ABSTRACT

The rapid advancement of medical technology has created opportunities for innovative rehabilitation devices, including Picobot, an assistive robotic device designed to aid stroke patients in regaining mobility. This study aims to evaluate the feasibility of investing in Picobot by assessing financial viability, technological readiness, and market potential. The analysis employs financial indicators such as Net Present Value (NPV), Internal Rate of Return (IRR), and Payback period (PP) to determine investment attractiveness. Additionally, a sensitivity analysis is conducted to assess the project's resilience under various market conditions. The findings indicate that establishing a production facility is financially viable, with an IRR of 37%, an NPV of IDR 48.65 billion, and a payback period of 7.1 years. Leasing a production facility offers a significantly higher IRR (887%) and a much shorter payback period (1.8 months), making it a more attractive short-term option. Meanwhile, purchasing a facility ensures long-term sustainability, with an IRR of 42% and a payback period of 6.4 years. The selling price of Picobot, set at IDR 20.77 million per unit, is more competitive than its competitors (IDR 39 million), with projected annual sales of 7,106 units. From a technological standpoint, the Technology Readiness Level (TRL) analysis reveals that Picobot is still in the prototype stage, requiring further product development, clinical trials, and regulatory compliance before widespread commercialization. As a result, this study recommends strategic approaches such as service diversification, in-depth market analysis, and continuous financial evaluation to ensure sustained profitability.

Keywords : *Feasibility Analysis, Picobot, Medical Rehabilitation, Investment Viability, Financial Metrics, Technology Readiness Level (TRL).*