PREFACE

With a heart full of gratitude, I offer my praise and thanks to God Almighty, through Jesus Christ, who, in His boundless grace and favor, enabled me to complete this Final Project. This journey of preparing my final project has been rich with invaluable new experiences. I recognize that many individuals played a vital role, offering unwavering support throughout my studies and the completion of this final project. Therefore, I extend my deepest appreciation to:

- To my beloved parents, B. Florus Turnip and S. Marpaung, thank you for your unwavering support, invaluable advice, and generous financial assistance that sustained me during my study. To my dear sister Ayumi and brother Kristian, thank you for always providing encouragement, understanding, and steadfast moral support, and to Marcelino, thank you for being my constant confidant and a comforting presence through every challenge.
- 2. To Mr. Luthfi Ramadani, S.T., M.T., Ph.D., my first final project supervisor and academic advisor, thank you for patiently dedicating your time, providing invaluable guidance, mentorship, and unwavering support from the very beginning until the completion of this final project. I am truly grateful for all the advice and knowledge you shared.
- 3. To Mr. Iqbal Yulizar Mukti, S.Si., M.T., Ph.D., my second final project supervisor, I extend my sincere thanks for your crucial help in shaping this final project. Your valuable feedback, suggestions, and constructive criticism were incredibly helpful in making sure I could finish this work effectively.
- 4. To Mr. Hendi and Mr. Elfan, representatives from the IT Planning Unit at PT Perusahaan Gas Negara, thank you for giving me the opportunity to work on this research topic, and for all your help with the information and data I needed.
- 5. And finally, to myself, for having the strength to navigate the ups and downs of university life. Thank you for holding on through the moments

of doubt and struggle, and for staying committed to seeing both academic journey and this final project through to completion.

The author realizes that this Final Project still has many shortcomings. Therefore, constructive feedback and suggestions are highly appreciated for future improvement. In conclusion, the author sincerely hopes that this work can be beneficial to readers and serve as a source of knowledge and reference for future research.