

DESIGNING A WEB BASED INFORMATION SYSTEM FOR THE DISPOSITION OF MATERIAL CHANGES AT PT SFP USING WATERFALL SYSTEM DEVELOPMENT LIFE CYCLE (SDLC) METHOD

UNDERGRADUATE FINAL PROJECT

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ABSTRACT

PT SFP is a manufacturing company that produces flexible plastic packaging. The activity of making material change dispositions is one of the important things in the production process. This is done when the starting material for a product that has been determined changes whether it is a change in the type of material, size, or thickness with the reasons and objectives of each. So that the standard product material that has been set will change. The disposition of material changes has been done manually using Microsoft Excel by the Material Planner and this manual process has a high cycle time of 4 hours 17.9 minutes if the production process is carried out at the Jababeka Plant and 3 hours 41.1 minutes if the production process is carried out at Ancol or the Cibitung Plant. Based on observations, it takes hours to make the disposition of the material change. Meanwhile, under the same conditions, the Material Planner also has to do other tasks. Material Planner is very overwhelmed to make material change dispositions manually and this can result in human errors in inputting data one by one, consuming more time and effort. Because it has been repeated for a long time, the system will be improved by approaching the system engineering design using the System Development Life Cycle (SDLC), namely the waterfall methodology. The proposed system is a web-based system as the main tool to reduce processing time in making material change dispositions. The proposed system is proven to make the film material change disposition process more effective and efficient. After the improvement, the time consumption of current system is 4 hours 17.9 minutes if the production process at Jababeka Plant and 3 hours 41.1 minutes if the production process at Ancol or Cibitung Plant becomes 25.5 minutes using the proposed system. That is, this improvement helps the user to complete the material change disposition creation job faster than ever before compared to the current system.

Keywords: Disposition, Material Change, Time Consumption, Microsoft Excel, Web-System, Waterfall System Development Life Cycle (SDLC).

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LIST OF TERMINOLOGIES

PPIC Department	:	One of the departments at PT Supernova Flexible Packaging that is responsible for planning a manufacturing process and controlling the inventory of raw materials to be produced into finished goods.
Disposition of Material Changes	:	An activity carried out by material planners at PT SFP which is used if there is a change in the material used for certain reasons.
ERP System	:	An integrated system used by PT Supernova Flexible Packaging to integrate all company resources which allows every department in PT Supernova Flexible to be connected to the same system. An integrated unit such as marketing, production, purchasing, accounting, etc. also stores all transactions in a database and provides management reporting tools.
Job Sheet Instruction	:	Asheet that contains guidelines for all the use of materials that have been set and that will be used in the production process such as guidelines on the type of material to be used along with the size to be used, etc.
ICC and non-ICC Product	:	ICC products are a group of customers or products whose production process more priority than non-ICC products.
Process Flow Chart	:	A diagram showing the sequential steps of a process or system.
Data Flow Diagram	:	A diagram to show or describe the data flow of the system.
Data Dictionary	:	A written explanation about the data in the database.