CHAPTER VI
CONCLUSIONS AND RECOMMENDATIONS

This chapter describes all of the research findings from previous data calculation and analysis chapter in conclusions as well as necessary recommendations for the company as well as for other researches to come.

6.1 Conclusions

Based on previous data processing chapter, it has already pointed out that Multi Criteria Decision Making (MCDM) approach using Analytical Hierarchy Process (AHP) has helped in order to calculate importance level weight of each technology component measured in the process of finding out technology contributions using Technometric.

During first data processing calculation using AHP and Technometric approach for technology contribution measurement to PT. Angkasa Pura I ATC system unit, researcher able to conclude the following:

1. Technology assessment process is conducted at ATC system unit at Juanda International Airport using AHP weighting method and technometric approach. Results from previous data calculation, analysis and observation produce the following outcome:

   o Technoware element technology of the company weighted 0.255 from the overall technology element contribution during flight operation process at ATC control unit. The result also indicates that during flight phase hold the greatest weight in technoware criteria. This shows the importance of technoware contribution during flight to assist pilot and produce a safe flight. Compared to state of the art sophistication level, technoware gaps 0.172 points.

   o Humanware holds the greatest weight for technology element contributing 0.362 for overall company’s technology element. Indicators shows that qualification is more important in absolute measurement than the
other three indicators (skill and expertise, scope of work and behaviour or work culture). Humanware holds the smallest gap value between company’s and state of the art by 0.101 points. Since humanware holds the greatest weight, this means that the company viewed humanware and human factor as the most valuable asset, therefore constant development for human factor quality through qualification improvements is conducted by the company.

- Infoware weighted 0.272, just behind humanware. Infoware is the second greatest weight after humanware since it represents the human-machine interface of both technology and human factor. This is way the company sees the importance of infoware to bridge-in the gap of human mind with technology sophistication. Compared to state of the art sophistication level, infoware gaps 0.231 points.

- Orgaware weighted at 0.111 for overall technology element weight and is the lowest weight among other. This indicates the very little company’s organizational structure interference as organization scope contributing in flight operation process. With the company’s existing contribution scores 0.288, the gap value to state of the art condition is 0.712 points.

2. Based on previous technology assessment process conducted, results indicate that Orgaware technology element is the company’s weakest element. Compared to today’s state of the art sophistication level for orgaware, it can be concluded that company’s orgaware element is insufficient. Although this particular element does not directly affect company’s ATC unit performance when conducting flight operation procedure, it shows the lack of company interference as organization scope contributing in flight operation process. This situation could be caused by the many business scope and
activities that the company handles throughout its overall business process.

3. Technology improvement preferences, orgaware technology element is chosen to be improved. Preferences is made by company’s experts and developed according to improvement criteria which are based on previous data processing results as well as the company’s existing condition. Alternative 1 is the most prefer among all alternatives. Alternative 1 is renewed implementation of power distribution, Alternative 3 is improving employee’s qualification and 3 is considered by company’s experts to make-more-sense in terms of direct improvement to organization and is considered supports the chosen best alternative. While alternative 2 that is improving work seniority is the least preferred since it is deals a lot to work culture and company’s beliefs of seniority at work.

6.2 Recommendations

1. The company, PT Angkasa Pura I Juanda International Airport should maintain humanware technology element as it is the company’s strongest technology component contributing at ATC system unit to ensure the company’s overall service level and customer satisfaction.

2. Ideas for company’s technology improvement based on this research ought to be taken to fully implementation for real improvement implementation in orgaware technology element if the company wishes to increases orgaware function and contribution to ATC system.

3. Technologically speaking, for technoware element itself, the company has sufficient capacity compared to state of the art sophistication level technology. However, in this research, assessment for technology contribution is based entirely on the company’s expert’s
judgments, including defining state of the art score. For further investigation on ATC system in Indonesia airports compared to other countries, assessment of technology components should include state of the art sophistication level that based on the most advance ATC system airport that is wish to be compared to.

4. This research is not merely the end results, rather than the start of other researches to come in management of technology and technology assessment studies. This research could be broaden into investigation of two ATC system in two different airports to compared each technological component contribution level and using other more advance methods of technology assessment and decision making for easier corporate management of technology.