CHAPTER 6
CONCLUSIONS AND SUGGESTIONS

This chapter explained about the conclusions of the research and the suggestions from the author for the next research and the next object of this research. The conclusions are summed based on the analysis result and answer the purpose that have been determined in the first chapter. The suggestions are made for the improvement that could be executed by the next researcher.

6.1 Conclusions

The conclusions that can be summed based on the result of the research to answer the purpose of this research are:

1. Waste is identified based on value stream mapping and questionnaire. Value stream mapping shows a big differences between the value added time and total lead time. Value added time reach 132 days and lead time reach 282 days. From the value stream analysis, the longest delay are obtained. The longest delay is happened on the completion of material documents which reach forty five days. The second longest delay is happened on the completion of the design which reach thirty days. The third longest delay is happened on the ground control drawing which reach twenty days. All of this problem could be classified as waiting waste. Waste is also identified using questionnaire. The results are the critical waste, namely; waiting (12%), lack of knowledge capture and re-use (10%), inappropriate individuals (10%) and lack of resources (10%). Comparing to the value stream mapping analysis which got the same result, waiting is the most critical waste happened in the unmanned aircraft project. Delay which is identified by using VSM is causing waiting.

2. In order to eliminate or reduce waste happened in unmanned aircraft development process, several recommendation are given. The first recommendation is the training, and the knowledge management. This recommendation could reduce waiting, lack of knowledge capture and re-use,
and also inappropriate individuals. Train the workers would give the workers more skills and knowledge, so they could work faster and efficient. The percentage of improvement are hard to discover, since the program are yet to be implemented. The additional recommendation is the specialist career path, this could increase the morale of the workers. Last recommendation is the phases to implement lean in the Directorate of Technology and Development. Since the Directorate of Production has already implement Lean Manufacturing, it would be good support for the company if Directorate of Technology and Development also implement lean concept to its process. So the whole company would implement lean.

6.2 Suggestions

The improvement and the potential research that can be executed to be the next research or to improve this research are:

1. In this research is based on the critical waste only to be improved. The following research should improve all waste to make it more optimal.
2. In this research there is no consideration about the project management, although the recommendation is using the project management tools. In order to have the comprehensive result, the following research may using the project management tools to identify the problem. For example using the Critical Path Method (CPM), Program Evaluation and Review Technique (PERT) or Graphical Evaluation and Review Technique (GERT).