

The Role of Leadership Strategy in Facing Blockchain Technology in the Defense Industry in Indonesia

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Abstract

The development of a robust defense industry is crucial for national security, requiring a balance between nationalism, strategic leadership, and the integration of cutting-edge technologies such as blockchain. This paper explores the significance of blockchain in revolutionizing the Indonesian defense industry, emphasizing its potential to enhance transparency, accountability, security, and efficiency. The research employs descriptive qualitative methods, utilizing diaries, literature reviews, and various references. The leadership strategy for effective blockchain integration is outlined, including a clear vision, understanding of blockchain technology, proper implementation, leader commitment, and adaptability. The defense industry's ability to adapt to evolving blockchain technology is emphasized, requiring a competent team and a culture supporting innovation. Leadership strategies are further detailed, emphasizing the importance of research and development, partnerships with other industries, and socialization and education to stakeholders. These strategies aim to increase competence, accelerate development, enhance collaboration, and build trust in blockchain technology within the defense industry

Keywords: Strategic Leadership, Defense Industry, Blockchain

INTRODUCTION

In order to build a modern national defense capable of facing more complex threats, reliable industry is needed. This industry must produce the main weapon system equipment (Alutsista) which is designed by professional human resources and supported by natural resources and artificial resources sourced from within the country (Sembiring, 2011: 9). development of a superior defense industry capable of responding to National Defense and Security needs requires a high level of nationalistic commitment in managing the Defense Industry so that all orientations support National defense

A commitment to nationalism will ensure that all defense industry orientations lead to support for national defense. However, this commitment to nationalism must also be balanced with business interests so that the defense industry is able to independently revive its corporate organization.

Apart from a high commitment to nationalism, strong strategic leadership is also needed to face the challenges facing the Indonesian defense industry, including the emergence of blockchain technology. Blockchain technology is an innovation that has become a major topic in various sectors, including the defense industry. Blockchain provides transparent and mathematically verified proof of every transaction or data change that occurs in a network. This provides high security and reliability because each block of information is linked to the previous block, creating a chain that is difficult to change or manipulate.

In the context of the defense industry, the application of blockchain can provide great benefits. One of the main benefits is increased transparency. With transaction records decentralized and open to all parties involved, interested parties, including the government and

the public, can monitor and verify every step in the defense equipment supply chain. This can increase accountability and prevent unethical or corrupt practices.

Security is also a major focus in the defense industry, and blockchain can provide an additional layer of security. Since data is stored across multiple decentralized nodes, an attack on a single node will not damage the entire system. Additionally, the cryptography used in blockchain provides a high level of encryption, protecting data from cyber threats.

However, implementing blockchain technology does not come without challenges. Big changes like this require significant investment, both in terms of human and financial resources. Strategic leadership is critical to identifying opportunities and overcoming obstacles that may arise during the implementation process.

Strategic leadership in the context of blockchain involves the ability to deeply understand the potential of this technology, formulate a strategy that fits the defense industry's long-term goals, and coordinate across the organization to achieve those goals. Leaders must be able to guide teams through change, provide necessary resources, and ensure that system security and reliability remain a top priority.

With a combination of nationalistic commitment and strong strategic leadership, the defense industry can harness the full potential of blockchain technology to build systems that are more efficient, secure, and responsive to increasingly complex threats.

Blockchain technology has now become one of the most talked about and anticipated technologies. Blockchain technology has the potential to revolutionize the defense industry. Blockchain technology can offer solutions to some of these challenges. However, to harness the potential benefits of blockchain technology, strong strategic leadership is required to identify opportunities and challenges, develop strategies, and manage blockchain technology implementation. Apart from a high commitment to nationalism, strong strategic leadership capabilities are needed to lead defense industry organizations and companies. Strong strategic leadership will be able to consolidate all defense industry resources into strength to face the challenges of competition and globalization.

RESEARCH METHODS

In this study, the author uses descriptive qualitative research methods by collecting, analyzing and interpreting non-numerical data into words so that readers can understand what the author means in this paper. The way the author collects research data is by using diaries, literature reviews and also various references that can be used according to the research topic that the author wants to research.

RESULT AND DISCUSSION

The defense industry in Indonesia faces various challenges, such as global competition, budget onstraints, and increasingly complex security threats. To be able to overcome these challenges, the defense industry in Indonesia needs to carry out digital transformation. One digital technology that has great potential to revolutionize the defense industry is blockchain.

Blockchain is a decentralized data storage technology. Data stored in the blockchain cannot be changed or deleted without the consent of all parties involved. Blockchain technology has several advantages, such as:

- Security: Data stored in blockchain is highly secure as it cannot be changed or deleted without the consent of all parties involved.

- Efficiency: Blockchain can improve operational efficiency because it can eliminate the need for third parties.
- Transparency: Blockchain can increase transparency because the data stored in the blockchain can be accessed by all parties involved.

Blockchain technology has great potential to revolutionize the defense industry in Indonesia by increasing security, efficiency and transparency in various aspects of the defense industry, such as procurement, logistics and training (Siahaan et al., 2020). To be able to take full advantage of the potential of blockchain technology, the defense industry in Indonesia needs the right leadership strategy.

Blockchain Leadership Strategy for the Defense Industry in Indonesia

Blockchain leadership strategies for the defense industry in Indonesia can be divided into several main aspects, namely:

1. A clear vision of the role of blockchain technology in the defense industry

The defense industry needs to have a clear vision of the role of blockchain technology in the defense industry. This vision must include the goals to be achieved, the benefits expected, and the challenges faced. For example, the defense industry may have a vision to use blockchain technology to improve the security of the defense supply chain (Jones & Smith, 2019). This vision can be achieved by using blockchain technology to track the movement of defense goods and services from manufacturer to end user.

2. Understanding blockchain technology

It is important for defense industry leadership to have a deep understanding of blockchain technology to ensure effective and efficient implementation in the defense industry. This understanding can be improved in various ways, including following developments in blockchain technology, attending special training and seminars on blockchain technology, and collaborating with parties who have competence in blockchain technology.

By keeping abreast of developments in blockchain technology, leaders can gain insight into the latest trends and potential applications in the defense industry. Additionally, specialized training and seminars on blockchain technology can provide an in-depth understanding of the concepts, benefits, and challenges associated with this technology. Finally, collaborating with parties who have expertise in blockchain technology can help defense industry leaders gain a broader and deeper view of the application of this technology in the defense context.

3. Implementation and implementation

the application and implementation of blockchain technology in the defense industry is important responsibility for the leadership of the industry. This is necessary to ensure that blockchain technology can be smoothly integrated into the business processes and operations of the defense industry, and obtain maximum benefits from this technology.

According to Smith and Jones (2019), implementing blockchain technology in the defense industry requires concrete steps, including conducting research and development to understand the needs and challenges faced, building appropriate blockchain infrastructure, and implementing blockchain solutions that can optimize business processes and security data in the defense industry.

4. Commitment from leaders

The defense industry needs to have commitment from leaders to implement blockchain technology. This commitment must be reflected in the policies and budget allocated for the development and implementation of blockchain technology (Brown, 2018). Defense industry leaders need to recognize the importance of blockchain technology and its potential to improve defense industry performance.

5. Ability to adapt,

the defense industry needs to have the ability to adapt to the changes brought by blockchain technology. Blockchain technology is a technology that continues to develop, so the defense industry needs to be ready to adapt to these changes (Chen et al., 2021).

The defense industry needs to have a competent team in the field of blockchain technology to be able to keep up with developments in this technology. Apart from that, the defense industry also needs to have a culture that supports innovation and continuous learning.

The following are several examples of the role of leadership strategies in dealing with blockchain technology in the defense industry in Indonesia:

- Support research and development of blockchain technology

Blockchain technology has the potential to revolutionize various industries, including the defense industry. Blockchain can be used to improve security, efficiency and transparency in various aspects of the defense industry, such as supply chain, logistics and asset management. The defense industry can support research and development of blockchain technology to develop solutions that suit the needs of the defense industry (Wang & Liu, 2020). This is important to ensure that blockchain technology can be used effectively and efficiently in the defense industry. There are several benefits that the defense industry can gain by supporting research and development of blockchain technology, among others Increase security, Increase efficiency, Increase transparency

- Building partnerships with other industries The defense industry can build partnerships with other industries, such as the information and communications technology industry, to develop and apply blockchain technology (Li & Zhang, 2019). This partnership can provide various benefits for the defense industry, including:

- a) Increase competence and resources

Partnerships with other industries can help the defense industry to increase competence and resources in the field of blockchain technology. The defense industry can learn from the experience and expertise of other industries in developing and implementing blockchain technology.

- b) Accelerate development and deployment

Partnerships with other industries can help the defense industry to accelerate the development and application of blockchain technology. The defense industry can leverage the resources and expertise of other industries to develop blockchain solutions that suit the needs of the defense industry.

- c) Increase collaboration

Partnerships with other industries can help the defense industry to increase collaboration with other interested parties. This can help the defense industry to develop more effective and efficient blockchain solutions.

- Carrying out outreach and education to stakeholders The defense industry needs to carry out outreach and education to stakeholders, such as government, industry and society, about blockchain technology (Wu et al., 2019). There are several benefits that can be obtained from socialization and education about blockchain technology, including:

- 1) Increase understanding and acceptance

Outreach and education can help increase understanding and acceptance of blockchain technology. This is important to ensure that blockchain technology can be accepted and used by various interested parties.

- 2) Eliminate misconceptions

Outreach and education can help dispel misconceptions about blockchain technology. Misconceptions can hinder the development and implementation of blockchain technology.

3) Build trust

Outreach and education can help build trust in blockchain technology. This trust is important to ensure that blockchain technology can be used safely and effectively.

By implementing the right blockchain leadership strategy, the defense industry in Indonesia can take full advantage of the potential of blockchain technology to increase security, efficiency and transparency. Below are several recommendations to strengthen blockchain leadership strategies for the defense industry in Indonesia:

Government

- Budget: The government can provide budget for the development of blockchain technology in the defense industry through various sources, such as:
 - a. State budget
 - b. Collaboration with international institutions
 - c. Collaboration with private companies

Budget this can be used to finance various activities, such as: * Research and development * Training * Implementation of blockchain solutions The government needs to ensure that the budget provided is sufficient to support the application of blockchain technology in the defense industry. Apart from that, the government needs to ensure that the budget is used effectively and efficiently.

- Clear regulations: Clear regulations for the application of blockchain technology in the defense industry need to cover various aspects, such as: * Data security * Operational efficiency * Transparency * Legal compliance

The government needs to involve various stakeholders, including the defense industry, universities and the community, in drafting this regulation. This regulation needs to be comprehensive and flexible, so that it can accommodate future developments in blockchain technology.

- Incentives: Incentives for the defense industry to implement blockchain technology could be: * Tax breaks * Subsidies * Soft loans

The government needs to provide incentives that are right on target and can encourage the defense industry to implement blockchain technology. These incentives need to be designed carefully, so that they do not cause market distortion.

Defense Industry

- Blockchain team: The defense industry needs to establish a blockchain team that is competent and committed to implementing blockchain technology. The blockchain team needs to have competencies in the fields of blockchain technology, defense industry, and management. Blockchain teams can be formed from various sources, such as: * Internal resources from the defense industry * Resources from universities or research institutions * Resources from private companies

The government needs to provide support to the defense industry in establishing a blockchain team. The government can provide training and assistance to the blockchain team, so that it can carry out its duties effectively.

- Research and development: The defense industry needs to conduct research and development to find the right blockchain solution for the defense industry's needs. This research and development can be carried out in collaboration with universities or research institutions.

The government needs to support research and development in the field of blockchain for the defense industry. The government can provide funding, facilities and infrastructure to the defense industry to carry out research and development.

By implementing these recommendations, the defense industry in Indonesia can become more resilient and ready to face future challenges

CONCLUSION

Indonesia's defense industry faces various challenges, including global competition, budget constraints, and increasingly complex security threats. Digital transformation, particularly through blockchain technology, was identified as a potential solution.

The blockchain leadership strategy for the defense industry in Indonesia includes several main aspects, such as having a clear vision of the role of blockchain technology, a deep understanding of the technology, proper implementation, commitment from leaders, and the ability to adapt to technological developments.

Recommendations to strengthen the blockchain leadership strategy include support from the government in terms of budget, clear regulations, incentives for the defense industry, the formation of a competent blockchain team, and research to develop blockchain solutions that suit industry needs.

By implementing these recommendations, the defense industry in Indonesia is expected to be able to utilize the full potential of blockchain technology to increase security, efficiency and transparency in various aspects of the defense industry.

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