



## Marketing Strategy for Online Condition Monitoring (Case Study: Nanoprecise Machine Doctor)

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**ABSTRACT:** Today's industry is facing ever-increasing competition. To stay competitive, a company needs to maintain the high reliability and productivity of its assets. Companies must invest in maintenance programs to prevent unplanned downtime and reach their optimal reliability. Predictive maintenance or condition-based maintenance is an important aspect of a maintenance program to maintain asset reliability. One emerging predictive maintenance tool, fueled by digital disruption, is online condition monitoring. Online condition monitoring provides diagnostics with shorter intervals than walking survey analysis with portable analyzers, allowing it to diagnose faults not detectable by other condition monitoring methods.

Adikari Wisesa Indonesia, a firm specializing in maintenance services, has partnered with Nanoprecise Sci Corp and is the sole distributor of Machine Doctor sensors in Indonesia to enhance its maintenance service. However, the sales of Machine Doctor were suboptimal. This study aims to identify the business issue, provide analysis, and propose a solution to the business issue.

The market is analyzed using the STP framework. Then, the general environment (PESTEL), industry environment (Five Forces), and competitor analysis are performed to better understand the external environment Adikari Wisesa is currently in. After analyzing the external environment, the internal environment of Adikari Wisesa is studied by using a Resource-Based View, VRIO, and Value Chain Analysis. Then, a SWOT analysis is performed summarizing the business situation of the company. A business solution is then proposed based on a TOWS matrix.

**KEYWORDS:** Condition Monitoring, Marketing Strategy, Predictive Maintenance.

### INTRODUCTION

One important maintenance to ensure reliability is condition-based monitoring or predictive maintenance (Moubray, 1997), which is the process of monitoring parameters in machinery (vibration, temperature, etc.), to look for indications of developing faults. One of the condition-monitoring activities that is to be highlighted is Vibration Monitoring (ISO 13373-2:2016). Vibration is one key parameter for monitoring the condition and performance of machines. Vibration monitoring can detect faults that result in mechanical vibration emissions in the machine (imbalance, misalignment, lubrication problems, etc.).

The conventional way of conducting vibration monitoring is by utilizing portable data collectors and performing walking vibration surveys periodically done by analysts. While the conventional method has served industries well over the years, the ever-increasing need for reliability necessitates companies to explore other solutions that record vibration data with much higher frequency compared to the walking survey (i.e., 2-4 times per day vs. one per month), especially for machineries with lower mean-time-to-failure (MTTF) and higher failure rate (OREDA, 2002). One such solution is Online Condition Monitoring. Nanoprecise Sci Corp has an online condition monitoring sensor called the Machine Doctor.

Machine Doctor sensors can detect faults early in their development stage, up to 750 hours before the failure happens and other fault symptoms (heat, noise, etc.) appear. This leaves ample time for a maintenance division to plan corrective actions accordingly and avoid unplanned downtime. Machine Doctor takes data reading 2-6 times per day, meaning that it is a monitoring device and not a safety device, and it is not suitable for equipment with very short mean-time-to-failure (MTTF).

The Machine Doctor is a promising online condition-monitoring solution. Yet, Adikari Wisesa faced several challenges in marketing them.

### LITERATURE REVIEW

To address the business problem, a new marketing strategy is required to increase sales of Machine Doctor. A comprehensive analysis starts with types of business-level strategy. Five business-level strategies are available for firms to employ to reach their



desired strategic position against competitors: cost leadership, differentiation, focused cost leadership, focused differentiation, and integrated cost leadership/differentiation (Hitt et al., 2018). A market or customer analysis needs to be performed in order to better understand the nature of a firm's customers, their requirements, behaviors, characteristics, etc. Thus, a marketing strategy can be tailored to fit the desired market and elicit a positive response from it.

## 1. STP

One suitable framework of market analysis to be used is Segmentation, Targeting, and Positioning (STP).

- a. Market segmentation divides a market into well-defined subsets. A market segment consists of a group of consumers who share a similar set of needs and/or profile characteristics and respond in a similar way to marketing stimuli (Kotler et al., 2023).
- b. Targeting is the process of identifying customers as a basis for the company to optimize its offering. In short, targeting reflects the company's choice of which customers it will prioritize and which customers it will ignore when designing, communicating, and delivering its offering.
- c. Positioning is the act of designing a company's offering and image to occupy a distinctive place in the minds of the target market. The goal is to instill the brand in the minds of consumers to maximize the potential benefit to the firm. Unlike the value proposition, which articulates all benefits and costs of the offering, the positioning zeroes in on the key benefits that will provide consumers with a reason to choose the company's offering (Kotler et al., 2023)

## 2. Internal Environment

Internal conditions of the firm should be analyzed. The internal analysis will give indications of whether the employed strategy will result in a competitive edge over competitors within the defined external conditions. Combining external analysis and internal analysis results in a direction for the firm to follow, enabling them to seize rising opportunities and how to deal with emerging threats accordingly.

Several frameworks for internal analysis can be employed, RBV, VRIO, and Value Chain Analysis.

- a. Resource-based view Analysis enables firms to exploit opportunities and neutralize threats. A firm's resources can be tangible or intangible.
- b. VRIO (Valuable, Rare, Inimitable, Organized) Analysis or the four criteria of sustainable competitive advantage consists of four specific criteria of core competencies that have to be fulfilled in order to develop a sustainable competitive advantage. (Thompson et al, 2022)
- c. Value chain analysis enables a firm to identify parts of its operations that create value and those that do not (Rothaermel, 2023)

## 3. External Environment

Firms work in an environment influenced by various external factors. These factors both directly and indirectly affect a firm's performance and its competitiveness in the market. Hence, in order to develop a competitive marketing strategy, external environmental factors must be taken into account. A firm's external environment can be divided into four components: General environment, industrial environment, competitor, and customer analysis.

- a. Firms operate in a general or macro-environment with six identifiable forces acting in it: political, economic, sociocultural, technological, environmental, and legal, better known as PESTEL forces (Thompson et al., 2022)
- b. Industry analysis can be modeled using the five forces of competition model: Threats of New Entrants, Bargaining Power of Suppliers, Threats of Substitutes, Bargaining Power of Buyers, and Industry Rivalry
- c. Competitor analysis is performed on companies that directly compete against the firm. Firms need to analyze their competitors to prepare countermoves for each competitor's actions and exploit opportunities left by them.

## 4. SWOT and TOWS analysis

After performing internal and external analysis, the business landscape of the firm can be summarized using the SWOT or TOWS framework. SWOT stands for Strength, Weakness, Opportunity, and Threats. Developing a marketing strategy by capitalizing on a firm's strengths, overcoming its weaknesses, seizing its best opportunities in the market, and countering competitive and general threats, gives the company the best chance for market success. (Thompson et al., 2022)



## METHODOLOGY

The study utilizes a qualitative approach. For this research, semi-structured interviews will be conducted with Adikari Wisesa's potential and existing clients. These interviews will adhere to a thematic framework using interview guides, which include main questions and several additional questions relevant to the main topics. This research employs qualitative methods aimed at conducting an in-depth investigation of the problem. Explains that in qualitative research, data analysis begins before the researcher enters the field (Sugiyono, 2022). Secondary data, or information from preliminary investigations, is analyzed to determine the research focus. Qualitative research examines the nature of phenomena, including their quality, context, and perspectives, without considering their range, frequency, or position within a cause-and-effect chain.

Subjects for interview questions in the interview guide are derived from previous research, literature, or early data collection techniques such as document analysis or direct observation (Busetto et al., 2020). The interview results will be used for market and internal analysis.

## RESULT AND DISCUSSION

### 1. Market Analysis

#### a. Segmentation

The relevant segmentation criteria for Machine doctor have been identified:

#### i. Demographic factors

Currently, Adikari Wisesa mainly serves the oil and gas (upstream and downstream) industry, mining, and power generation industries.

To further ensure the relevancy of demographic segmentation for this study, the industry will be segmented based on the companies' industrial process: Rotating equipment majority and non-rotating equipment majority. This is chosen because the Machine Doctor sensor's main strength is its ability to diagnose rotating equipment.

#### ii. Operating variables

Customers' operational variables are some of the most essential parts of segmenting the industry. These variables provide insightful information on the success probability of the employed online predictive maintenance solution. According to the data gathered by interviewing several existing and potential clients of Adikari Wisesa, there are four operating variables relevant for the segmentation process:

- **Customers' predictive maintenance maturity level**

Clients have different Predictive Maintenance maturity or readiness levels. It is important that clients have reached a certain maturity level in order to have the data platform, IoT infrastructure, organizational capabilities, and digital culture needed to sustain Machine Doctor sensors as a PdM 4.0 tool. There are four stages of predictive maintenance maturity level (Haarman, 2017):

- Visual inspections: physical examinations where the conclusions rely on the inspectors' knowledge and experience.
- Instrument inspections: checks where conclusions are drawn from a combination of the inspectors' expertise and data readings from instruments.
- Real-time Condition Monitoring: real time monitoring of assets with alerts triggered by set rules or critical thresholds.
- Predictive maintenance using Big Data Analytics: real-time monitoring of assets with alerts triggered by predictive methods, like regression analysis.

- **Amount of total and critical rotating equipment.**

Critical equipment affects production the most. The plant production stops when critical equipment fails, and there are no redundancies to step in (OREDA, 2002). Critical equipment directly correlates to plant profitability.

Hence, critical equipment is considered to be the primary target for online vibration monitoring. The threshold of twelve critical machines is determined due to Nanoprecise's minimum order of 50 sensors, assuming each machine requires 4 sensors. The extra 2 sensors are a subject for negotiation both with the customer and with the Nanoprecise principal.

- **Plant reliability requirement or profit sensitivity to reliability.**

This serves as the basis for the cost-benefit analysis of Nanoprecise implementation.



- Internet Availability

Nanoprecise sensors utilize internet access to deliver immediate data recording and reporting, hence internet access is essential. LTE network coverage is optimal, as LTE cell connection is one of the main value propositions of Nanoprecise.

### iii. Purchasing Approaches

There are four purchasing approach criteria considered for the Machine Doctor segmentation process:

- Power structure

Determine who is the purchasing decision maker. A different approach will be required for different functions with a higher influence on decision-making, particularly in purchasing (e.g. engineering-dominated vs. financially dominated).

In addition to the function difference, an engineering-dominated function can also be divided into several approaches (Kotler et al., 2023)

- Do-It-Myself (DIM) Clients who prefer to buy PdM tools and perform analyses by themselves through their employed PdM Engineers.
- Do-It-With-Me (DIWM) Clients who procure PdM tools, perform analyses in-house, but still contract third-party engineers to perform analyses or give second opinions.
- Do-It-For-Me (DIFM) Clients who procure PdM tools alongside the engineering services from the providers.

### iv. Nature of the existing relationship

Relationships with Adikari Wisesa. A special relationship, such as personal connections, greatly affects the marketing approach and the customer journey.

### v. Purchasing policies

Some companies are open to OPEX or subscription-based service, while others are averse to it, preferring only one-time purchases (CAPEX).

### vi. Attitude toward risk.

Customers have various perceptions and trust regarding brands, especially in terms of their popularity. Customers belonging to the early-adopter classification are more open (risk-taking) to consider purchasing new products or brands, while others are more averse to it (wait-and-see).

### b. Targeting

After the market segmentation has been modeled, a target market will be chosen based on its target attractiveness and compatibility:

#### i. Demographic Factors

Potential clients would need to have a significant amount of rotating equipment inside their plant (rotating equipment majority). This is chosen because Nanoprecise sensors' capability is maximized when monitoring rotating equipment, and it is the primary use case of the Nanoprecise sensors.

#### ii. Operating variables

Customers' operational variables are some of the most essential parts of segmenting the industry. These variables provide insightful information on the success probability of the employed online predictive maintenance solution.

- **Customers' predictive maintenance maturity**

Customers would need to be in stage III: Real-Time Condition Monitoring stage. This stage necessitates certain Processes, Content, Performance, Measurement, and Organisational capabilities to sustain stage IV (PdM 4.0) solutions. The table below describes the parameters for organizations with stage III PdM maturity levels.

- **Amount of total and critical rotating equipment.**

Plants with a critical equipment number of more than 12 are chosen due to Nanoprecise's minimum order quantity of 50 sensors.

- **Profit sensitivity to reliability**

To maximize efficiency and the appeal of Nanoprecise usage, companies with the potential of more than two times



ROI are targeted. This means that the cost spent on Nanoprecise subscription provides a return twice the amount invested through the prevention of unplanned downtime.

- **Internet Availability**

Sites with LTE cell coverage are prioritized. This is one of Nanoprecise’s core competitive advantages.

**iii. Purchasing Approaches**

Three purchasing approach criteria have been identified as attractive and compatible target segment.

- **Power Structure**

An engineering-dominated purchasing structure is preferred as engineering analysis and thinking are required in order to justify the purchase of Nanoprecise.

In addition to that, an engineering-dominated purchasing structure with a Do-It-With-Me and Do-It-For-Me (DIWM and DIFM) approach is preferred. This is because of the higher segment attractiveness of those approaches. Those segments have higher entry barrier due to the PdM expertise required by providers, in which Adikari Wisesa is one of those providers, resulting in fewer competitors.

**iv. Nature of existing relationship**

Companies with closer ties to PT Adikari Wisesa Indonesia are prioritized. This is done to increase efficiency in the marketing process by prioritizing potential customers with greater access for product introductions.

**v. Purchasing policies**

Nanoprecise has a subscription-based service. Hence, it is desired that the company is open to a subscription pricing policy (OPEX).

**vi. Attitude toward risk**

Companies that are more risk-taking are preferred. This is because Nanoprecise and online monitoring solutions are both new brands and concepts in mechanical maintenance.

The targeted segment for Machine doctor can be summarized in table below:

**Table 1. Targeted Market Segment**

Characteristic	Target
Industry type.	<ul style="list-style-type: none"> <li>• Rotating equipment majority</li> </ul>
Customers’ PdM maintenance maturity	<ul style="list-style-type: none"> <li>• Stage III PdM maturity stage</li> </ul>
Amount of total and critical rotating equipment.	<ul style="list-style-type: none"> <li>• More than 12 machines</li> </ul>
Plant reliability requirement or profit sensitivity to reliability.	<ul style="list-style-type: none"> <li>• Price sensitivity: 2x ROI</li> </ul>
Internet Availability	<ul style="list-style-type: none"> <li>• LTE Available</li> </ul>
Power structure	<ul style="list-style-type: none"> <li>• Engineering-dominated                             <ul style="list-style-type: none"> <li>○ DIWM</li> <li>○ DIFM</li> </ul> </li> </ul>
Nature of the existing relationship	<ul style="list-style-type: none"> <li>• Close ties to PT Adikari Wisesa Indonesia preferred</li> </ul>
Purchasing policies (including bidding and amount limit of direct (PO)	<ul style="list-style-type: none"> <li>• Open to subscription-based maintenance products</li> </ul>
Attitude toward risk.	<ul style="list-style-type: none"> <li>• Risk Taker</li> </ul>

**c. Current Positioning (7Ps)**

**i. Current product positioning**

- A sensor with a shorter monitoring interval to capture faults with a short development cycle (short mean-time-to-failure).
- A sensor capable of capturing six parameters (vibration, acoustic, temperature, magnetic flux, RPM, and humidity). These parameters complement each other in providing automated diagnosis powered by AI.
- The first truly wireless sensor in the market with no extra infrastructure



**ii. Price**

Currently, Adikari Wisesa is eligible for a partner’s pricing, providing an extra discount due to Adikari Wisesa’s capability in predictive maintenance. Unfortunately, due to a Non-Disclosure Agreement signed by Adikari Wisesa and Nanoprecise, the amount of discount, and Adikari Wisesa’s profit margin cannot be disclosed. However, Adikari Wisesa is currently pricing the Machine Doctor at USD 700 to USD 1000 per sensor per year for the LTE model. Ideally, one machine requires four sensors installed for optimal

**iii. Place**

Adikari Wisesa has been authorized as a sole distributor for the Indonesian market. Nanoprecise sensors are sold and installed by Adikari Wisesa without further intermediaries. The sensors are sent from their manufacturing location in Bangalore, India.

**iv. Promotion**

Adikari had several marketing campaigns for Machine Doctor in the past:

- a. Mass email marketing using an online intelligence platform.
- b. Information about the Machine Doctor on the company website
- c. Direct marketing to Adikari Wisesa’s existing clients and close associates

**v. People**

Adikari Wisesa currently has a business development division consisting of 6 members: a business development head, four sales members, and one tender admin.

**vi. Process**

The Machine Doctor ordering process typically begins when clients consult Adikari Wisesa for a condition monitoring solution, equipment, their criticality, and other relevant operating parameters. Then, clients ask for an official quotation (RFQ). Then, Adikari Wisesa sends an official Quotation. When the price has been agreed upon, a Purchase Order is issued. Then, Adikari Wisesa submits a Purchase Order to Nanoprecise, which is then processed, and the sensors are sent. After the customs and import process is finished, Adikari Wisesa will receive the sensors and install them in the client’s facility.

**vii. Physical Evidence**

Adikari Wisesa currently has 4 demo sensors for presentation and trial. Clients can apply for a trial program and 1-2 of their machines will be monitored for up to 2 weeks. Clients may experience and decide themselves about the Machine doctor solutions.

**2. Internal Analysis**

**a. Resource-Based View Analysis**

**i. Resources**

Analysis of Adikari Wisesa’s tangible and intangible resources can be summarized in the table below:

**Table 2. Adikari Wisesa Tangible and Intangible Resources**

Tangible Resources	
Physical Resources	<ul style="list-style-type: none"> <li>• Jakarta head office, operational offices in Surabaya and Pomalaa (South Sulawesi)</li> </ul>
Technological Assets	<ul style="list-style-type: none"> <li>• Condition monitoring data analyzers</li> <li>• Advanced engineering analysis</li> <li>• Engineering troubleshooting tools</li> <li>• Corrective maintenance tools</li> </ul>
Organizational Resources	<ul style="list-style-type: none"> <li>• Dedicated predictive maintenance division</li> <li>• Standardized and certified maintenance practice</li> <li>• Agile and lean organization capable of adapting quickly</li> </ul>
Intangible Resources	
Human Capital	<ul style="list-style-type: none"> <li>• Highly qualified engineers from accredited universities</li> <li>• International predictive maintenance certifications</li> </ul>



	<ul style="list-style-type: none"> <li>• Maintenance experience of 15+ years</li> <li>• 40 permanent employees and around 200 contract employees</li> <li>• 80% of employees aging 20-35 years old</li> </ul>
Company Image	<ul style="list-style-type: none"> <li>• Trusted image among consumers</li> </ul>
Relationships	<ul style="list-style-type: none"> <li>• Sole distributor of Machine Doctor in Indonesia</li> <li>• Predictive maintenance contracts with clients</li> </ul>

**ii. Capabilities**

Adikari Wisesa has several capabilities resulting from its tangible and intangible resources. Adikari Wisesa’s workforce is mostly comprised of younger employees aged 20-35 years. Adikari Wisesa also has a lean organization consisting of 40 permanent employees. This makes Adikari Wisesa an agile organization capable of adapting to market trends quickly. Supported by senior members of the management, Adikari Wisesa became a trusted partner of its clients due to its ability to adapt and cater to different clients and its long experience in the maintenance industry.

**b. Value Chain Activity Analysis**

Value chain analysis analyze the value-creating nature of Adikari Wisesa’s activity.

**i. Primary Activities**

- Supply Chain Management  
Adikari Wisesa has less control over the export-import documents and declarations to customs, which may incur high taxes. Adikari Wisesa must consider having their own shipping partner to reduce costs and streamline the importing process.
- Sales and Marketing  
Adikari Wisesa utilizes several marketing campaigns to promote its services to customers. They have performed search engine optimizations in the past, content marketing on the company website, and direct marketing to its close associates. But Adikari Wisesa’s social media account is underutilized with no officer handling it. Currently, Adikari Wisesa has no dedicated function for market research and planning. Their sales method is mainly direct purchase orders and open bids, with the pricing strategy of cost-based pricing for open bids and market-based pricing for direct purchase orders.
- Service and After-Sales  
Adikari Wisesa has no real tools to measure customer satisfaction. The after-sales activity outside of technical after-sales is done sporadically and unstructured. While it may work adequately, it requires an organized customer satisfaction program enabling them to correctly assess and improve on customer feedback.

**ii. Secondary Activities**

- Human Resource Management  
Due to the additions of new business lines, there are previously unidentified gaps in several areas of the organization, such as product marketing.
- Research and Development  
Adikari Wisesa constantly strives to improve its services through technological development. It is currently developing a digitalized maintenance dashboard to standardize and increase its maintenance service efficiency. Adikari Wisesa also actively searches for cutting-edge maintenance tools to enhance its services, such as the Machine Doctor Sensors.
- General Administration  
It is currently lacking in legal function, which is mitigated by having a legal partner for occasional consultations.



c. VRIO Analysis

Table 3. VRIO Analysis of Adikari Wisesa Indonesia

Resources or Capabilities	Valuable	Rare	Inimitable	Organized	Competitiveness
Physical Resources	YES	NO	NO	NO	Competitive Parity
Technological Assets	YES	YES	NO	NO	Temporary Competitive Advantage
Organizational Resources	YES	YES	YES	YES	<b>Sustainable Competitive Advantage</b>
Human Capital	YES	YES	YES	NO	Unused Competitive Advantage
Company Image	YES	YES	YES	NO	Unused Competitive Advantage
Relationships	YES	YES	YES	YES	<b>Sustainable Competitive Advantage</b>

3. External Analysis

a. General Environment

- i. Political. Indonesia went through industrial reforms in the 2010s, such as the deregulation of business licenses, tax amnesty, and other industrial development policies. The industrial reforms by the government had a positive impact on investment climate and infrastructure development, stimulating investments in the business sector and economic growth. This political agenda will have a positive impact on the maintenance industry. A growing industry means growing production facilities required to support them, which increases the number of mechanical assets as the core customer of Adikari Wisesa Indonesia.
- ii. Economic. The Indonesian economy steadily grew throughout the last few years, averaging around 5-6% annually. Data from Q1 2024 shows that mining & quarrying has the highest GDP growth compared to other industries (BPS, 2024). Other industries such as manufacturing are also growing albeit at a slower pace.
- iii. The sociocultural aspect of the demographic shift to Millennials and Generation Z shifted the risk appetite of contracting companies to take more risks in trying new solutions. (Thangavel et al., 2021).
- iv. The Six Enablers of Next Tech disrupt many industries in the market: The internet, cloud computing, mobile devices, big data, and computing power. These ever-increasingly powerful six enablers working in synergy open up massive opportunities for digital disruption and new ways of problem-solving (Kotler and Kartajaya, 2021).
- v. The quest to increase energy efficiency means also to prevent machinery from developing damages or faults. For example, misalignment in industrial machines contributes to around 3% of total energy losses (Gaberson, 1996).
- vi. There are regulations in the maintenance industry that should be adhered to. Regulations related to maintenance such as in large petrochemical plants emphasize the importance of risk- and condition-based maintenance decision-making systems to optimize maintenance tasks and improve equipment reliability and safety (Yuan et al., 2012). Compliance with these regulations is crucial for ensuring the proper functioning of rotating equipment in industrial settings.

b. Industrial Environment

- i. Threat of new entrants (low): High entry barriers, differentiated products, high capital entry barrier, and high switching costs.
- ii. Bargaining power of suppliers (high): Few competitors, and suppliers' goods are critical to buyers' marketplace success.
- iii. Bargaining power of buyers (low): High switching cost and highly differentiated products
- iv. Threat of substitute products (moderate): The online condition monitoring market has a high threat of substitute products. There are numerous PdM tools and brands available in the market.
- v. Rivalry among competing firms (relatively low): Moderate industry growth, High switching cost and differentiation, moderate exit barriers.

c. Competitor Analysis

The Place and Promotion aspect of each product is omitted because all sensors have reached parity in those areas (e.g., they essentially perform or operate the same). As seen in the table, The Machine Doctor has product features superior to other sensors, with relatively more features available (fully wireless, 4G connectivity automated diagnosis, etc.). So, the Machine





Doctor offers more value for customers compared to competitors.

However, Adikari Wisesa priced the Machine Doctor way above the competitors, 29% more expensive than the second most expensive on the list and about 150% more expensive than the rest. Although the Machine Doctor has more features compared to the other, the threat of other sensors substituting Machine Doctor despite having fewer features cannot be understated. A price adjustment is recommended.

**4. SWOT Analysis**

Below is the summary of Adikari Wisesa SWOT Analysis

**Table 4. SWOT Analysis of Adikari Wisesa Indonesia**

Strengths	Weaknesses
1. Dedicated Predictive Maintenance Division capable of providing analysis 2. Agile and lean organization 3. Highly qualified engineers 4. Good company reputation 5. Competitive advantage of sole distributor.	1. No dedicated marketing and sales function for Machine Doctor 2. No international shipping partners
Opportunities	Threats
1. Conducive general or macro environment 2. Relatively conducive industry environment 3. Machine Doctor has more superior features to the competitors.	1. Threats of product substitutes, especially from cheaper competitor products.

**BUSINESS SOLUTION**

1. Adikari Wisesa TOWS Matrix

	Strengths	Weaknesses
Opportunities	SO1 (S1, S3, S5, O1, O2, O3) Capitalize on the dedicated predictive maintenance division to create an enticing content marketing highlighting Machine Doctor superior features.  SO2 (S2, S3, O1, O2, O3) Capitalize on the adaptive organization with highly skilled employees to perform search engine optimizations.	WO2 (W1, O1, O2) Capitalizing on the good firm environment, additional marketing events would provide more exposure for the product.  WO3 (W2, O1, O2) Find international shipping partners to handle Nanoprecise import activities.
Threats	Opportunities	Threats
	ST1 (S5, T1) Negotiate a better price to Nanoprecise principal highlighting the market positioning in Indonesia. Provide promotional pricing to grow market size.	WT1 (W2, T1) To anticipate the threat of substitute product, dedicated marketing and sales function should be established.

2. Proposed Activities

i. **SO1, WO2 – Content Marketing**

The presence of the predictive maintenance division should be capitalized to create relevant content marketing for clients, particularly regarding Nanoprecise and its success stories. Content marketing can be performed on the company website or social media, utilizing the algorithm to further spread the marketing campaign.



- a. Essays and articles  
Business market buyers are usually informed buyers. They need to gather as much information as possible before even proposing a purchase within the company. Essay articles posted on the company website will provide valuable information to potential clients regarding the problems and pain points the Machine Doctor can solve
  - b. Social media posts  
Posts on social media have shorter forms compared to articles but with far greater reach. Social media algorithm promotes social media posts to relevant parties. Therefore, social media posts can be a viable entry to information gathering on Adikari Wisesa's predictive maintenance solutions. Posts in social media can revolve around topics similar to posted articles.
  - c. Online Webinar  
Free online webinars regarding predictive maintenance may increase engagement. Adikari Wisesa can both show its capabilities in predictive maintenance and educate customers on how their pain points can be addressed by Machine Doctor. Proposed online webinar topics:
- ii. **SO2 – Search Engine Optimization**  
The search engine is a frequent tool used by buyers as a tool for information gathering, both in the exploratory phase and the interest phase. Pages or websites with high SEO ranking will appear on top of search results, increasing their probability of getting clicked by users.  
Search engine optimization (SEO) is the process of improving website traffic to a website or an article page from search engines. (Dimitrios and Andreas, 2016). SEO is done based on search keywords that want to be promoted. When an SEO keyword for a website is done successfully, searches with that keyword will show the website on top searches. Search engines such as Google have their own criteria for how to promote a keyword in SEO listed on their developer website (Google Search Central, 2024).
  - iii. **WT1 – Product Management Staff**  
Adikari Wisesa should hire a dedicated staff to handle the marketing, sales, and after-sales of Machine Doctor. This is done to better focus the marketing effort of Machine Doctor.
  - iv. **WO3 – International Shipping Partner**  
To smooth out the import process of Nanoprecise, an international shipping partner should be considered. There are advantages to having a corporate account in international shipping services.
  - v. **ST1 – Better Pricing**  
To better position the Machine Doctor in the market, a price adjustment is recommended. Currently, it sits among the more expensive side of the market. There are mentions of other more expensive solutions in the market, but their pricing and proposal could not be reliably determined for this study. Several clients significantly negotiated the price of Machine Doctor down before purchasing.  
It is targeted that the price can be adjusted to USD 550 per sensor per year, around a 20% reduction from the previous starting price

## CONCLUSION

PT Adikari Wisesa Indonesia is a company specializing in maintenance services. To enhance its maintenance service, particularly predictive maintenance, and to increase its firm performance, Adikari Wisesa partnered with Nanoprecise Sci Corp and was appointed the sole distributor of Machine Doctor in Indonesia. Unfortunately, the sales of Machine Doctor are underwhelming, consisting only 1.5% of the 30% market share currently held by Adikari Wisesa. Coupled with a new direction from Nanoprecise Principal of 50 sensors MoQ, Adikari Wisesa should prepare a marketing strategy to address these issues.

According to the market analysis, several important attributes of Machine Doctor potential customers were identified, that is a customer would be considered a matching target when it has a significant amount of rotating equipment, has reached stage III predictive maintenance maturity stage, has more than 12 rotating machines, price sensitivity to downtime of 2x ROI, availability of LTE/4G signal, an engineering-dominated firm with do-it-with-me or do-it-for-me preference, close ties to Adikari Wisesa, open to



subscription-based maintenance products, and is considered risk taker.

Several key takeaways can be derived from the Internal and External analysis through the SWOT framework. That is Adikari Wisesa has the internal strengths of a dedicated predictive maintenance division, and strong human capital, while also has an internal weakness of no dedicated marketing and sales function for Machine Doctor and no international shipping partner. Adikari Wisesa's external environment is conducive to its business, and notably, Machine Doctor has superior features to its competitors. However, those competitor products are still viable substitutes and still pose a threat to Machine Doctor.

Several business solutions and an implementation plan are proposed to address these issues. That is Adikari should focus on content marketing through its website, social media accounts, and online webinars. Content marketing will also help the SEO process of keywords in the articles to increase traffic and the rank of the company website in search engines. A dedicated product management staff should be hired so that the company can be more focused on planning and executing its product marketing planning, marketing, and sales. Then, the company should create a corporate account in an international shipping company to smooth out the purchase and import process from Nanoprecise manufacturing site. Finally, the pricing point should be renegotiated to a lower amount. An implementation plan of six months is proposed to assess the effectiveness of the solutions.

## RECOMMENDATIONS

Further research is required to assess the effectiveness of the proposed solutions. The effectiveness analysis of the proposed solutions should be re-assessed periodically throughout its initial implementation plan, particularly the performance of product management price and the success of the pricing negotiations.

This marketing strategy may also be beneficial in promoting Adikari Wisesa's other line of business. Along the way, companies might be identified as customers requiring maintenance solutions other than Machine Doctor, but the problems or pain points can still be solved by the company through its other business unit. This will increase the sales of the company.

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