

# Business Model Canvas Innovation and Blue Ocean Strategy for eFishery

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**Keywords:** Business Model Canvas, Blue Ocean Strategy, Start-up, Innovation, Fish Feeder.

**Abstract:** eFishery is an innovation company in agriculture which help the community with its founded, eFishery is a fish feeder integrated solution for fish and shrimp. This machine can automatically feed the fish, has a sensor for sensing the appetite of fish and adjust the amount of feed given to appetite, and can be connected through the Internet to customers. eFishery has gotten investors but its product sales are still not in accordance with the expected target, and other managerial problem. This research method is qualitative with approach based on the nine elements of business model canvas mapping, SWOT analyst and blue ocean strategy. Based on interviews and observations in this study know that there are several blocks of nine elements of the business model canvas that needs to be retained, eliminated, enhanced and supplemented. There are two alternative BMC's prototypes resulting from this research, first is for domestic market oriented with main customer segments are government, large aquaculture companies, fish, shrimp and fodder industry associations. Then the second is export market oriented.

## 1 INTRODUCTION

eFishery was produced by PT Multidaya Technology Nusantara. The company was founded in 2013 with the initial concept of bootstrapping yet Along the way the company is rapidly growing into a start-up with high added value and have started to get investors from abroad, in September 2015 PT MTN has gained investor of Aqua-spark and Ideasource.

In middle of 2016 eFishery was sold 256 units at a price per unit ranges between Rp. 5.873 million up to Rp. 7.791 million. There are three main target this eFishery customers, including the government through the ministry of maritime affairs and fisheries, large companies such as PT JAPFA Comfeed Indonesia Tbk, and PT Central Proteinaprima Tbk. and small-medium aquaculture farmers companies.

Apart from these achievements, CEO of PT Multidaya Technology Nusantara targets revenues reached USD 8 million in 2016 from the selling and leasing of products eFishery, but to date the new product units sold is around 256 which the target unit sold about 2561 units, still far from the expected target company. Furthermore, the largest target

market of PT MTN through eFishery products are fish farmers throughout Indonesia, but the problem is the refusal of many growers will eFishery products because they are not familiar with the use of high-tech agricultural products. On the other hand, demand from abroad as from China, Brazil and some other countries which can not be met by the company because the international patent license of eFishery is still in the process of filing. The next problem that occurs is the lack of availability of access to electricity in fish /shrimp farmers ponds / so PT MTN must develop these eFishery with resources using solar panels, but it will lead to high production costs that implicate the selling price to consumers will be increase. On the supplier side, PT MTN still rely on the vendor suppliers of components from China that caused production costs to be less efficient and requires a long time for ordering, this is because the company has not found a supplier company in the country.

According to Hoffmann and Sempels (2013), to develop business models, its being to be a challenging job for the company or region who are interested in researching the different regions. The approach uses a business model canvas that can be an effective tool to assess the potential of the

business before the business plan has been formally developed (Gavrilova et al., 2014). To survive in the globalization, companies need to prepare a business model innovation strategy as a strategy to win the global competition, to develop innovative value proposition, market segmentation and key partners who become the absolute key factor in the global market competition (Permatasari and Dhewanto 2013). This research aim is to vision and mission identification, do the analysis of current business model canvas and make a new business model canvas by blue ocean strategy.

## 2 LITERATURE REVIEW

Christensen (2001) defines the business model as the source of competitive advantage possessed by an organization that distinguishes the company from product positioning in the same industry. The business model is usually used by a manager to describe the logical thinking of the company, how the business is run and how to create value for its stakeholders (Aspara 2011).

The business model also has some benefits for a company that is to make it easier for planners and decision makers in companies see the logical connection between the components of the business to produce a value for consumers and companies. The business model can also help test the consistency of relationships between components, and help test the market (Team PPM Management 2012).

According to Osterwalder and Pigneur (2010) said that an effective way to assess the overall integrity of the business model is to combine classical analysis of the strengths, weaknesses, opportunities and threats (SWOT) through the business model canvas (BMC). According to David (2006), all organizations have strengths and weaknesses in the functional areas of business. Goals and strategies set out with the intention of utilizing the internal strengths and overcome weaknesses.

In "Business Model Generation" Osterwalder and Pigneur (2010), create a framework that shaped business model canvas and consists of nine boxes containing elements that are interrelated. According to Osterwalder and Pigneur (2010), the business model canvas is a business model that describes the rationale of how an organization creates, delivers, and captures value. Osterwalder and Pigneur uses nine basic elements, namely: 1. customer segment, 2. value proposition, 3. channels, 4. customer

relationship, 5. revenue streams, 6. key resources, 7. of key activities, 8. key partnerships, and 9. cost structures.

Immonem (2012) in A New Business Model Renewal Process: A framework of Utilizing Collaboration with External Experts resulting research renewal business model covering four stages: participation, preparation, business development and follow-up models. Meanwhile, according to Hone et al. (2011) in A Gounded Theory on The Business Model Structure of Google concludes that once the company understands the structure of the business model, the company can design a business model for the future. Bonazzi and Zilber (2013) in Innovation and Business Model: a case study about integration of Innovation Funnel and Business Model Canvas resulted that in the development and growth of the Dutch State Mines strategy, suggesting a close relationship between empirical practice and academic postulates. The basis is structured strategy of product diversification and development, as well as in the use of association and geographic expansion as a market penetration lever, elaborated to meet global flaws in 2050.

## 3 RESEARCH METHODS

This research was conducted in March-December 2016 which took place in the office of PT. MTN in Bandung and Jakarta, Indonesia.

This research uses descriptive qualitative approach in the form of a case study on PT. MTN which produce eFishery. The study was conducted intensively, and in-depth detail about a particular object in a certain period of time including the environment (Umar, 2010).

This study uses a survei, depth interview, observation directly visiting to the office of PT. MTN, the formulation of strategies using vision and mission and SWOT analysis to the current business model canvas, blue ocean strategy mapping which supported by literatur review to produce two prototypes of future business model canvas.

Respondent is purposive sampling from internal company and external company such a goverment, academician and business consultant.

## 4 RESULTS AND DISCUSSIONS

PT MTN's vision is to become a "Fellow Farmers to Grow". Vision is basically showing the purpose and clarity of direction in the long term and contains a philosophy of values espoused companies. While the mission is carried PT MTN was to create a product called eFishery fish feeder that have three main features:

- Smart Autonomous;
- Realtime Monitoring;
- Smart Sensing

EFishery is a smart feeder manufactured by PT Multidaya Technology Nusantara. This tool serves as a fish and shrimp feeder automatically with the advantages of smart autonomous means that the tool can automatically feel the appetite of fish, realtime monitoring means that these substances automatically report their activities at any time to the user through an intermediary interface of websites that are connected to the Internet, and smart sensing functions is to feel the appetite of fish and shrimp, and can control the quality of the pool water that can be used by the wide community that includes government, corporations large, medium and small-sized aquaculture so that people can be helped in managing their business more effectively and efficiently. Based on research, the vision and mission of PT MTN are no need to revised.

The result of SWOT identification to the nine elements of business model canvas of PT MTN and the company's internal and external analysis can be used as a benchmark to arrange new prototype of business model canvas. The results of such identification can be collaborated with the basic principles of blue ocean strategy.

Some studies suggest that innovative business models must be able to align internal capabilities or adapt to external changes such as technological developments or change customer values (McGrath, 2010).

PT MTN was originally bootstrap until won several competitions in 2015 eFishery get investors from Ideasource and Aquaspark.

Current business model canvas mapping and SWOT result are in the figure 1 and table 1 above.

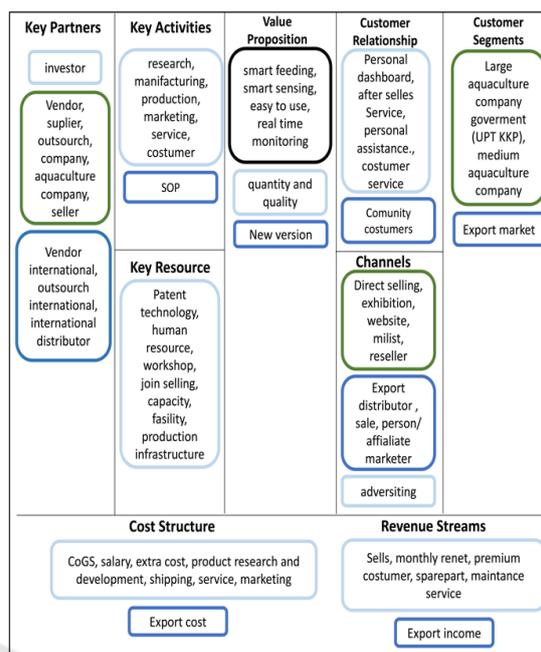


Figure 1: Current Business Model Canvas.

Table 1: SWOT Result.

Element	Strenght	Weakness	Opportunity	Threat
Customer Segments	Well segmented costumers	No priority scale, no segment	Shrimp and fish industry, feed industry, farmer association, ASEAN Market	Same product
Value Prepositions	Product is very usefull and good aftersales	Not entire segment, High price	Quality and quantity	Competitor
Channels	Effective distribution	Limited sales person	Education promotion	Disappointed cust.
Customer Relationship	Good relationship personal assistance with customer	Limited personal assistance	Software CRM (Customer Relationship Management) and personal assistance	Disappointed cust
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Key Activities	Segmented activity	No SOP	SOP	No effective
Key Partnership	Good relationship with investor	Difficult to find vendor	Quality Assurances	Low quality
Cost Structure	Cost structure fit with BMC	High Research and Development cost	Controlled Research and Development	Banrupt

### 4.1 Alternative Prototype Business Model Canvas 1

In this prototype, PT MTN focuses on domestic customer segment.

### 4.1.1 Customer Segmentation

PT MTN focuses on market development in Indonesia. PT MTN has specifically focused its customers on aquaculture farmers in Indonesia. Current customer segments are Government through the Ministry of Maritime Affairs and Fisheries, large entrepreneurs in fisheries (aquaculture) and medium-small aquaculture entrepreneurs. Medium-small segment of the entrepreneur in this field has its own character compared to other customer segments. These character differences are the low level of education, knowledge and skills that result in the level of interest to buy eFishery products was still low, this is different from the government that supports the development of eFishery.

PT MTN has tested its equipment at Lampung Sea Aquaculture Center, however PT MTN needs to intensively increase cooperation and relationship to the central government through the Ministry of Marine Affairs and Fisheries. Cooperation with the central government aims to allow eFishery products to be purchased by the government and the government can channel them as grant aid to needy communities. PT MTN needs to register eFishery to a government e-catalogue so that the government can easily assess and purchase eFishery products.

Furthermore, in Indonesia today the shrimp industry has been running well consisting of medium and large scale companies scattered throughout Indonesia. Indonesia is one of the largest shrimp exporter countries in the world with exports 400 to 500 thousand tons per year. This is different from fishery industry that is still dominated by large companies. This condition is a potential market opportunity for eFishery, considering that the company must focused on the shrimp industry segment too. Then PT MTN also needs to partner with the Association of Animal Feed Indonesia because its already has a wide network and has a good sales person and sale educator so that if the cooperation is already established, its can also market eFishery to its customers.

Building brand awareness is very important for eFishery to get wider attention from consumers. To build the brand awareness, eFishery needs to focus the consumer segment in the large fish and shrimp industry, the Indonesian animal feed association, the government not in medium and small companies.

### 4.1.2 Value Proposition

eFishery has a very useful value proposition for the needs of the community in the field of fish and shrimp farming in Indonesia, both in terms of innovation novelty, its use and design. However, one of the main focus that should be paid attention by PT

MTN is the quality and performance of eFishery product, according the humid weather in Indonesia, eFishery's endurance needs to be improved and guaranteed its durability up to five years. The addition of solar panels to the appliance should be an option for consumers who do not have access to electricity.

### 4.1.3 Customer Relationship

PT MTN needs to increase the number of personal assistance to be more effective in serving consumers, this is mainly because of the new eFishery products and need more intense and serious education to consumers. In addition, it needs to create a group of customers that have a function to exchange experiences and information between eFishery users.

### 4.1.4 Channel

The existence of eFishery as a new products become a challenge for PT. MTN because people still do not know in detail about benefits of eFishery. PT MTN needs to create a good marketing strategy efficiently for the process of delivering value to the consumer. The strategy is to target large companies in fish and shrimp and animal feed association of Indonesia and government in advance to build brand awareness, PT MTN need to make educational promotion more interesting with more interactive media through electronic advertisement and mass media. In addition PT MTN needs to create a strategic distributor to streamline sales channels and get profitable customers as much as possible.

### 4.1.5 Key Activities

Standard Operating Procedures (SOPs) are documents relating to procedures performed chronologically to accomplish a job aimed at obtaining the most effective work of the workers at the lowest possible cost. SOPs usually consist of important rules, method of writing procedures, and completed by the flowchart chart at the end.

Currently PT MTN has not implemented SOP anymore, therefore PT MTN needs to make SOP for the direction and structure of its employees work can be monitored and standardized so it can make activity more effective and efficient in performance according to company's purpose and vision.

### 4.1.6 Key Resource

Currently PT MTN has insufficient production capacity when compared with the ideal amount. Currently PT MTN produces eFishery of 100 units

per month, while the ideal amount is 300 per month. PT MTN needs to increase its production capacity in collaborated with the improvement of promotional and marketing channels.

### 4.1.7 Key Relationship

The purpose of the implementation of quality assurances is to ensure the vendor meets the standard requirements that have been applied by the company to the activities or raw materials made by vendors associated with eFishery production activities. If in the QA process there are vendors which do not comply by the standard, PT MTN can look for better vendor performance.

### 4.1.8 Cost Structure

Control in research and development activities need to be done so that the cost is not too expensive. PT MTN needs to focus on improving product quality and with the application of appropriate technology that has been tested, for example the addition of solar panels on eFishery. Furthermore, for employees, in order to save budget expenditure, PT MTN need to focus on outsourcing work system.

### 4.1.9 Revenue Stream

The implication of market development is the acquisition of new funding sources for companies from the central government, large and medium fish and shrimp companies and the association of animal feed of Indonesia. The 1<sup>st</sup> prototype of BMC is in the figure 2 below:

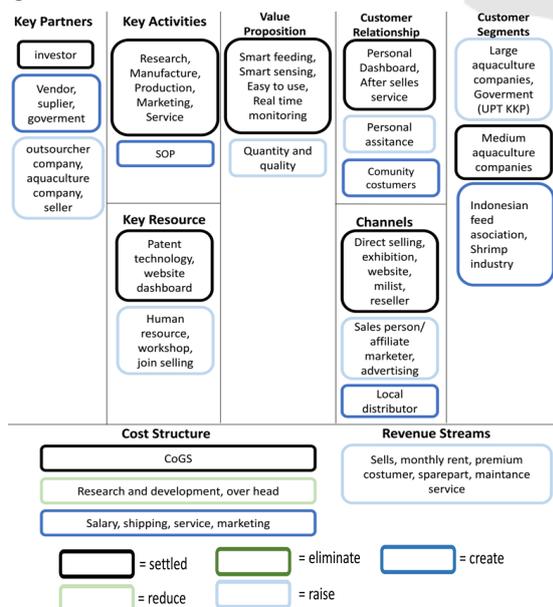


Figure 2: Business Model Canvas Prototype 1.

## 4.2 Alternative Prototype Business Model Canvas 2

In the 2nd prototype of business model canvas, the organization should to focuses on the export market segment. The selection of the foreign market segment has implications on all business model canvas element.

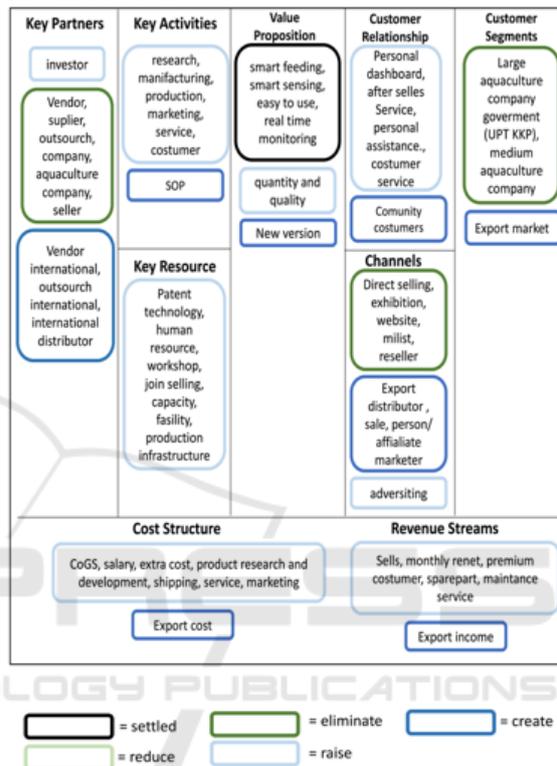


Figure 3: Business Model Canvas Prototype 2.

### 4.2.1 Customer Segment

Major export opportunities are mainly in the ASEAN its because the ASEAN Economic Community since 2016, ASEAN is a potential market considering many of the ASEAN member countries that have fish and shrimp industries such as Thailand and Vietnam. Each countries are countries with a good quality and quantity of fish and shrimp industries. Export opportunities are also wide open for Asian markets, especially China with large economies including in its fish industry, Bangladesh, India to Turkey. Likewise the market in Africa, Europe to America.

Choosing to focus on the export market has implications for improving product quality and higher operational costs then to domestic market selection. However, with its focus on export

markets, brand awareness and brand equity will be easily and rapidly obtained and revenue too.

#### 4.2.2 Value Propositions

PT MTN needs to create new variant with bigger tank capacity for overseas market because the area of fish pond there tends to be bigger than in Indonesia. In addition, quality and durability are also absolutely enhanced to achieve export consumer satisfaction. Selling price does not need to be lowered as it does on prototype 1, but must be adjusted to be more expensive and to exchange rate in each country.

#### 4.2.3 Customer Relationship

PT MTN still has to create a managed customer group in each country for customers to be well served and can exchange information and experiences through the user group. Organizations also need to recruit overseas personal assistants in accordance with their country to assist the education-promotion process, customer complaints and customer service.

#### 4.2.4 Channel

To meet the export market PT MTN needs to create export distributors in each country that are prioritized based on potential customers. In addition to recruiting international distributors, organizations also need to recruit international sales who will be useful for lobbying and diplomacy in search of companies and governments to market products. Forms of business partnerships used are business to business and business to government considering potential customers are targeted governments and large companies.

#### 4.2.5 Key activities

In order to run effectively and efficiently business process, ranging from the selection of vendors and suppliers, production processes to international distribution market, the organization needs to make Standard Operational Procedure.

#### 4.2.6 Key Resources

PT MTN needs to increase its international marketing staff, as this will be the company's focus. The focus of the company is the export market hence it is very necessary to recruit the professional marketing personnel who are able to convey the value of PT MTN to international consumers.

#### 4.2.7 Key Partner

International distributor company, vendors and suppliers are business partner of PT MTN also the new strategic investors.

#### 4.2.8 Revenue Stream

Prototype 2 offers revenue from larger exports compared to prototype 1 because of its have high potential customers. Revenue comes from the purchase of eFishery units, monthly leases, purchases of eFishery tool components and from eFishery care services.

#### 4.2.9 Cost structures

The implications for the cost structure of these alternatives are increased costs due to the diversion and incremental costs of salaries, international distributors, workshop expansions and the addition of human resources.

## 5 CONCLUSIONS

The vision and mission of the company is not be revised, which needs to be revised is the current business model canvas because it raises managerial problems within the company. This research produced two prototype of business models canvas, the first focus on the domestic market in Indonesia and the second focus on the export market. both have different managerial implications. on the first prototype the cost incurred would be cheaper than the second but if choosing the second prototype, the efishery product would be easily sold internationally because of its huge market potential although its cost more expensive than the first prototype option.

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