DESIGNING AN EXCEL-MACRO BASED GOODS WITHDRAWAL RECORDING SYSTEM TO SOLVE PRODUCT LOSS AND SHORTEN PRODUCT ORDERING TIME IN SUB-ASSEMBLY DEPARTMENT

(A Case Study of PT X)

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Abstract

Loss of products and long product ordering process time are issues that occur in the sub-assembly department of PT X. These problems are caused by the lack of records for incoming and outgoing goods and the absence of data for subsequent production. During the research, it was recorded that 82 items were ordered late and 3 units were missing. If ignored, these problems will lead to increased costs. To address these issues, research was conducted in the sub-assembly department using the design thinking method, which focuses on user needs. In this research, an administrative information system was designed. The design of the information system began by understanding the core of the problem statement and determining system design standards using SDLC in the define phase. It then proceeded with generating ideas in the ideate phase and conducting experiments in the prototype phase. In the prototype phase, the developed information system was directly tested to evaluate user experience and the effectiveness of the information system. Usability testing and user experience testing were performed in the test phase. After conducting both tests, the results showed that the usability score was 70.75, indicating that the system was suitable for use in the department. Furthermore, the user experience results were satisfactory, with an average benchmark rating of "good," indicating that users were sufficiently assisted by the new system. Based on the conducted research, it can be concluded that the goods withdrawal recording system can minimize the issues occurring in the sub-assembly department of PT X by reducing losses and shortening the product ordering time.

Keywords: Design SDLC; Design Thinking; Sub-Assembly; Usability Testing;