ABSTRACT

Tourism, as a sector within the economy, involves various tourism activities supported by facilities and services managed by the community, entrepreneurs, and both central and local governments. In developing tourism facilities, it is crucial to align the development with actual needs. Rembang Regency, rich in natural and cultural resources, has significant potential in tourism. To maximize this potential, a precise methodology in decision-making is required.

This research integrates the Analytical Hierarchy Process (AHP) and the Technique for Order Preference by Similarity to Ideal Solution (TOPSIS) within a Decision Support System (DSS) for the development of tourism facilities. The study employs the Prototype Method for system development and utilizes AHP alongside TOPSIS for data-driven decision analysis, focusing on tourist preferences, resources, and facility evaluation.

The research emphasizes the importance of comprehensive market identification to serve various tourist segments and manage resources wisely. By understanding market segments, Stakeholder*s can design effective and efficient strategies. The findings indicate that implementing a Decision Support System (DSS) can enhance the quality of decision-making in the tourism sector and contribute to sustainable regional economic growth. The data collection phase includes primary data through observation and interviews, as well as secondary data from external sources, covering parameters and assessment indicators, tourism data of Rembang Regency, and the requirements of the system to be developed. The data is then processed using the Analytical Hierarchy Process (AHP) for weighting and the Technique for Order of Preference by Similarity to Ideal Solution (TOPSIS) for* ranking *alternatives. The integrated system design phase is conducted using the Prototype Method, including Unified Modeling Language (UML) design and system prototypes. System verification through Black Box Testing followed by validation through user acceptance tests ensures that the design meets the needs of* Stakeholder*s, namely the Rembang Regency Tourism and Culture Office. The research concludes with the formulation of conclusions and recommendations for further study and practical applications.*

The research process involves data collection through direct observation and interviews with relevant informants. The collected data is processed using the Analytical Hierarchy Process (AHP) and the Technique for Order of Preference by Similarity to Ideal Solution (TOPSIS). These methods are used to generate a ranking *of alternative tourism areas prioritized for development. The conclusion of this research asserts that strategic and data-driven development of tourism facilities can help* Stakeholder*s make more precise and effective decisions. Thus, this structured and evidence-based approach is expected to support the development of a more sustainable and competitive tourism sector.*

Keywords: AHP, Rembang Regency, Tourism, Development, Decision Support System, TOPSIS.