

CHAPTER V

CONCLUSIONS AND SUGGESTIONS

5.1 Conclusion

Based on a series of stages of analysis, design, implementation, and testing that have been comprehensively described in the previous chapters, several conclusions can be drawn from this study, which are as follows:

1. This research has succeeded in designing and building a web-based Generator Installation Project Management Information System that is tailored to the flow of operational business processes at PT. Bolo Dewo Utomo. This system is able to integrate project registration recording, physical field progress reporting, and centralized payment term management.
2. The application of *the Fuzzy Tsukamoto* algorithm to the delay detection feature has been well implemented. Based on validation tests compared with experts (company management), the system is able to predict the level of project delay risk with an accuracy value of 88%. These results show that the algorithm is feasible to be used as a managerial decision-making tool to support project delay risk mitigation efforts.
3. The evaluation of user satisfaction and ease levels measured using *the System Usability Scale* (SUS) method received very positive responses. The results of the questionnaire from Admin, Director, and *Project Manager* resulted in an average score of 87.5. This proves that the system's *user-friendly* interface and workflow are easy to understand.

5.2 Suggestions

The author realizes that the project management system developed in this study still has some limitations and room for improvement. Therefore, the author formulates several suggestions that can be considered for future system development, namely:

1. Addition of fuzzyfication variables to the system. Currently, the delay detection algorithm only considers the variables of time percentage and payout percentage. For further research, it is highly recommended to add variables of external conditions in the field, such as the intensity of bad weather, the number of worker availability, or delays in the delivery of materials, so that risk predictions become much sharper and more accurate.

2. Development of a *mobile-based interface* (Android or iOS) dedicated to *the role of Project Manager*. This aims to make the process of filling *out* the work checklist and uploading photos of proof of progress from the project site more practically through a mobile phone without having to always open a laptop device.