CHAPTER IV
CLOSING

4.1 Conclusion

Based on the research and observation that has been conducted about the scrum implementation in PT XYZ Component Exchange Department to handle Technical Organizational & Environmental (TOE) Project Complexities and contributing to company's competitive advantage, it can be concluded that:

1. Component Exchange Department of PT XYZ Scrum framework implementation to gain competitive advantage:

   - The application of scrum and Sicomex has had a key impact to help reduce the lead time of overhaul activities. Counting that in the previous year the realization of lead time was far above the target, by 2025, the lead time achievement of overhaul activities carried out fell below the lead time target – indicating that the execution is much more efficient. Top management at PT XYZ Balikpapan also strongly supports the application of scrum carried out in the Comex Department because it helps them to maintain good performance to continue to support PT XYZ's mining activities.

   - The implementation of the scrum framework as an agile project management methodology at PT XYZ Component Exchange Department has met the criteria/standards based on 6 scrum principal guidelines. From the results of the observations made, all members

routinely iterate through daily scrum every day – which is a very vital value in the application of scrum.

- PT XYZ has successfully remained competitive to its competitors from the scope of competitive advantage. It can be seen from the good trends over the 3 aspects of competitive advantage – project speed, cost, and customer satisfaction.

2. Scrum Framework execution helps PT XYZ handle its Technical, Organizational, and Environmental Project Complexities aspects:

- The implementation of scrum and Sicomex helps the scrum team to be able to overcome various project complexities which are divided into Technical, Organizational, and Environmental. Based on field observations and qualitative surveys produced, the scrum team can be more adaptive in dealing with various types of project complexities and all uncertainties that can occur at any time in carrying out overhaul activities.

- Scrum – supported by Sicomex – has succeeded in becoming an appropriate agile project management methodology with an application-based digital transformation that plays a very massive role in helping PT XYZ's Comex Department. It managed to handle a number of external factors – from the TOE aspects – that can delay its overhauling activities. This is because in updating the progress of the overhaul every day, a technology that can support these activities is needed. With Sicomex, the scrum team can quickly find out the

overhaul updates per day – making it easier for them to run the values of scrum.

3. Counting on the 5 months of effective scrum, the scrum team at the Comex Department of PT XYZ felt the positive impact resulting from the procurement of Sicomex technology and the application of scrum. This is evident from their discipline to be present in the daily scrum which is held every day.

4. The management support that continues to be provided to the scrum team is also one of the main factors related to the success of the Comex Department in executing scrum. Training, mentoring, and briefing are provided regularly to ensure that the scrum team can run the scrum framework properly. As a result, positive trends continue to be shown in 2025 despite the various challenges that exist.

4.2 Recommendation

Referring to research and field observation that has been accomplished, researcher has noticed several recommendations that could be considered by PT XYZ in order to enhance its scrum implementation to handle project complexities and remain competitive within its industry. The recommendation covers:

1. Continue to make the development of the Sicomex application a topic that is discussed in daily scrum every day. This is to be able to ensure that Sicomex can be at a very perfect stage to be routinely and so on to be used

by the Comex Department of PT XYZ. Never stop involving IT officers in every scrum event that is carried out must also be implemented.

2. Emphasize again to the scrum team and Comex Department about the big vision and main urgency of the implementation of scrum. This is useful for integrating Sicomex and scrum into an organizational culture and behavior. So that the team can remain agile regardless of what project they will handle later.

3. Installing agile transformation leadership. When the trend resulting from adopting a technology and scrum is already showing positive results, installing agile transformation leadership plays a vital role in keeping team performance at its best. It is hoped that the implementation of this scrum will be the starting point to make officers at PT XYZ agile and ready to face various uncertainties in their industry. The agile transformation leadership launched by McKinsey also functions as a key figure in designing the company's roadmap towards fully agile in the future.

4. Consistently maximizing the role of agile academy. PT XYZ itself actually already has an agile academy – through 1 special department in their company. This is where the role of agile academy becomes very important to ensure that companies can continue to compete in this era of VUCA. The agile academy consisting of agile coaches will be responsible for training new members – and old members – to be able to have capabilities and skills that are constantly updated according to the times.