteen) main challenge factors in Bio Farma Group's digital transformation, namely: digital capability, strategy, technology, organization & culture, digital efficiency, digital readiness, customer, digital research, investment perception, operations, collaboration, investment review, and digital priority. These findings indicate that the challenges are not only technical but also encompass strategic aspects, organizational culture, internal readiness, collaboration effectiveness, and digital investment management.

This research contributes to the mapping of strategic factors that can serve as a reference for companies, particularly state-owned enterprises in the health sector, in addressing digital transformation challenges. The findings are expected to be utilized by Bio Farma Group's management as a foundation for formulating appropriate policies, such as enhancing digital efficiency, strengthening internal digital capabilities, optimizing cross-unit collaboration, and conducting continuous evaluation of digital investments, to build a more adaptive and sustainable digital transformation foundation.

Keywords: digital transformation, challenges, Bio Farma Group, exploratory factor analysis