UNIVERSITY OF INDONESIA

THE BUSINESS MODEL DEVELOPMENT FOR ZIRCON MINING INDUSTRY IN WEST KALIMANTAN (CASE STUDY: PT ZIRCON)

THESIS

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FACULTY OF ECONOMICS
MAGISTER OF MANAGEMENT
MM-MBA
JAKARTA
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Submitted to fulfill one of the requirements to obtain degree of Magister Management

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STATEMENT OF ORIGINALITY

This final paper represents my own effort,

any idea or excerpt from other writers in this final paper, either in form of publication or in other form of publication, if any, have been acknowledged in this paper in accordance to academic standard or reference procedures.

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PREFACE

Praise to Lord Jesus, my savior for all HIS abundant love, blessings, mercies and strength for me to finalize this thesis. This thesis still has many shortcomings and the researcher is apologized if there is still so many lacking in the analysis but hope that this thesis can be useful for anyone that needed.

On this occasion researcher would like to say gratitude to:

1. Dr. Mohammad Hamsal as thesis advisor who has been willing to provide his time and share his knowledge for this thesis, thank you for all the guidance given during process of writing this thesis.
2. My lovely family for their affection, prayers and never ending support. I would like dedicate this writing to my parents and all of my family that I can't mention one by one.
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Furthermore I hope this study can provide scientific contribution to anyone who reads and needs it. Suggestion and constructive criticism as an input for enhancements and improvements for the next writing are welcome.

Jakarta, July 13, 2012

Novi Natalia

LETTER OF AGREEMENT TO PUBLISH THE THESIS FOR ACADEMIC PURPOSE ONLY
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ABSTRACT

Name	: Novi Natalia
Study Program	: Magister of Management – Master of Business International
Title	: The Business Model Development for Zircon Mining Industry in West Kalimantan

Business Model is a framework on how a company runs its business that can give value in every aspects of the business, from its suppliers, customers, partners, employees and even to the environment. This thesis firstly discuss on how the zircon mining company struggle from the unorganized business process that could become the obstacle in order for the company to growth. Using The Business Model Canvas - Nine Building Blocks established by Osterwalder and Pigneur that can be applied to the zircon mining industry in West Kalimantan, the business model can assist the Zircon mining industry in West Kalimantan to enhance its business and keeping track in the zircon market. This study is done using qualitative research. The research of this thesis shows that Business Model Canvas – Nine Building Blocks that evaluate the company business process from difference aspects such as customer segments, value propositions, customer relationships, channels, key resources, key activities, key partnership, revenue streams and cost structures can be tools to create a suitable business model that help the company enhancing its business process.

Key Words:
Business Model Canvas, Nine Building Blocks, Zircon Sands.

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CHAPTER 1

INTRODUCTION

Almost all of the world's Zirconium sand is mined in the form of Zircon (ZrSiO4), the majority as a co-product of titanium mining from heavy mineral sands deposits. The demand for Zircon mostly come from the end user sector of ceramics, specialty chemicals and materials, and refractories, foundry sand and the minor television glass market. In 2010, TZ Mineral International (TZMI) estimated the total consumption of Zircon is increase from -15 percent in 2009 to 39 percent in 2010 and it causing a deficit in Zircon supply for 72 kt (79,400 st). (TZ Minerals International, 2011, p. 73).

1.1 Background

According to TZ Minerals International (TZMI), there is a significant increase in global consumption of Zircon, that mostly come from China. China estimated consumed 578 kt (637,000 st) as the biggest consumer for Zircon. The consumption increases 80 kt (88,000 st) from 2009 and followed by Europe as the next big consumer of Zircon, estimated consumed 328 kt (361,500 st) in 2010 from total global consumption, increase 99 kt (109,100 st) from last year. (TZ Minerals International, 2011, p. 73).

Table 1-1 Zircon Consumption by Market 2006-2010

Market	2006	2007	2008	2009	2010
Ceramics	663	681	628	543	750
Refractory	161	164	144	113	191
Foundry	161	157	133	109	136
TV Glass	49	43	35	27	31
Zirconia & Zr Chemicals	171	187	200	176	241
Other	16	23	21	19	22
Total Consumption	**1221**	**1255**	**1161**	**987**	**1371**
Growth in Consumption	**1.8%**	**2.8%**	**-7.5%**	**-15%**	**39%**
Surplus/ (Defisit)	**57**	**72**	**81**	**70**	**-72**

Source : TZ Mineral Engineering

The ceramics industry is known as the major factor for the increase in Zircon demand. The growth in Zircon consumption is largely for the use gres porcellanato tiles. Zircon when ground and incorporated into ceramic glazes and tile bodies, imparts a brilliant white to ceramic. Zircon is also used as base material for many of the colors that are used in ceramic glazes. Global tile manufacturing has been growing rapidly for the last 15 years especially in China, and total ceramic demand has increased by 38 percent in 2010. Zircon also used for auto catalyst and technology driven applications and total demand for Zircon specialty chemical has increased by 37 percent in 2010.

More for TZMI report stated that global zircon production in 2010 is to be 1.3 Mt (1.4 million st) compares with the global production of final product Zircon of 1.06 Mt (1.76 million st) in 2009. In percentage terms, global Zircon output rose for 15 percent in 2010 from negative growth of -15 percent in 2009. (TZ Minerals International, 2011, p. 73).

Table 1-2 Global Zircon Production, 2006-2010

World Supply	2006	2007	2008	2009	2010
Australia	476	586	500	415	537
South Africa	407	376	398	352	381
United States	143	121	124	57	88
Others	251	244	220	232	296
Total Supply	**1277**	**1327**	**1242**	**1056**	**1302**
Growth in Supply	**7.5%**	**3.8%**	**-6.3%**	**-14.9%**	**23%**

Source : TZ Mineral Engineering

Still, from TZMI report stated that in 2010 the principal source countries for Zircon are Australia and South Africa, together they accounted for 70 percent of global output. (TZ Minerals International, 2011, p. 73).

As the impact of a significant increase in Zircon consumption, many Zircon suppliers are currently exploring the new area to find the better quality of Zircon. According to World Mineral Exchange web page, there are several countries that also known as Zircon producers such as USA, Brazil, West Africa, USSR, Ceylon, Malaysia and India ("Zircon and Allied Minerals").

And in addition for the category of Zircon's supplier, Indonesia has been considered as one of the Zircon supplier that needed to be counted. In a strong competitive business world, where almost all business has been done globally, it is important either for well established company or a company that just about to get started to develop a comprehensive business plan in order to enhance its business, and one of which is by developing a comprehensive business model.

Why setting up a proper business model is important? According to Osterwalder, Alexander & Pigneur (2010), "A business model describes the rationale of how and organization creates, delivers and captures value" (p. 14). In order to enhance its business, not only it is important for a company to have a sufficient fund, but also a proper business model method to run its business.

Business model in this case, again according to Osterwalder, Alexander & Pigneur (2010), offers concept so called "The Nine Building Blocks" that consist of several factors that is really important for a company, not just for surviving but also in order for the company to be noticeable and dominant player in the market for the long run. The nine building blocks consist of several criteria that the company must put into its priority, and this should assist the company to develop a comprehensive business model. The factors that should be a priority according to Osterwalder, Alexander & Pigneur (2010), are such as knowing your customer segmentations, creating a value propositions, building up channels on how to deliver the products to customer through distributions or sales channels, including establishing and maintaining relationship with each customer segments. The other thing is to pay attention to revenue streams as well as the cost structure, and finding out about key resources, key activities and last but not least the key partnerships for its business.

So that, in order to enhance its business and overcome the obstacles, a business model can be a compas that direct a company to achieve its goal which is to become a company that can sustain for a long period of time and business model also can be a parameter whether the company fails or succeed in reaching its goals.

1.2 Scope of Study

The object of this thesis is a new established mining company that just started its business in 2010, PT Zircon. PT Zircon is a home mining industry located in remote area of West Kalimantan. It begins its production in 2010, however the company is facing stagnancy and could not enhance its business due to disorganized business process. The scope of study of this thesis is to develop a business model for this new established company, in order for the company to have an organized business process that could help the company enhance its business process so that he business process could become more effective and efficient. And finally shall the business model is created, it shall covered all the issues and obstacles that likely to occur for PT Zircon, and assist PT Zircon to enhance its business.

1.3 Problem Identification

We will identify some issues that must become the consideration to every company, in this case PT Zircon, in order to create a proper business model and to enhance its business.

The first thing that need to become the company priority is the customer segments, this is about to whom the company want to sell its products. Selling the products to the right customer segments can deliver the value proposition to customer that will create a competitive advantage for the company, in addition to that, the company might also need to find out how to maintain and establish a valuable relationship with its customers.

The second is, the revenue streams and cost structure, basicly the revenue streams result from the value propositions that successfully conducted by the company. Beside the revenue streams, it is also important to analyze the costs that might occur during the operational activities, in order to determine the desired profit margin.

The third point, will be the distribution channels, PT Zircon located in the remote area of West Kalimantan with minimum infrastucture, and it will be a challange for the company on how to deliver its product to the customer and minimize the handling costs.

Last but not least, it is also important for the company to establish an efficient and effective activities for the whole process from production to the distribution of the products, by using the right resources, and choosing the right partners in its business activity.

1.4 Problem Statement

There are several issues that need to be solved in order to set up a business model for PT Zircon, a mining company that producing Zircon sand that located in a remote area of West Kalimantan.

The first issue, as a new player in the zircon market, how PT Zircon determine its market segments, what is PT Zircon targeted market segments, how the company creating and maintaining relationship with its customer and what will be the company's value proposition to the customer?

The second issue is the key resources and key activities. The other point that can be included in this category is distribution channels. Distribution channels is really important for several reasons. A proper distribution channels can cut the company handling costs as well as saving up time by lessen up time in delivering the product from plant to warehouse and from warehouse to customers. Key resources in this case, experienced workers and advance machineries can assist the company to enhance its production capacity, and creating an effective and efficient production process. For the second issue is that what kind of distribution channels that is suitable for the company? How the company can obtain the experienced workers and required advance machineries in order to enhance its production process and production capacity?

The third issue, as a new player in the zircon market, how PT Zircon determine its market segments, what is PT Zircon targeted market segments, how the company creating and maintaining relationship with its customer and what will be the company's value proposition to the customer?

The fourth issue is the partnership. The partnership play an important role for the company, in order for the company to enhance its business. As stated in the scope of study, PT Zircon as a new player in zircon market will having difficuties for competing against the old player in the market. In order to be able to compete against the old players in the zircon industry, how the partnership can effect the company competitiveness and also, how the partnership can assist the company in enhancing its business? How should the company determine its partneship?

1.5 Purpose of Thesis

This main focus of this thesis is solely on how to developing a comprehensive business model for the company. By developing a comprehensive business model, the company might also be able to overcome issues and obstacles that occur. For the business model, the scope of study will focus on Osterwalder, Alexander & Pigneur (2010), "The Nine Building Blocks".

According to Osterwalder, Alexander & Pigneur (2010), the nine building blocks consist of, first block is customer segments, which the company has to decide what kind of customer they want to sell the product to. Second block is creating value propositions for its customers, while the third block is creating channels that can assist to create value propositions to customers through communication, distribution, and sales channels. The fourth block is customer relationships that need to be established and maintained for each customer segments. The fifth block is revenue streams as a result of the successful services to the customers. The sixth block is key resources that consist of the experienced workers and advance machineries in order to enhance the production process and production capacity. The seventh

block is key activities that shows the efficiency and effectiveness of the operational process in the company. The eighth block is key partnership which shows the partnership that the company manage to create in order to assist the company enhancing its business. And the last but not least is the ninth block which is the cost structure of the business model. The cost structure explaining the cost that occurs by the new process created from the business model.

1.6 Structure of the Thesis

Chapter 1. Introduction

This chapter will describe briefly for the background and the reason for this thesis is made in the first place, the problem statement, learning objective, the scope of the study and the content structure.

Chapter 2. Theoritical Foundation

This chapter will present the theory that used for the subject of this thesis which is setting up business model by using the nine building blocks, established by Osterwalder, Alexander & Pigneur.

Chapter 3. Research Methodology

This chapter will explain briefly the research methodology that is used for this thesis, on how to gather and produce the information that finally can be utilized for this thesis.

Chapter 4. Case Analysis

This chapter will analyzed the company current operational system and setting up the new operational system based on Osterwalder, Alexander & Pigneur (2010), The Nine Blocks".

Chapter 5. Conclusion

This chapter will be the conclusion, as a result of the analysis for PT Zircon, given with recommendations.

CHAPTER 2

THEORETICAL FRAMEWORK

2.1 Business Model

In an increasingly competitive global market, it become significantly important for a company to not just only looking for profit but also on how to achieve sustainable growth. In order to achieve a sustainable growth and targeted profit, a company need to be able to create an innovation on how to do the business. To create an innovation will create a differentiation and a differentiation can create a competitive advantage to a company. (Dellorme, Phillipe et all, 2011).

Business model can be the tool to create an innovation and differentiation for a company by using business model framework. According to Dellorme, Phillipe et all, (2011), the definition of business model is;

"A way of the company's pragmatic translation of its ambition and its strategy to achieve it. It is also about ensuring that innovation brings value to the company, to its employee, customers, partners as well as to its communities and the environment"

On the other side, a similiar definition of business model comes from Osterwalder, Alexander & Pigneur (2010) stated the definition of business model that;

"a business model decribes the rationale of how an organization creates, delivers, and captures value."

From the statement of two definitions above, it can be conclude that business model is a framework on how a company do its business that can give value in every aspects of the business, from its suppliers, customers, partners, employees and even to the environment. A value from the creation of competitive advantage as the result of innovation and differentiation of the company business

process. A business model is a tool for every company that targeted to achieve a sustainable growth and profit.

2.2 The Purposes of Business Model

According to PPM (2012) Business Model Canvas applied in Indonesia, there are several purposes of setting up business model for a company. First, regarding the nine building blocks, the business model created can be use by the top management in the company for decision making purposes. The second is to analyzed the consistency of the relation between the business model components, this will determine whether the company flow of activities in line with each other. The third is to evaluate the market by using assumption or scenarios, business model can be used to analyzed market condition such as customer behaviour. How the company can generate profit by analyzing customer behaviour revealed in the revenue streams.

2.3 The Nine Building Blocks

The nine building block is a business model concept established by Osterwalder, Alexander & Pigneur (2010). According to Osterwalder, Alexander & Pigneur (2010), The nine building blocks allows a company to describe and think through the business model of an organization, competitors, and enterprises.

The nine building block also show the logic how a company intends to make money. The nine blocks will cover the four main areas of a business such as customers, offer, infrastucture and financial viability. The business model will be like the blueprint of strategy to be implement through organizational structures, processes and systems.

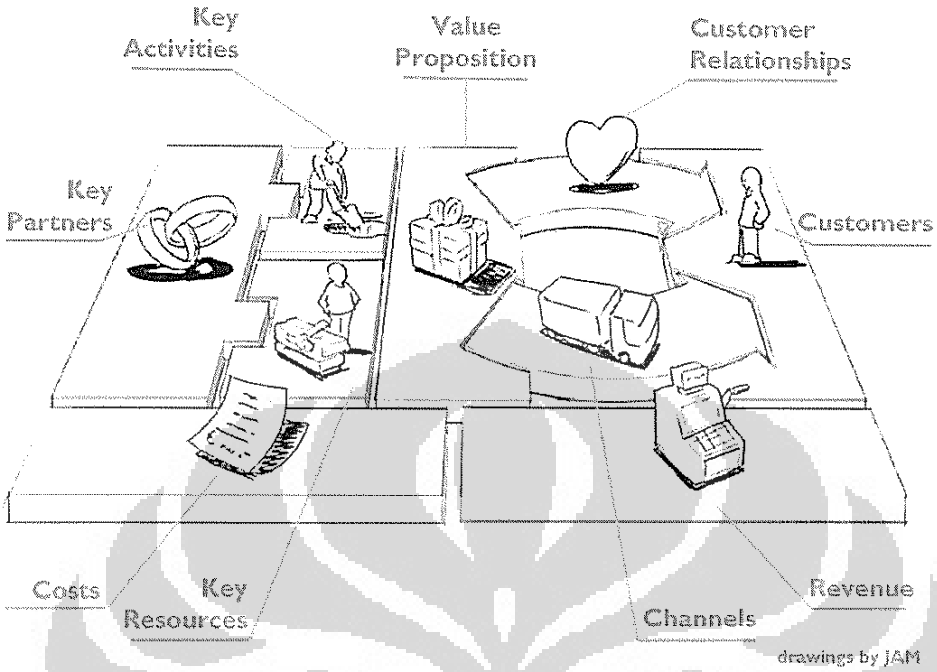

Figure 2-1 The Nine Building Blocks

Source : Osterwalder, Alexander & Pigneur (2010)

To set up a business model framework based on the nine building blocks, there are several aspects that need to be analyzed such as segmentation of customer, the value proposition, distribution channels, customer relationship, customer streams, key resources, key activities, key partnership and the cost structure of a company.

2.3.1 Customer Segments

The first block from the nine building block is the customer segments. According to Osterwalder, Alexander & Pigneur (2010), the customer building block defines the different group of people or organization an enterprise aims to reach and serve.

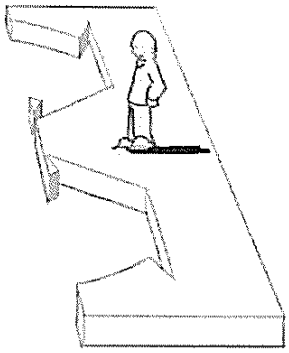

Figure 2-2 Customer Segments

Source : Osterwalder, Alexander & Pigneur (2010)

Customers play an important roles on company, because without a profitable customer a company can not survive. In order to attract profitable customers, a company shall analyzed customers and distinct them into several segments based on their needs, behaviours, or attributes. A business model may define one or several small or large customer segments. And its important for a company to determine which customer segment to serve and which to ignore. And from that point the company can builld business model based on a comprehensive understanding of the customer segments.

There are several types of customers segments such as mass market, niche market, segmented market, diversified market, and multi-sided platforms (or multi-sided markets). For zircon mining industry, the customer segments will be the niche market that serve a spesific and specialized customer segments.

2.3.2 Value Propositions

A customer value proposition is a business or marketing statement that describes why a customer should buy a product or use a service. It is a clearly defined statement that is designed to convince customers that one particular product or service will add more value or better solve a problem than others in its competitive set. (Investopedia, 2010).

Also according to Osterwalder, Alexander & Pigneur (2010), value proposition building block describes the bundle of products and services that create value for spesific customer segment.

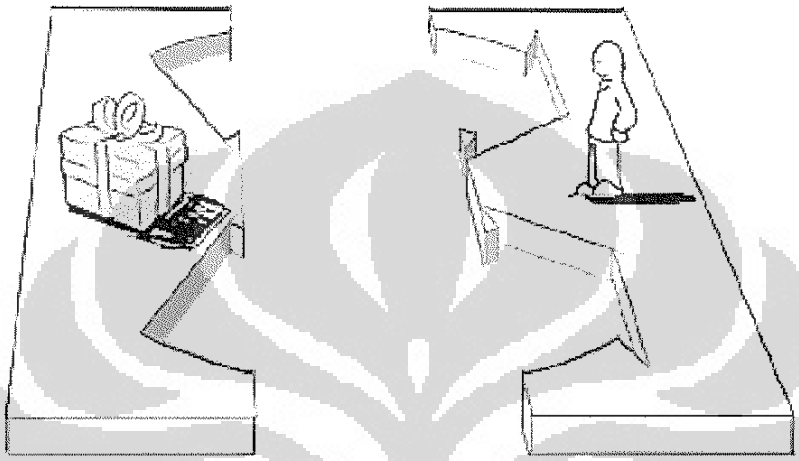

Figure 2-3 Value Proposition

Source : Osterwalder, Alexander & Pigneur (2010)

The value proposition will determine why the customer is switching from one company to another. The value proposition is determined by the ability of a company to satisfy customers need and to solve customers problems. Some value proposition may be innovative and represent a new and disruptive offer. Others may be similiar to existing market offers, with added features and attributes.

There are several questions that a company must answer regarding providing the value proposition to the customer, such as what value a company can deliver to the customer, which one of its customer problems is helped and sloved by a company, what is the need of the customer that a company could provide, and what kind of bundles of product ans services that a company could offer to its customer segment.

In the terms of value proposition, Value can be quatitative such as price, speed of services etc, and also qualitative such as design, customer experience etc. In this case, accessibility could be one of the most important value proposition, accessibility in this case is making products and services available to customer.

2.3.3 Distribution Channels

The channels building block describe how a company communicates with and reaches its customer segments to deliver a value proposition.

According to Osterwalder, Alexander & Pigneur (2010), channels are customer touch points that play an important role in the customer experience. Channels serve several fuction including raising awareness among customers about a company's products and services, helping customers evaluate a company's value proposition, allowing customers to purchase spesific products and services, delivering a value proposition to customers and providing post purchase customer support.

There are several question that can be a company's task to find the right distribution channels for its company such as through which channels its customer segments can be reached and how to reach them. The other this is how the channels supposed to be integrated and which are the best for the company, a channel that cost efficient and integrates with customer routines.

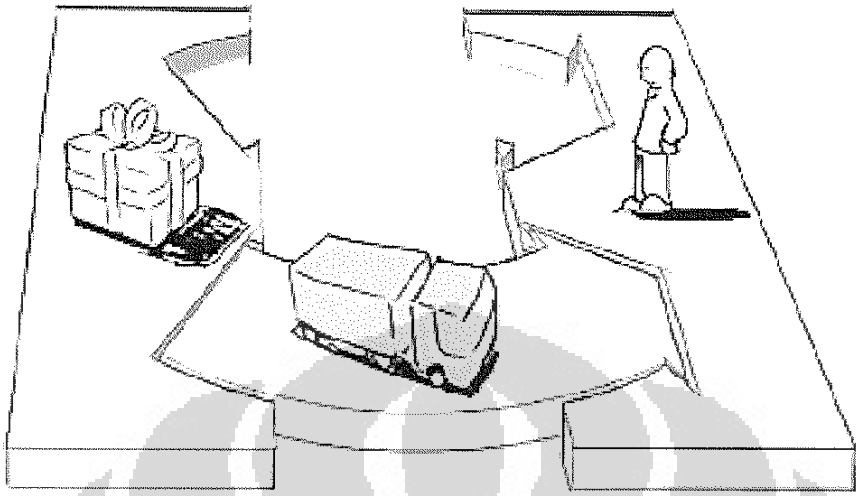

Figure 2-4 Distribution Channels

Source : Osterwalder, Alexander & Pigneur (2010)

Also according to Osterwalder, Alexander & Pigneur (2010), finding the right mix of channels to satisfy how customers want to be reached is crucial in bringing a value proposition to market. A company can choose either to reaching its customers through its own channels, partner channels, mix of both.

Table 2-1 Channel Types and Process

Channel Types			Channel Phases				
Own	Direct	Sales Forces	1. Awareness How do we raise awareness about our company product and services?	2. Evaluation How do we help customers evaluate our organization's Value Proposition?	3. Purchase How do we allow customers to purchase specific products and services?	4. Delivery How do we deliver a Value Proposition to customers?	5. After Sales How do we provide post-purchase customer support?
		Web Sales					
	Indirect	Own Stores					
Partner		Partner Stores					
		Wholesaler					

Source : Osterwalder, Alexander & Pigneur (2010)

Owned channels can be direct, such as an in house sales force, or they can be indirect such as retails stores owned or operated by a company. Partner channels are indirect and span a whole range of options, such as wholesale distribution and retails.

2.3.4 Customer Relationship

The customer relationship building block describe the types of relationships a company establishes with spesific customer segments.

It is important for a company to determine its type of relationship to be established with its customer segment. Customer relationship can be driven by specific motivation such as customer acquisition, customer retention, and boosting sales (upselling). (Osterwalder, Alexander & Pigneur, 2010).

There are several question that a company must put into consideration such as what type of relationship does company's customer segments expect to establish with the company and which one has been established, how costly it is and how it will integrated with the rest of the business model.

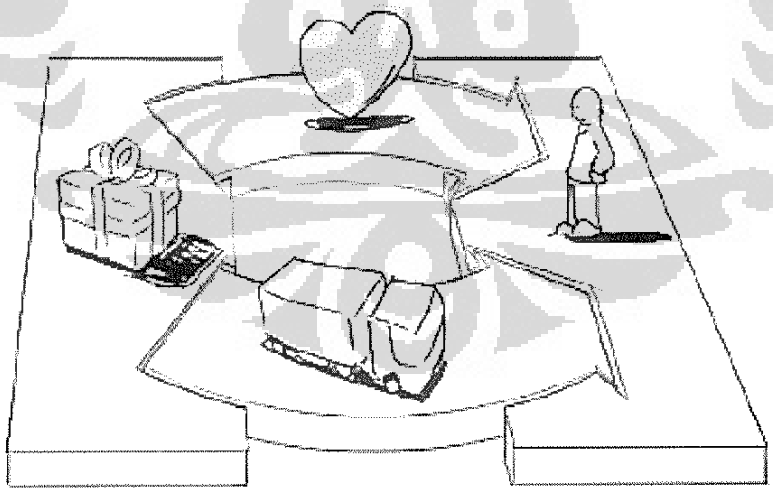

Figure 2-5 Customer Relationship

Source : Osterwalder, Alexander & Pigneur (2010)

According to Osterwalder, Alexander & Pigneur (2010), there are several categories of customer relationship which may co exist in a company's relationship with a particular customer segment, such as what so called dedicated personal assistance, this relationship involves dedicating a customer representative specifically to an individual client.

2.3.5 Revenue Streams

The revenue stream building block represents the cash a company generates from each customer segments (cost must be substract from revenues to create earnings). (Osterwalder, Alexander & Pigneur, 2010).

A business model can involve two different types of revenue streams, such as transaction revenues resulting from one time customer payments and recurring revenues resulting from ongoing payments to either deliver a value proposition to customers or provide post purchase customer support. Each revenue stream may have different pricing mechanism, such as fixed list prices, bargaining, auctioning, market dependent, volume dependent, or yield management. (Osterwalder, Alexander & Pigneur, 2010).

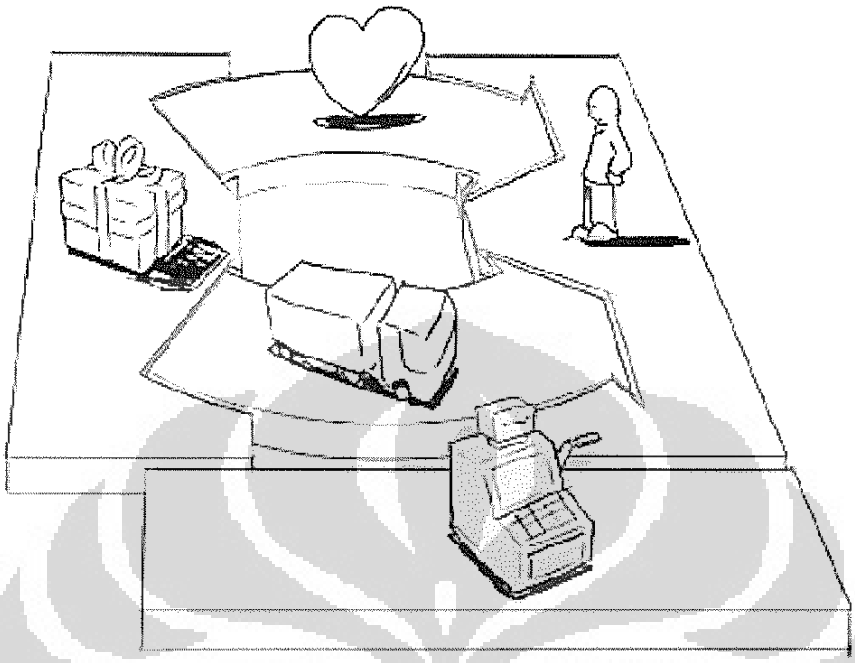

Figure 2-6 Revenue Stream

Source : Osterwalder, Alexander & Pigneur (2010)

In this case the company must determine what value that the customer willing to pay, how will they prefere to pay and how does it revenue stream contribute to overall revenues. In this case, one of the revenue stream comes from usage fee which is generated by the usage of particular service. The more a service is used, the more the customer pays.

Each revenue stream might have different pricing mechanisms, there are two main types of pricing mechanism, fixed and dynamic pricing. (Osterwalder, Alexander & Pigneur, 2010)

Table 2-2 Pricing Mechanism

Fixed Menu Pricing Predefined Prices are Based on Statistic Variables		Dynamic Pricing Prices Change Based on Market Conditions	
List Price	Fixed prices for individual products, services or other Value Propositions	Negotiation (Bargaining)	Price negotiated between two or more partners depending on negotiation power and/or negotiation skills
Product Feature / Dependent	Price depends on the number or quality of Value Proposition features	Yield Management	Price depends on inventory and time of purchse (normally used for perishable resources such as hotel rooms or airline seats)
Customer Segment / Dependent	Price depends on the type and characteristic of a Customer Segment	Real Time Market	Price is established dynamically based on supply and demand
Volume Dependent	Prices as a function of quatity purchased	Auctions	Price determined by outcome of competitive bidding

Source : Osterwalder, Alexander & Pigneur (2010)

2.3.6 Key Resources

The key resources building block describes the most important assests required to make a business model work. Every business model required key resources. From the key resources a company can provide, create, and offer a value proposition, reach the market, maintain relationship with customer segments, and earn revenues. A key resources can be physical, financial, intelectual, or human. Key resources can be owned or lease by the company or acquired from key partners. The questions will be, what key resources do the company value proposition required, as well as with the distribution channels, customer relationships and revenue streams. (Osterwalder, Alexander & Pigneur, 2010).

key partners.

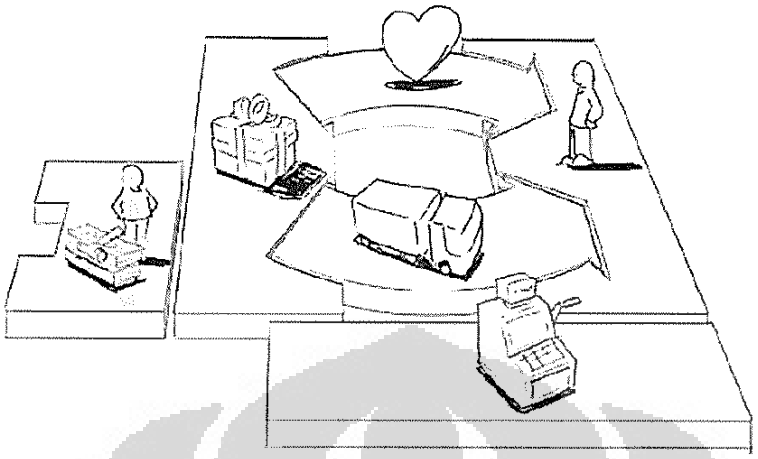

Figure 2-7 Key Resources

Source : Osterwalder, Alexander & Pigneur (2010)

According to Osterwalder, Alexander & Pigneur (2010), key resources can be categorized as follows;

Physical, including physical assets such as manufacturing, facilities, buildings, vehicels, machines, systems, point of sales systems, and distribution networks.

Intellectual, such as brands, proprietary knowledge, patents and copyrights, partnership and customer databases are increasingly important components of strong business model. Intellectual resources are difficult to develop but when successfully created may offer substantial value.

Human, a company requires human resources, but people particularly prominent in certain business models.

Financial, some business model called financial resources and/or financial guarantees, such as cash, line of credits, or a stock option pool for hiring key employees.

2.3.7 Key Activities

Key activities building block describes the most important things a company must do to make its business model work. (Osterwalder, Alexander & Pigneur, 2010).

Key activities are the most important actions the company must take to operate successfully.

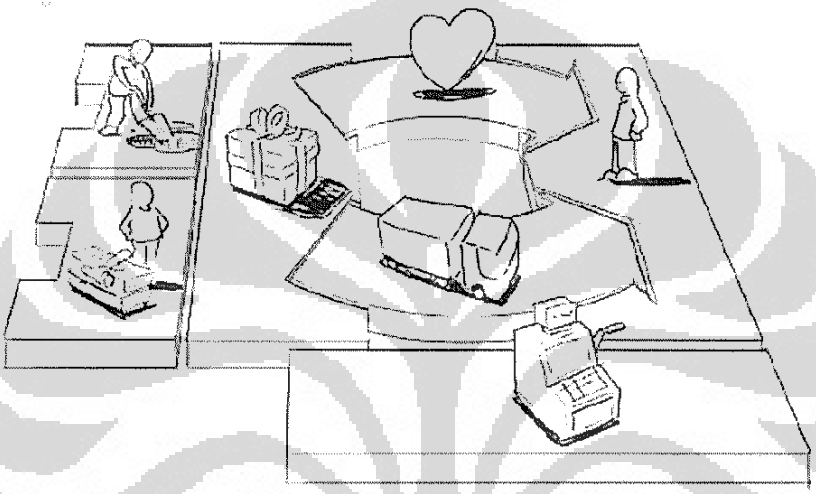

Figure 2-8 Key Activities

Source : Osterwalder, Alexander & Pigneur (2010)

Regarding key activities, Osterwalder, Alexander & Pigneur (2010), categorized it into several point such as;

Production, this activities related to designing, making, and delivering a product in substantial quantities and/or of superior quality. Production activity dominates the business models of manufacturing company.

Problem solving, this activity related to coming up with new solutions to individual customer problems. The operations of consultancies, hospitals, and other services company are mostly dominated by solving problem activities.

Platform or network, business model designed by this platform as a key resource are dominated by platform or network related activities.

2.3.8 Key Partnership

The key partnership building block describes the network of suppliers and partners that make the business model work. (Osterwalder, Alexander & Pigneur, 2010).

Companies forge partnerships for many reasons, partnerships are becoming a cornerstone of many business models. Companies create alliances to optimize their business models, reduce risk, or acquire resources.

According to Osterwalder, Alexander & Pigneur (2010), we can distinquish between four different types of partnership such as strategic alliances between non competitors, coopetition or a strategic partnerships between competitors, joint ventures to develop new businesses and buyer supplier relationships ro ensure reliable supplies.

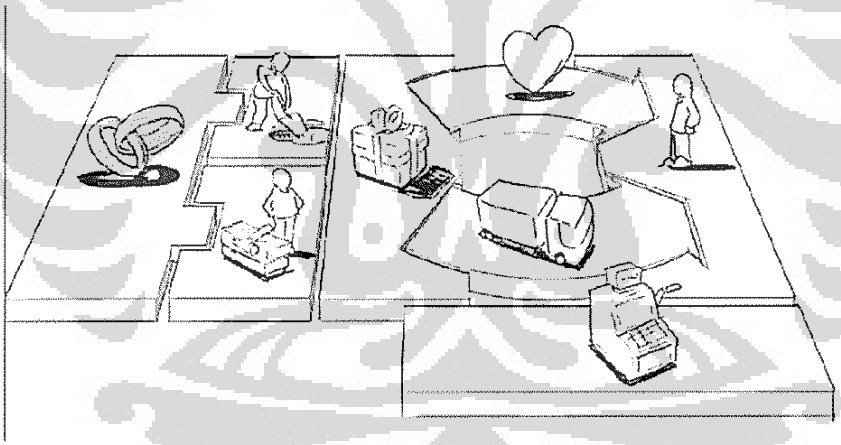

Figure 2-9 Key Partnership

Source : Osterwalder, Alexander & Pigneur (2010)

There are several things that the company might need to pay attention to regarding key partnership, such as who will be the company key partners and suppliers, what is the resources requiring from partners and the key activities that the partners perform. All of those can be used to distinguish between three motivations for creating partnerships.

There are three motivations for creating partnership, such as optimization and economy of scale, reduction of risk uncertainty and acquisition of particular resources and activities. (Osterwalder, Alexander & Pigneur, 2010).

2.3.9 Cost Structure

Cost structure describes all costs incurred to operate a business model. (Osterwalder, Alexander & Pigneur, 2010).

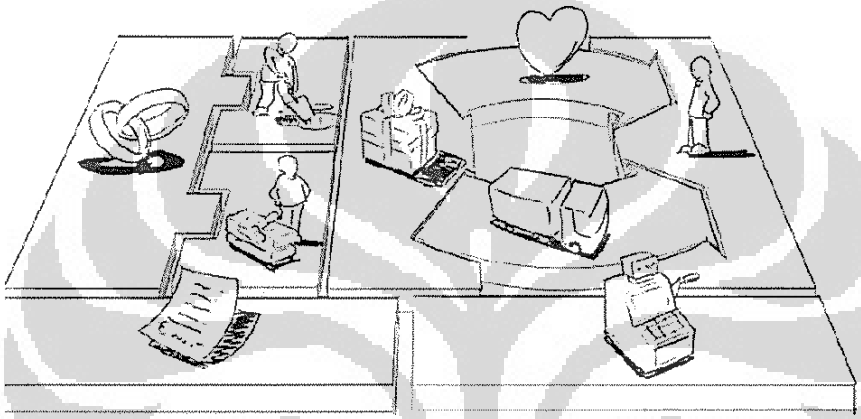

Figure 2-10 Cost Structure

Source : Osterwalder, Alexander & Pigneur (2010)

According to Osterwalder, Alexander & Pigneur (2010), Cost should be minimized in every business model. But low cost structures are more important to some business models than others. Therefore it can be useful to distinguish between two broad classes of business model cost stuctures such as cost driven and value driven.

Cost driven, is a business model focused on minimizing cost whenever possible. This approach aims at creating and maintaining the leanest possible cost structure, using low price value proposition, maximum automation, and extensive outsourcing.

Value driven, used for some company that main concern is the value creation instead of minimizing costs. Premium value proposition and a high degree personalized service usually characterize value driven business models.

Again according to Osterwalder, Alexander & Pigneur (2010), cost structures are having the following characteristics such as;

Fixed cost, cost that remain the same despite the volume of goods or service produced. Variable cost, cost that vary propotionally with the volume of goods or service produced. Economies of scale, cost advantages that a business enjoys as its output expands. And economies of scope, which is the cost advantages that a business enjoys due to a larger scope of operations.

2.4 Business Model Canvas Template

The nine business model building blocks form the basis for a handy tool, which we called Business Model Canvas.

This tool resembles a painter's canvas, preformated with the nine blocks, which allows a company to paint pictures of new or existing business models. Before a company setting up a new business model, it is important for the company to have an assessment of the current operation process and to have an evaluation also for the current process. One of the assessment and evaluation that can be done is by using what is know as S.W.O.T analysis.

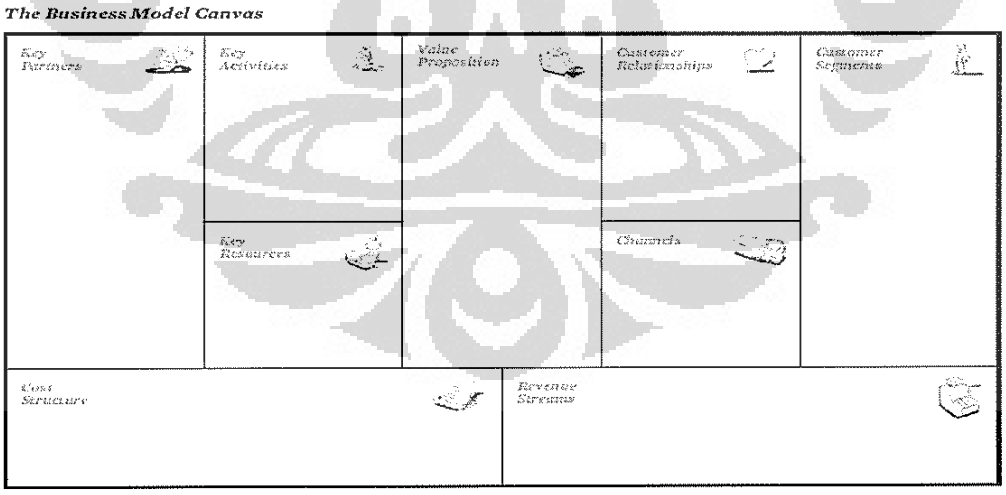

Figure 2-11 Business Model Canvas

Source: Osterwalder, Alexander & Pigneur (2010)

CHAPTER 3

PATTERNS AND DESIGN OF THE BUSINESS MODEL

3.1 Patterns of the Business – Open Business Model

Before we design business model for the company, the first thing is to create a pattern as draft for a company's business model. Accrording to Osterwalder, Alexander & Pigneur (2010), the purpose in defining and describing the business model is to recast well known business concepts in a standardized format which is the business model canvas, so that it would be useful in order to design the business model later on.

In this case, to create the pattern for PT Zircon's business model, we will apply the business model pattern that introduced by Osterwalder, Alexander & Pigneur (2010), so called Open Business Model. It is said by Osterwalder, Alexander & Pigneur (2010), that open business model is a business model that is used by company to create and capture value by collaborating with outside partners. This is include in the principle of innovation in the business model that is introduced by Osterwalder, Alexander & Pigneur (2010), which also stated that it is important for a company to create an effective and value added activity in it company operations, that only can be done by building a valuable partnership with another companies.

The open business model can be perfomed by creating strategic alliance. According to Kotabe & Helsen, "Strategic alliance can be describe as a coalition of two or more organizations to achieve strategically significant goals that are mutually beneficial." (Kotabe & Hansen, 2011, p. 315).

The advantages of strategic alliance are, first, to defend, company create alliances for their core businesses to defend their leadership position. Basicly the underlying goal is to sustain the firm's leadership position by learning new skills, getting access to new markets, developing new technologies, or finessing other capabilities that help the company to reinforce its competitive advantages. Second, a company may also shape strategic alliances to catch up. This happen

when a company create a strategic alliance to shore a core business where it does not have a leadership position. Third, the company might also enter a strategic alliance to simply remain in the business. And lastly, a company might also view strategic alliance as a vehicle to restucture a business that is not core and in which it has not leadership position. (Kotabe & Hansen, 2011, p. 316).

The strategic alliance as the business model pattern that suitable for PT Zircon will be joint venture. As it will create a value added partnership, in which PT Zircon will be the single provider of zircon for its partner and in charge of the operational activities of the business while the other partner can invest in the company in the form of funding, for the machineries and tools.

3.2 Design of the Business Model

This section describe a number of techniques and tools from the world of design that can assist in designing a better and innovative business model. Business people unknowingly practice design everyday by designing organization, strategy, projects and so on.

There are six business model design techniques that consist of customer insights, ideation, visual thinking, prototyping, story telling, and scenarios. In this case, we will need to explore all of the six techinques in order to find the most suitable and applicable techinques (Osterwalder, Alexander & Pigneur, 2010, p. 125).

3.2.1 Customer Insights

For some companies that invest heavily on market research, it is significantly important to put on customers perspective as their main concern, because the customer perspective can be the guidlines for the entire business model design process. Customers perspective can determine a company position regarding value proposition, distribution channels, customer relationships as well as the revenue stream. Even though customers perspective is not the only thing in order to create an ideal business model, but still a successful business model

requires a deep understanding of customers, including the environment, daily routines, concerns and aspirations.

In this case of PT Zircon, as it is a mining industry, the customer is more specify, only in the zircon industry. According to Global Industry Analysts, Inc (GIA), The global market for Zirconium is forecast to reach 2.6 million metric tons by the year 2017. Increasing demand in the global nuclear sector will lead to high demand for Zirconium and simultaneous increase in production capacities worldwide. In addition, also the increasing demand from Asia-Pacific including China, and growing ceramic tile production activity across the world also can be the indicator that the demand for zirconium will be increased in years ahead. In order to create a business model based on customer insight, the company should create a detail forecast on demand and supply of the zircon industry atleast for the next five years so that the company can take proper action in fullfiling the customer demands.

3.2.2 Ideation

According to Osterwalder, Alexander & Pigneur, the process of ideation comes up from generating many different business model to determine one business model that will become the most applicable business model for a company (p. 136). Also from Osterwalder, Alexander & Pigneur, it is stated that we can distinquish four epicenters of business model innovation such as resource driven, offer driven, customer driven and finance driven. First, for resource driven, innovations can originate from an organizations, existing infrastucture or partnership to expand or transform the business model, the second one is offer driven, offer driven innvotions can create new value propositions that effect other business model building blocks, the third one is customer driven innovations that based on customer needs, facilitated access, or increase convenience, and like all innovations emerging from a single epicenter, they effect other business model building blocks, and the last but not least is finance driven which innovation driven by revenue streams, pricing mechanisms, or reduced cost sturctures that affect oother business model building blocks. (p. 139).

The process of ideation start with determining team composition, and then determining which elements to study before generating business model ideas, after that the team can start to imagine the innovation that can be create for each of the nine building blocks, and then simplify the ideas by norrow it down by determining the prioritizing the most suitable idea in creating the business model, last but not least is the prototyping, to find out the complete business model for each shortlisted ideas look like, (Osterwalder, Alexander & Pigneur, 2010, p. 142).

3.2.3 Visual Thinking

A business model is a system that connect every elements in the nine building blocks, so that is why it is important to visualized the business model as a whole and have a big picture of the business model in every element of the nine building blocks. To have the visual thinking of the business model, there are some tools that can be used, such as post it notes, sketches, diagrams to construct and discuss the meaning. Regarding the visual thinking techniques, there are two techniques that can be used such as post it notes and the use of sketches in combination with the business model canvas. There are also four process to improve visual thinking by understanding, dialogue, exploration, and communication, (Osterwalder, Alexander & Pigneur, 2010, p. 148).

According to Osterwalder, Alexander & Pigneur, there are several steps in order to a ideal business model using the visual thinking. First, by using post it notes, the simple guidlines will be using thick marking pens, write only one element per post it notes, and write only a few words per note to capture the essensial point. Second is visualizing with drawing, pictures can deliver messages instantly, simple drawing even can express the ides that otherwise require many words. And Third, after using either both post it notes and drawing, it is important to understand the essense of the visualization that already made by using post it notes and drawings. We can put the post it notes in the business model canvas that already drawn. The business model canvas will tell us which pieces of information to insert in the model, and where, after that it will allow us

to capture the big picture and be able to analyzing and understanding the relationship between the elements in the nine building blocks.

The fourth step will be enchance the dialog, every person in the team will be able to share their opinions based on the big picture they have on the business model canvas that they already drawn and posted post it notes on it, and after collecting opinion from each person, they will have to be able to pick the best choices and options they have form sharing their opinion. The fifth step is to exploring the ideas that were created and determined in the fourth step. Each person in the team allowed to have a deep understanding of each idea they are creating and expanding those ideas to the highest level. The sixth and also the last step will be improving the communication. After ideas is visualized, created and formed, the last thing is to communicate the ideas to every person related in the business process so that the ideas can be executed properly. (Osterwalder, Alexander & Pigneur, 2010, p. 150-155).

3.2.4 Prototyping

Just like visual thinking, prototyping makes abstract concepts tangible and facilates the exploration of a new ideas, (Osterwalder, Alexander & Pigneur, 2010, p. 162). Also according to Osterwalder, Alexander & Pigneur, there are several steps that can be done to in prototyping, first, is to draw an outline and pitch a rough idea, this can be done by drawing a simple business model canvas, and then describing the idea using only the key elements such as do not forget to include the value proposition and the main revenue streams. And then after that, the second step is to explore what it would take to make the idea work, this can be done by developing more elaborate canvas to explore all the elements that needed to make the business model work. In this step we will need to develop the full canvas, think through business logic, estimate the market potential, understand the relationships between building blocks and do some basic fact checking.

The third step is to check the viability of the idea that can be done by turn the detail canvas into a spreadsheet to estimate the business model earning potential, in this step it is needed to create a full canvas, include the key data,

calculate the costs and revenues, estimate profit potential and run financial scenarios based on different assumptions. The last step is perform a field test that investigate customer acceptance and feasibility. In this step we will need to prepare well justified business case for the new model, including the prospective or actual customers in the field test and the perform the test for value proposition, channels, pricing mechanism, and other elements in the market place. (p.165).

3.2.5 Storytelling

Osterwalder, Alexander & Pigneur in their book ever stated that storytelling can assist in providing effective communication regarding the business model that the company about to build, (p.172). The purposes of storytelling in business model is that the storytelling techinque can be used in explaining a new, untested business model. In their book Osterwalder, Alexander & Pigneur stated that explaining a new untested business model is like explaining painting with words alone. But telling a story on how the business model create value will be like applying bright colors to canvas, It makes things tangible. The other thing is that to have clarification such as telling a story that illustrated how the business model created can solved the customer problem, the story can give the buy in needed to subsequently explain the business model in detail. also people are usually more moved by story than by logic, Osterwalder, Alexander & Pigneur, 2010, p. 173).

3.2.6 Scenarios

According to Osterwalder, Alexander & Pigneur, scenarios can be useful in guiding the design of new business models. Like visual thinking, prototyping, and story telling, scenarios render the abstract tangible. The are two types of scenario. The first describes different customer settings; how products or services are used, what kinds of customers use them, or customer concerns, desires, and objectives. The second type of scenario describes future environments in which a business model might complete. The goal is not to predict the future, but rather to imagine possible futures in concrete detail. the exercise helps innovators reflect on the most appopriate business model for each of several future environments.

The strategy literature discusses this practice in detail under the topic of "scenario planning". Applying scenario planning techniques to business model innovation forces reflection on how a model might have to evolve under certain conditions. This sharpens understanding of the model, and of potentially necessary adaptations, most important, it help to prepare for the future.

CHAPTER 4

THE BUSINESS MODEL PROPOSAL

4.1 The Company Overview

PT Zircon is a company that running its business in zircon mining industry established in 2010. The ownership of the company is one hundreds percents owned by the owner and also act as the president director of the company. This company main activity is to produce zircon and then sell it to its customer that usually to industries that required zircon in their production and for product as well. The company located in Nanga Kayan, a small region part of Melawi regency in West Kalimantan.

4.2 The Product – Zircon Sands

Reference from webelements.com believes that the name "Zircon" probably originated from the arabic "Zargun" which describes the color of the gemstone now know as zircon (ZrSi04). Zirconium, symbol Zr on the Periodic Table, is a metal most often found in and extracted from the silicate mineral zirconium silicate and the oxide mineral baddeleyite. In its various compound forms, the grayish-white zirconium is the nineteenth most plentiful element in the earth's crust, where it is far more abundant than copper and lead. It belongs to the titanium family of metals, a group that also includes titanium and hafnium and that is favored in industry for its members' good electrical conductivity as well as their tendency to form metallic salts. Because it is stable in many electron configurations and physical states, zirconium can be made into many products. However, since the 1940s, its most significant applications have been in various structural components of nuclear reactors.

Zirconium was discovered by German chemist Martin Heinrich Klaproth, who first isolated an oxide of the mineral zircon in 1789. The first metallic powder was produced in 1824 by a Swedish Chemist, Jons J. Berzelius. The forms of the metal that could be isolated during the nineteenth century, however, were impure and thus very brittle. The earliest method of purifying useable quantities of

the metal was developed in 1925 by Dutch chemists Anton E. van Arkel and J. H. de Boer, who invented a thermal iodide process by which they thermally decomposed zirconium tetraiodide. The drawback with van Arkel and de Boer's method was its cost, but twenty years later William Justin Kroll of Luxembourg invented a cheaper process, using magnesium to break down zirconium tetrachloride. Relatively inexpensive, this process produced zirconium in quantities large and pure enough for industrial use.

Since Kroll's breakthrough, zirconium has become an important element in several industries: steel, iron, and nuclear power. It is used in the steel industry to remove nitrogen and sulfur from iron, thereby enhancing the metallurgical quality of the steel. When added to iron to create an alloy, zirconium improves iron's machinability, toughness, and ductility. Other common industrial applications of zirconium include the manufacture of photoflash bulbs and surgical equipment, and the tanning of leather.

Despite its ability to be used for many different industrial applications, most of the zirconium produced today is used in water-cooled nuclear reactors. Zirconium has strong corrosion-resistance properties as well as the ability to confine fission fragments and neutrons so that thermal or slow neutrons are not absorbed and wasted, thus improving the efficiency of the nuclear reactor. In fact, about 90 percent of the zirconium produced in 1989 was used in nuclear reactors, either in fuel containers or nuclear product casings.

Zirconium is found in S-type stars, and has been identified in the sun and meteorites. Analyses of lunar rock samples show a surprisingly high zirconium oxide content as compared with terrestrial rocks. Some forms of zircon ($ZrSiO_4$) have excellent gemstone qualities.

Figure 4-1 Zircon Sands

Source: Geology.com

Below is basic information and spesification for zircon ($ZrSiO_4$)

- Name: Zirconium
- Symbol: Zr
- Atomic number: 40
- Atomic weight: 91.224 (2)
- Standard state: solid at 298 K
- CAS Registry ID: 7440-67-7
- Group in periodic table: 4
- Group name: (none)
- Period in periodic table: 5
- Block in periodic table: d-block
- Colour: silvery white
- Classification: Metallic

4.3 Evaluating Business Model

Beside detemining the pattern and design of the business model, it is important for us to make an evaluation of the business model that we are going to set up. The evaluation of the business model can be the evaluation of SWOT of the company. Evaluation of business model is conducted in order to have the big picture of the company overall condition, so that we could determine what kind of business model pattern and design that is suitable for the company.

In this case, we will conduct strength, weakness, opportunity and threat (S.W.O.T) analysis to assess each component in the nine building blocks, to have more understanding of the strenghts asnd weaknesses of the company in each building blocks components. And then we will going forward to analyzed the threats and opportunities of each building blocks.

The S.W.O.T assessment analysis of nine building blocks will be referred to evaluation table established by Osterwalder and Pigneur. The evaluation table scoring shows in the positive and negative remarks. Negative remarks showing the weaknesses and threats of the components in the evaluation table and positive remarks showing the strengths and opportunities of the components in the evaluation table. Qualitative analysis from one to five, which indicates five is the highest score and one is the lowest score.

4.3.1 Value Proposition Assessment (Strength and Weakness)

Table 4-1 Value Proposition Assessment

Value Proposition Assessment	+		-			
Our VP are well aligned with customer needs	1	2	3-	4	5	Our VP and customer needs are misaligned
Our VP has strong network effects	1	2	3-	4	5	Our VP has no network effect
There are strong synergies between our product and services	1	2	3-	4	5	there are no synergies between our products and services
Our customer are very satisfied	1	2	3-	4	5	we have frequent complaints

For point one, the result in 3 (negative) shows that the company value proposition is weak. The company value proposition is weak becauue it is not align with customer needs. The company value proposition is not align with customer needs because the company just produce and sell the raw zircon sands in the market and customer in zircon sands industry usually need zircon sands that has more purity because it will effect the end product of zircon produced. In the second point, result in 3 (negative), it shows the weakness of the company value proposition. Because the company just sell its product to the market and they do not have certain customer segments, there is no customer relationship for the company so that the company would not be able to deliver its value to the customer. The third point result in 3 (negative), shows the company weakness because there is no synergies between the company product and service, or we could say that the company does not provide any service to the customer. And in the last point result in also 3 (negative), because the company quite have alot of complaints from the customer since the zircon sands produced still has alot of dirt, and still lack of purity in the zircons produced.

4.3.2 Cost and Revenue Assessment (Strength and Weakness)

Table 4-2 Cost / Revenue Assessment

The first point of revenue assessment table results in 5 (negative) shows the weakness of the company margin. From the table 4-13 we could see that the company profit margin suffers for minus IDR (29,250,000) with the scenarios that the company could produce 110 ton of zircon sands each month. For the second point result in 1 (positive), shows that even the company have strenght from its revenue stream factor but it is not too strong since the company just has only one revenue stream, which is from the sales of zircon. The third point also result in 1 (positive) indicates there is several repeat purchases of the company zircon sands eventhough not too significant since the company do not have certian customer segment and do not build certain customer relationship with its customer. For point 4, 5, 6, 7 and 8 each result in 5 (negative), because the company only produce zircon sands, so that the company only has one revenue stream and that make the company revenue stream sustainability questionable. Because the

company does not have additional product to produce such us the other spesification of zircon products that come from the further production of zircon sands, or the by products that can be produced aside from zircon sands. It certainly caused the company fail to charge for the thing that the customer willing to pay. In this assessment also shows that the company production activity incurred in high cost process since the company having a cash out before the company get the cash in. The company cashflow become fragile since the company has to spending out the cash and receive the cash later from sales. The company pricing mechanism also leave out money on the table since the company should have charge more for their products price, that can be done by increading the purity of the sand produced.

Revenue Assessment			+		-	
We benefit from strong margin	1	2	3	4	5-	Our margins are poor
Our revenue are predictable	1+	2	3	4	5	Our revenues are unpredictable
We have recurring revenue streams and frequent repeat	1+	2	3	4	5	Our revenues are transactional with few repeat purchases
Our revenue stream are diversified	1	2	3	4	5-	We depend on a single revenue stream
Our revenue stream are sustainable	1	2	3	4	5-	Our revenue sustainability is questionable
we collect revenue before we incur expenses	1	2	3	4	5-	We incur high costs before we collect revenues
We charge for what customers are really willing to pay for	1	2	3	4	5-	We fail to charge for things customers are willing to pay for
our pricing mechanism capture full willingnes to pay	1	2	3	4	5-	Our pricing mechanism leave money on the table
Cost Assessment			+		-	
Our cost are predictable	1+	2	3	4	5	Our costs are unpredictable
Our cost stucture is correctly matched to our business model	1	2	3	4	5-	Our cost structure and business model are poorly matched
Our operations are cost efficient	1	2	3	4	5-	Our operations are cost inefficient
We benefit from economies of scale	1	2	3	4	5-	We enjoy no economies of scale

The cost assessment result in 1 (positive) shows that the company having quite predictable cost. Refers to table 14-3, the company cost mostly consist of wages, meal, maintenance and gasoline expenses. For the second and third point result in 5 (negative) because the company currently does not have any business model and since the company margin result in negative, it shows that the company operations still not efficient. Last but not not least, the company economy of scale assessment result in 5 (negative), it shows that the company does not have any economies of scale since the company only produced limited amount of the zircon sands with lowest price with high cost in its production.

4.3.3 Infrastructure Assessment (Strength and Weakness)

Table 4-3 Infrastructure Assessment

Infrastructure Assessment	+				-	
Our key resources are difficult for competitors to replicate	1	2	3	4	5-	Our resources are easily to replicate
Resource needs are predictable	1+	2	3	4	5	Resources need are unpredictable
We deploy key resources in the right amount at the right time	1+	2	3	4	5	We have trouble deploying the right resouces at the right time
We efficiently execute key activities	1	2	3	4	5-	Key activity execution is inefficient
Our key activities are difficult to copy	1	2	3	4	5-	Our key activities are easily copied
Execution quality is high	1	2	3	4	5-	Execution quality is low
Balance of in house versus outsourced execution is ideal	1	2	3	4	5-	We excecute too many or too few activities ourselves
We are focused and work with partners when necessory	1	2	3	4	5-	We are unfocused and fail to work sufficiently with partners
We enjoy good working relationships with key partners	1	2	3	4	5-	Working relationships with key partners are conflict ridden

Infrastucture assessment leaving 5 point (negative) on how the resources are easy to replicate. Because the company just counting on several general

resources, no specific types of resources, the company's resources consist of several workers and machineries. It could become the weakness point for the company.

Because the resources are predictable and inefficient in production process, it become the company weaknesses leaving 5 point (negative) for the inefficient production activitiy. The impact on the inefficient activity is that the execution become so low and the company can not produce in the maximum capacity.

The company company currently having twenty experienced workers that quite sufficient for its current production butif the company planning to enhance its business and in this case desire to produce more then the company must have more workers to cover its production activity. And for that the company assesstment result in 1 (positive) for the point in how to deploy its resources in the right amount and in the right time.

Company current production activity is easily to copied since it has no any special tools or skills in producing the zircon sands. the company need more tools, more advance machineries, and more experts involved in the current production process in order to increase the production and create a more efficient production activity, the other thing that shows the company inefficientcy is that the company could only produce for 4000 kg per day for the zircon sands while the company having the capability in for poducing 6000 kg of zircon sands. the company profit margin also result in negative amount that shows that the company production activity still unefficient, result in 5 (negative) for point 4,5,6 and 7.

For the relationship with partners, it given 5 point (negative), that indicates the weakness of the company, the point is given actually because there is no partnership available currently for the company. There is no relationship with key partner whatsoever, the company currently just having several partners that it sells the zircon sands directly to, but those are not the key partners.

4.3.4 Customer Interface Assessment (Strength and Weakness)

Since the company does not have any customer relationship, there is no bonds created between the company and the customer and for that, the customer chum rates become high, and because the company just sell the product to the market, the company does not have any customer segments, and also becasue of that the company fail to acquaire new customers, result in the assessment table 5 (negative) for point 1, 2 and 3.

The assessment of the customer interface shows and indicates that the company customers are not well segmented. The company customer segments currently just focused on zircon sands producers, but basicly the company sell to any customer that interested in it zircon sands. The company also have the difficulties in aquiring some new customers (zircon sands producers).

The company also has poorly integrated channels. The company only channel is to deliver its product to the customer using trucks. The other weakness for the company is that the infrastucture (the road) is still a dirt road, so it gives difficulties for the company in the rainy days. Because of the poorly integrated channels, the company channels become very inefficient and ineffective, the prospect also quite weak because with the poorly integrated channel, it is become difficult to reach the customer. And also because of the channel is inefficient and ineffective, also hinder the company to have the economies of scope. That result in 2 (negative) for point 4,5,6,7,8, and 9. Result in 5 (negative) for the statement that the channels are poorly integrated with customer segments, because, first and foremost, the channels of the company are poorly integrated and the company also has no certain customer segments.

The other aspects that indicates weakness of the company customer relationship is that, there is no customer relationship for the company. The company just sell out the product to the customer, there is no extended services given to the customer. And the company also does not have certain brand to clasified its product. And for that there is low customer switching cost. Since the company does not spend any of his cash on creating a bond between the company and its customer. Result in 5 (negative) for the last 10, 11, 12 and 13 point.

Table 4-4 Customer Interface Assessment

Customer Interface Assessment			+		-	
Customer churn rates are low	1	2	3	4	5-	Customer churn rates are high
Customer base is well segmented	1	2	3	4	5-	Customer base is unsegmented
We are continuously acquiring new customers	1	2-	3	4	5	We are failing to acquire new customers
Our channels are very efficient	1	2-	3	4	5	Our channels are inefficient
Our channels are very effective	1	2-	3	4	5	Our channels are ineffective
Channels reach is strong among customers	1	2-	3	4	5	Channel reach among prospects is weak
Customers can easily see our channels	1	2-	3	4	5	Prospects fail to notice our channels
Channels are strongly integrated	1	2-	3	4	5	Channels are poorly integrated
Channels provide economies of scope	1	2-	3	4	5	Channels provide no economies of scope
Channels are well matched to customer segment	1	2	3	4	5-	Channels are poorly matched to customer segments
Strong customer relationships	1	2	3	4	5-	Weak customer relationships
Relationship quality correctly matches customer segments	1	2	3	4	5-	Relationship quality is poorly matched to customer segments
relationship bind customers through high switching costs	1	2	3	4	5-	Customers switching costs are low
Our brand is strong	1	2	3	4	5-	our brand is weak

4.3.5 Value Proposition (Threats Assesment)

Table 4-5 Value Proposition (Threats Assessment)

Value Proposition Threats					
Are Substitute Products and Services Available?	1	2	3	4	5-
Are competitors threatening to offer better price or value?	1	2	3	4	5-

Because there are no customer relationship indicates in this current process, it becomes threats for the company as the company can lose its customers and because of the competitors are having a more efficient way to produce its products, with more quality if sands, it become threats for the company as the competitors is offering better quality of products with competitive prices. and also the company does not offer any substitute products or services that available to its customer. And for that cause, for the threats assessment result in 5 (negative) for each point.

4.3.6 Cost / Revenue (Threats Assessment)

Table 4-6 Cost and Revenue (Threats Assessment)

Cost / Revenue Threats					
Are our margin threatened by competitors? Or Technology?	1	2	3	4	5-
Do we depend excessively on one or more revenue streams?	1	2	3	4	5-
Which revenue stream are likely to disappear in the future?	1-	2	3	4	5
Which costs threaten to become unpredictable?	1-	2	3	4	5
Which costs threaten to grow more quickly than the revenues they support?	1-	2	3	4	5
Where can we reduce costs?	1-	2	3	4	5

For the first and second point in the qualitative analysis result in 5 (negative), it is becasue the company margin is certainly threaten by competitors and technology. For the small company like PT Zircon, the does not have the advance technology machineries and esperts that could support them to produce a higher volum of zircon, with the higher purity in which the company could sell with a higher price. In addition to that, the company also depend on only one revenue stream which is the production of the zircon sands itself.

For the third, fourth, fifth and sixth point, each are result in 1 (negative), because of several reasons, the first reason is, the company only having one revenue stream which is the zircon sands and since the zircon sands is non recycle mineral, the zircon sands reserve will be run out in the future and the company will no longer have the revenue stream, but in this case, it still leaving out the company a decade of time for PT Zircon sands zircon reserves. In the other hand there is also a cost that likely to become unpredictable, such as the maintenance cost, the more the machineries depreciated, the higher the maintenance cost will be. In addition to that, all the cost are likely to grow more quicky than revenue, since the company spending out cash first before they generate income from sales. And in the mean time, with this current business operation, there is impossible for the company to reduce cost, since the company will need alots of cash spending for its zircon sands production, especially higher cost in renting machineries, maintenance, gasoline and wages, while the company just generate small amount of cash by selling the product in lower prices than other companies.

4.3.7 Infrastructure (Threats Assessment)

Table 4-7 Infrastructure

Infrastucture Threats					
Could we face disruption in the supply of certain resources?	1	2	3	4	5-
Is the quality of our resources threatened in any way?	1	2	3	4	5-
What key activities might be disrupted?	1	2	3	4	5-
Is the quality of our activities threatened in any way?	1	2	3	4	5-
Are we in danger of losing any partners?	NA	NA	NA	NA	NA
Might our partners collaborate with competitors?	NA	NA	NA	NA	NA
Are we too dependent on certain partners?	NA	NA	NA	NA	NA

In the current condition, it is highly possible that the company will have difficulty in facing the disruption that might regarding its effort to supply the its product to the customer, since the company only depend on one resources which is to deliver its product by trucks. And will definately find difficulty whenever it comes to rainy days when the company will facing some difficulties with the dirt road. And for that cause, for the first point result in 5 (negative). The quality of the company resources will be threaten, since the company only have limited resources, for example like they only have twenty workers that being paid daily and does not have any special expertise, also the company does not have any advance machineries to support its production. And for that for the second point, it result in 5 (negative). The key activities that might being disrupted is the production processs itself. Because the company will need a better quality of workers, experts and advance machineries in order for the company to increase its production capacity and having a better quality of zircon. In that cause, for the fourth point, also result in 5 (negative). For point 5, 6, and 7 result in 1 (negative) because the company recently have no partnership with any company. So it will be irrelevant.

4.3.8 Customer Interface (Threats Assessment)

Table 4-8 Customer Interface (Threats Assessment)

Customer Interface Threats					
Could our market be saturated soon?	1-	2	3	4	5
Are competitors threatening our market share?	1	2	3	4	5-
How likely are customers to defect?	1	2	3	4	5-
How quicky will competition in our market intensify?	1	2	3	4	5-
Do competitors threaten our channels?	1	2	3	4	5-
Are our channels in danger of becoming irrelevant to customers?	1-	2	3	4	5
Are any of our customer relationships in danger of deteriorating?	NA	NA	NA	NA	NA

For the first point, related to PT Zircon which is still a new company, there will be minimum threats regarding the market that being saturated, since PT Zircon is still a new company that still struggling to grap its market share, and so that leave out the first point with 1 (negative). There is significant possibilty that our competitors are threatening our market share. The company is currently sturggling with the small market share it can grasp. The company is unable to expand its market share due to several factors such as, there are no customer relationship that creating a low value proposition for the company, also there is no partnership that can caused the the competitors can easily intefere in the company channels. The company need to find out how to reach the customer in an easy and effective way by creating an effective distribution channel, and for that it would definately defect our customer. And for that cause, for the second, third, fourth and fifth points, result in 5 (negative). There is minimum threats to the company channel that can be irrelevent to the customer, leaving out 1 (negative) in the scoring, because even the company channel still not efficient or effective, but the company still able to deliver its products to the customer.

As we could see from the table scoring is that the there is significant threats in the customer interface points. The competition in zircon market can be intensified quickly as the demand for zircon sands is keep increasing as well as the price. As the new player in the zircon sands market, it will be hard for the company to grab the market share. One of the way have a portion in the market share is to considering partnership with its competitors, in assumption that the company will be able to have portion from its competitors market share. There is no customer relationship available currently, and so that become irrelevant.

4.3.9 Value Proposition (Opportunities Assessment)

Table 4-9 Value Proposition (Opportunities Assessment)

Value Proposition Opportunities					
Could we generate recurring revenue by converting products into services?	1	2	3	4	5+
Could we better intergrate our products or services?	1	2	3	4	5+
Which additional customer needs could we satisfy?	1	2	3	4	5+
What complements to or extensions of our value proposition are possible?	1	2	3	4	5+
What other jobs could we do on behalf of customers?	1	2	3	4	5+

There are so many possibility that the company can provide services beside products to the customer, not just providing but also integrated it become one package offered to the customers. There are some customer need also can be satisfy by giving the customer special order products. So the company can help to provide the products based on the customer order.

The value proposition that the company can give to the customer will be the services to the customer, buy providing more varies of zircon produced. The other thing, such as better quality of zircon, that the company will be able to produce zircon with higher percentage of the purity. The other job, that the company could do on behalf of the customer is that providing testing lab, that

could help the customer to get more undertanding of the product. And learn more on how to use the product in many other way. In this case for SWOT assessment regarding opportunity that the company will get regading the value proposition result in 5 (positive), it is because the company actually have the potential to become a company that can bring out the value proposition to the customer in the future.

4.3.10 Cost / Revenue (Opportunities Assessment)

Table 4-10 Cost / Revenue (Opportunities Assessment)

Cost / Revenue Opportunities					
Can we replace one time transaction revenue with recurring revenue?	1	2	3	4	5+
What other elements would customers be willing to pay for?	1	2	3	4	5+
Do we have cross selling opportunities either internally or with partners?	NA	NA	NA	NA	NA
What other revenue streams could we add or created?	1	2	3	4	5+
Can we increase prices?	1	2	3	4	5+
Where can we reduce costs?	1	2	3	4	5+

For the first point, result in 5 (positive) because the company has the potential, and there is many possibilities that the company can replace one time transaction to recurring revenue. The company need to build and maintain its customer relationship that can help the company to generate more sales from its customers. The second point also result in 5 (positive) , because there is also an opportunity and there are more element that the customer willing to pay such as the possibility of by product and the services that can be provided to the customer. All of that can be a possible additional income to the company. The company currently has no partnership and does not do any internal selling, and for that result become irrelevant.

For the fourth, fifth and sixth points, each result in 5 (positive), becasue there is a significant opportunity that the company can add its revenue stream, one

of the way is by take advantage of the by product that created from the zircon production. For the cost and the price, there are possibility to increase the price of the zircon sands. The price of the zircon sands generally depends on the purity of the sands, and the percentage of the zircon in the sands. The more zircon in the sands the higher the percentage and higher the price. If the company be able produce the zircon sands to it maximum capacity then the company can achieve its economies of scale that can result in decrease in cost of production.

4.3.11 Infrastructure (Opportunities Assessment)

Table 4-11 Infrastructure (Opportunities Assessment)

Infrastucture Opportunities					
Can we use less costly resources to achieve the same result?	1+	2	3	4	5
Which key resources could be better sourced from partners?	1+	2	3	4	5
Which key resources are under exploited?	1+	2	3	4	5
Do we have unused intellectual property of value to others?	NA	NA	NA	NA	NA
Could we standardize some key activities?	1	2	3	4	5+
How could we imporve efficiency in general?	1	2	3	4	5+
Would IT support boost efficiency?	1	2	3	4	5+
Are there oursource opportunities?	1+	2	3	4	5
Could greater collaboration with partners help us focus on our core business?	1	2	3	4	5+
Are there cross selling opportunities with partners?	1	2	3	4	5+
Could partner channels help us better reach customers?	1	2	3	4	5+
Could partner complement our value proposition	1	2	3	4	5+

For point one, two and three, result in the 1 (positive) in the table scoring, for some reasons. For the resources, the company already having some workers and also some machineries that can be used for its production. Even so, the company still missing some key resources which is extraction machineries (such as excavator machineries) that can help to enhance the company production, and not just the company production but also can also help to enhance the quality of

the zircon sands, result in the increase purity of sands, and it will be hard for the company to achieve the same result with current resources. And for that result in 1 (positive). The purpose of the partnership will be to assist the company in terms of funding such as providing the machineries for the company. But currently there is no partnership available for the company, and it will be challange for the company to find the proper partnership that can help provide mutual benefit for the company. There is small change for resources that are under exploited and also there is no unused intellectual property, in case of that become irrelecant.

By developing the business model, there is abig opportunity for the company to determine the standardization of its production activity and increasing its efficiency and efectivuty in its productionn process, in addition of that the company might need experts and advance machinery and for that the IT support will also highly needed, and for that, for the point five, six and seven result in 5 (positive).

4.3.12 Customer Interface (Opportunity Assessment)

The first point result in 5 (positive) since there is big apportunity for the company to benefit from growing market as the zircon industry is keep growing every year and as the consumption of the zircon increase, especially in China. There is also an opportunity for the company to serve another customer segments, but the company will be focus on the current customer segment in order to grab more market share since the company is still new in the industry, and for that caused, in the table scoring it result in 1 (positive). And also with a finer customer segmentation, the company will be able to serve the customer with better services, result in 5 (positive). For the fourth and fifth point in the table scoring, result in 5 (positive) because with a development of business model, there is abig opportunity for the company to improve its channel efficiency and effectiveness and also being able to integrate its channel better. There are several thing that the company can do to enhance its infrastucture such as building a paved road. Having more trucks to deliver its product from the mine to the warehouse and to the customers. There are an opportunity to have complementary partner channel,

but in this case will be not the company main purpose, and for that it will result in 1 (positive). The company will focus on finding a main partner that can bring to a mutual partnership for them. In the other hand, the company will need a better channel in order to reaching out to the customer, and for that there will be minimum opportunity for the company to serve directly to the customer, result in 1 (positive) in the table scoring. Also with the developing business model, the company will be able to align its channel in to the right customer, result in 5 (positive) in the table scoring. By maintaining the customer relationship, the company can saving the cost for switching customers.

Table 4-12 Customer Interface (Opportunities Assessment)

Customer Interface Opportunities					
How can we benefit from growing market?	1	2	3	4	5+
Could we serve new customer segments?	1+	2	3	4	5
Could we better serve our customers through finer segmentation?	1	2	3	4	5+
How could we improve channel efficiency or effectiveness?	1	2	3	4	5+
Could we intergrate our channels better?	1	2	3	4	5+
Could we find new complementary partner channels?	1+	2	3	4	5
Could we increase margins by directly serving customers?	1+	2	3	4	5
Could we better align channels with customers segments?	1	2	3	4	5+
Is there potential to improve customer follow up?	1	2	3	4	5+
how could we tighten our relationships with customers?	1	2	3	4	5+
Could we improve personalization?	1	2	3	4	5+
How could we increase switching costs?	1	2	3	4	5+
Have we identified and fired unprofitable customers? If not, why not?	1+	2	3	4	5
Do we need to automate some relationships?	1+	2	3	4	5

For point nine to fourteen, there a big opportunity for the company, in order for the company to improve the customer follow up, tighten customer relationship, and improve personalization, by setting up a comprehensive customer relationship, and for this point also, it would be a higher opportunity for the company to minimize customer switching cost, result in 5 (positive), and in this case will result in minimum opportunity for the company to automate the customer relationship, since the company will need to personalize its customer relationship to grap more customer, and market share. And it this case, will also effect in the company value proposition. Along with above statement, the company will not yet fired up its customer yet, since the company will to analyze its market share and identified its customer segments beforhand. And for that will result in minimum opportunity for the company to fired up any of this customer in this current statement.

4.4 The Scenarios – Current Statement

This is the scenarios for PT Zircon, PT Zircon is a small mining company that located in the remote area of West Kalimantan, in Nanga Kayan regency, with vast range of mining field for 195 Ha, location code Zr. 01. 09.

4.4.1 The Customers

Currently PT Zircon does not have any particular customers. PT Zircon make a production daily but selling the sands monthly to any customers that wanted to buy its sands. So that every month, PT Zircon could be selling to different customers. There is no customer relationships and value propositions that can be offered to customers.

4.4.2 The Infrastructures

The infrastructures consist of key activities, key resources, and key parthership. In addition to that, we can put the distribution channels as our supporting infrastucture. First point to be notice is that, in the current process PT Zircon does not build any partnership and running its business on its own.

The second point is that PT Zircon having a very minimum infrastuctures. In the very first beginning, PT Zircon build and open the road so now it become

easier to transport all the sands from the mining plant to the warehouse but still the road is remain a dirt road, so it caused the difficulties when it rainy days.

The other thing is that, there is still alots of machineries that the company still not having because the company does not have enough fund to buy those machineries. The production steps is very simple and not effective and efficient. With only 20 workers, in this current steps, the company could not produce to its the maximum capacity. The current key activities as follows,

- 15 set of spiral concentrator for production
- 1 set of fuso machine and 1 set of suction pump machine 6" ; this set is used for the rocks filter and sands filter 3mm
- 1 set of fuso machine and 1 set of suction pump machine 6" ; this set is used for alocate the sands to the cement pool.
- 1 set of fuso machine and 1 set of suction pump machine 6" ; this set is used for alocate the sands from cement pool to spiral concentrator.
- 2 set DonFeng machine and 2 set of 2 water pump machine 4" ; this set is used in the finishing step.
- 1 set of water pump machine and 1 set of water pump machine 6" ; this set is used for spraying water in the for the finishing step
- 2 set of water pump, 2 set of Don Feng machine, 2 set of water pump 4" ; this set is also used in finishing step.

The other resources that the company not yet have for its production as follows;

- 1 unit of excavator machine PC 200
- 1 unit Hilux Pick Up 4X4
- 1 unit Drum truck Mitsubishi
- 1 set of Conveyor

There is also no specific distribution channels and how the company deliver its product to its customers. In the current process, the zircon sands will be kept in the warehouse for some range of time before it gets to the customers. once

the production reach the capacity requested by customer, then the zircon sands is sent directly to the customers.

4.4.3 Cost and Revenue Analysis

The cost and revenue scenario analysis are all in estimated amount. All revenue and cost calculated with the estimation that there are no significant changes in any expenses incurred in the next months. Also all are calculated with the assumption of ten of working hours with total twenty workers. The production capacity is estimated based on the production capacity that the company can produced with current resources.

Table 4-13 Cost and Revenue Scenarios of PT Zircon

	A Day	A Month	A Year
Income			
Production Capacity *with 36% concentrate of zircon sands*	4000 kg	110.000 kg (110 ton)	1.320.000 kg (1.320 ton)
Sales			
Kg X 36% X Rp 75 / %	10.800.000	297.000.000	3.564.000.000
Price per 36% concentrate of zircon sands *Rp 75 / kg*			
COGS	9.075.000	272.250.000	3.267.000.000
Gross Profit	**1.725.000**	**24.750.000**	**297.000.000**
Expenses			
Wages Expense	1.400.000	42.000.000	504.000.000
20 employees			
Meal Allowance	400.000	12.000.000	144.000.000
20 employees			
Total Expenses	**1.800.000**	**54.000.000**	**648.000.000**
Net Profit Before Tax	**-75.000**	**-29.250.000**	**-351.000.000**
Remarks			
COGS Details			
Gasoline	4.400.000	132.000.000	1.584.000.000
550ltr @ Rp 8000			
Rental Excavator Machineries	3.500.000	105.000.000	1.260.000.000
Maintenance Machineries	1.175.000	35.250.000	423.000.000
Propeler Pump, spareparts etc			
Total COGS	**9.075.000**	**272.250.000**	**3.267.000.000**

The current cost and revenue analysis shows that the net loss before tax in a year is (Rp 351.000.000) The production costs including costs for gasolines, machineries maintenance, rental excavator machineries, wages and meal allowances. Assuming there is no significant changes during the year, while the revenue generates from zircon sands selling.

It is also important to be noted that the company spending out some cash before getting cash in, in this case generating expenses before revenues. So this is actually become concern of the company, as the company will need a solid channels, customers and partners to support its production. To avoid there is lag in sales that can casued the company can not sell its produce than the company will facing risk in shortage of fund.

The cost and revenue scenarios shows that without the limited excavator machineries, the company only can produce to 4000 kg per day, and it is not its maximum capacity. The purity of the sands only 36 percents, the company will need more excavator machineries to achieve its desireble product purity which is 65 percents.

4.5 Proposed Business Model

The proposed business model designed to assist PT Zircon in order to organized its operational activities, so that the operational activities can be done effectively and efficiently so that can enhance the business growth in the long run.

From figure 4-3, shows that the company will need to build partnership with either a zircon producers or and ceramics industry (because ceramics industries are one of major users of zircon sands). The partnership can be in the form of strategic partnership or so called strategic alliance.

The company can focused its activity on zircon production. And to maximized its production capacity the company can use the excavator machines. The idea on how to provide the excavator machines is one of the purpose of the

partnership. In this case, the scenario is that the company will have a partnership that can provide funding to the company. As the company getting its fund to provide the excavator machines, the company can produce in the maximum capacity and with the more purity and better quality of sands.

By giving the better quality of zircon, this will increase the company value proposition as well as decreasing the rental cost for machineries. The other thing, with funding, the company can build better quality of the infrastucture such as road, so that the company can have better way in reaching ts customers.

It is also recommended for the company to enhance its customer relationship by providing services to the customers. With the new process, more advance machineries, and experts, assumed the company will be able to enhance its production by producing not only zircon sands, but also can produce customized zircon sands requested by the customers, in addition to that, in the new process there is possibility of adding more income to the revenue streams from by products and services. In the end the whole process in line will create more revenue and enhance the company profit margin.

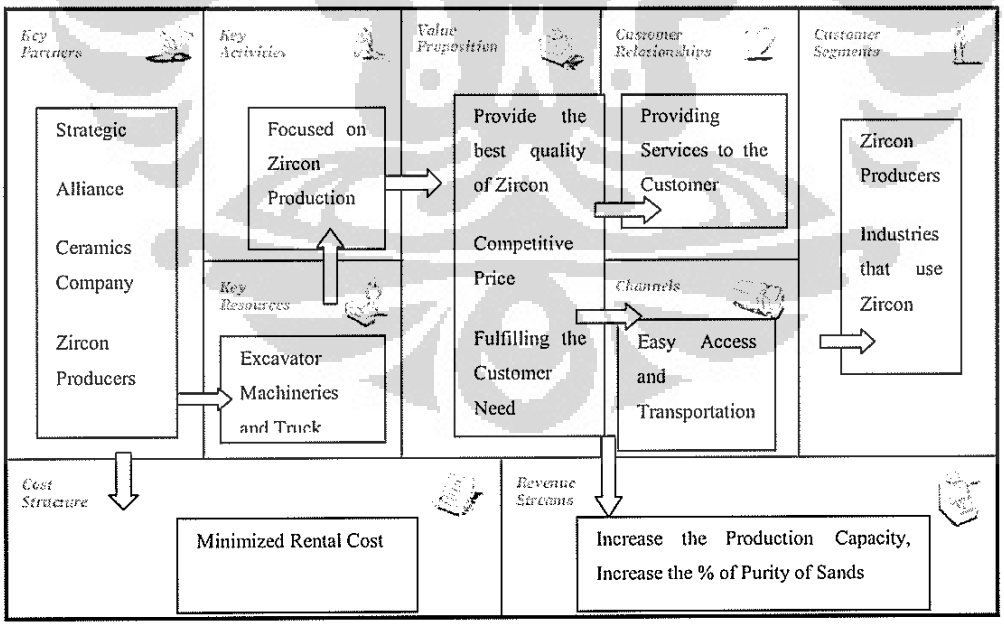

Figure 4-2 Proposed Business Model

The details and in depth explaination of above proposed business model, can be found in below pointers:

4.5.1 Customer Segments

The main consumer for zircon end use about 55 percent is the ceramics industry. Based on the presentation by Illuka, and according to the TM Enginerring, global tile manufacturing has been growing rapidly for the last fifteen years, especially in China, leaving China as the biggest consumer of Zircon, accounting for estimated 578 kt (637,000 st) of global consumption

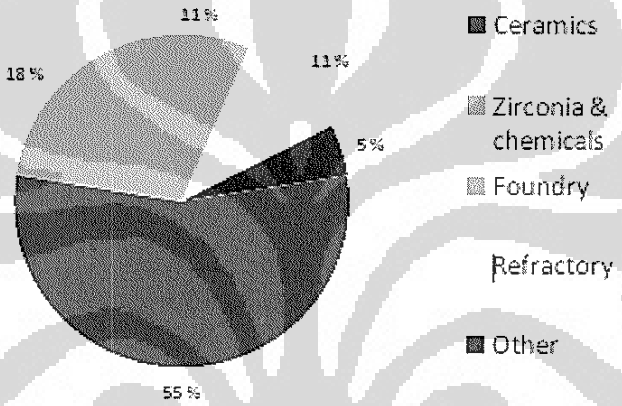

Figure 4-3 Zircon End Use Diagram

Source : Illuka presentation, November 2010

In this case, PT Zircon costumer's segment will solely focused on every company that required and utilized zircon sands for their productions. Such as ceramics industries, tile industries, and refractories. It will be more on supplier and buyer relationship that a company might need to determine spesific and categorized buyers instead of selling to the mass market. In order for that, a partnership might need to be built for this case.

In the other hand, the company could also sell directly to the larger zircon sands producers. By selling to this producers, a company might need to think of long term partnership.

4.5.2 Value Proposition

PT Zircon can set its value proposition on these key points, such as ;

- Delivering premiun quality of sand to its customer with competitive price.
- Work closely with the customer to understand their needs and the value of use if its products.
- Applying quality management system (ISO) to its product.

Having a testing facility capable of measuring the purity of the zircon produced. Also regarding the company effort to enhance its value proposition, the company will need to provide additional serviceds to the customer. For example, the company can produce a specialized zircon sands based on the customer request. The company could also improved its customer relationship by personalized its services for each of its customer, by held seminar or training on how to make use of the zircon sands products for different end used products, and for its customer to get more understanding of zircon.

4.5.3 Infrastructures

Infrastuctures here means all the things that required in order to support the on going of the production. Infrastuctures can be include such as the key activities (steps in production), key resources (all the machineries, workers, and tools that needed for production), and key partnership (what kind of partnership that the company choose to help them enhancing its competitive advantage).

4.5.3.1 *Key Activities*

From madehow.com, it is found out that there are several steps that need to be done in zircon sands production.

First, Extraction process, there are several process in the extraction process. The sand and gravel that contain zircon mixed with silicate, ilmenite, and rutile are typically collected from coastal waters by a floating dredge, a large steam shovel fitted on a floating barge. After the shovel has scooped up the gravel and sand, they are purified by means of spiral concentrators, which separate on the basis of density. The ilmenite and rutile are then removed by magnetic and electrostatic separators. The purest concentrates of zircon are shipped to end-

product manufacturers to be used in metal production, while less pure concentrations are used for refractories.

Second, Refining zircon, End-product manufacturers of zircon further refine the nearly pure zircon into zirconium by using a reducing agent (usually chlorine) to purify the metal and then sintering (heating) it until it becomes sufficiently ductile—workable—for industrial use. For small-scale laboratory use, zirconium metal may be produced by means of a chemical reaction in which chloride is used to reduce the zircon.

Third, The less-pure zircon is made into zirconia, an oxide of zirconium, by fusing the zircon with coke, iron borings, and lime until the silica is reduced to silicon that alloys with the iron. The zirconia is then stabilized by heating it to about 3,095 degrees Fahrenheit (1,700 degrees Celsius), with additions of lime and magnesia totalling about five percent.

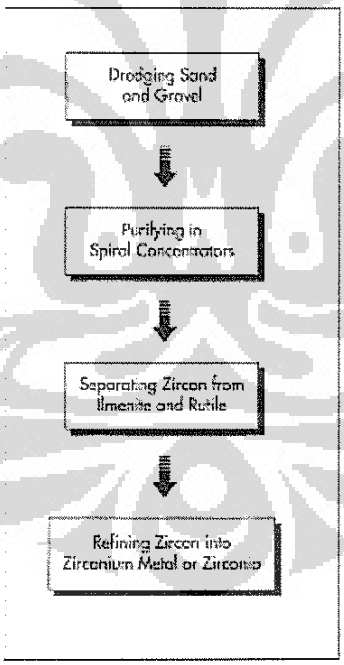

Figure 4-4 Steps in Zircon Sands Production

Fourth, the quality control. This step is probably one of the missing steps that is not conducted in PT Zircon current production process. Quality control, however is suggested becasue, it is important for the company in order to fulfill

the value propositions offered to the customers by providing the best quality product of zircon that match the need of the customer as well.

The quality control methods implemented in the production of zirconium metal are typical Statistical Process Control (SPC) methods used in most metal production. These involve tracking and controlling specific variables determined by the end product requirements. Stringent government quality control is applied to all zirconium metal produced for nuclear applications. These controls assure that the zirconium produced for use in a nuclear plant has been processed correctly and also allow for accountability: processing is tracked so that it can be traced back to each individual step and location.

Fifth, by product and waste. This also the missing steps in the company current production process. By product from Silicate, ilmenite, and rutile—all by products of the zircon refining process—are typically dumped back in the water at the extraction site. These elements compose typical beach sand and are in no way detrimental to the environment. Magnesium chloride, the only other notable by product of zirconium manufacturing, results from the reduction of the zircon with chlorine in the refining process and is typically sold to magnesium refineries. This by product could be sold and giving more revenue streams to the company.

4.5.3.2 *Key Resources*

Key resources will having advantage from the partnership. Key resources indicates the experts, experienced workers and advance machineries with advance technologies. With the advance technologies machineries, experts and additional workers, it will assist the company in enhancing its production capacity. Also in addition to key resources, the distribution channels also will taking advantage of this effect as well. As the company have the funding to enhance its infrastuctures, such as providing more trucks, building up a better road so the customers can received their products in timely manner.

4.5.3.3 *Key Partnership*

If the company is planning to get funding (or investment), the recommendation for the company will be based on UU No 11 Tahun 1967. That

the company shall consider the government or local government in order for the company to form a partnership.

4.5.4 Cost Revenue Analysis Scenarios – In New Business Model

Table 4-14 Cost and Revenue Scenarios of PT Zircon in A New Business Model

	A Day	A Month	A Year
Income			
Production Capacity *with 65% concentrate of zircon sands*	6000 kg	150.000 kg (150 ton)	1.800.000 kg (1800 ton)
Sales			
Kg X 65% X Rp 75 / %	29.250.000	731.250.000	8.775.000.000
Price per 36% concentrate of zircon sands *Rp 75 / kg*			
By Product (20% from sales)	5.850.000	146.250.000	1.755.000.000
COGS	5.575.000	167.250.000	2.007.000.000
Gross Profit	**29.525.000**	**710.250.000**	**8.523.000.000**
Expenses			
Wages Expense *20 employees*	1.400.000	42.000.000	504.000.000
Meal Allowance *20 employees*	400.000	12.000.000	144.000.000
Total Expenses	**1.800.000**	**54.000.000**	**648.000.000**
Net Profit Before Tax	**27.725.000**	**656.250.000**	**7.875.000.000**
Remarks			
COGS Details			
Gasoline *550ltr @ Rp 8000*	4.400.000	132.000.000	1.584.000.000
Maintenance Machineries *Propeler Pump, spareparts etc*	1.175.000	35.250.000	423.000.000
Total COGS	**5.575.000**	**167.250.000**	**2.007.000.000**

In this new cost and revenue scenario, assumed that the company having a partnership and the partnership offers funding in terms of machineries, trucks (transportation), experts and more workers. Assumed all those resources can enhance the production to 6000 kg per day and enhance the purity of the zircon sands produced by 65 percents. Assumed by using the new production process the company can produce by product and also customized zircon sands for the customer and create additional revenues streams. Assumed revenue from by product by 20 percents from sales and there is no significant changes in expenses, the company can increase its profit margin a year from loss (Rp 351.000.000) to Rp 7.875 mio. Aside from that, the company save up for rental machineries costs since the company already get funding from strategic partner.

CHAPTER 5

CONCLUSION AND RECOMMENDATION

5.1 Conclusion

To build a business model for a zircon mining industry in west kalimantan based on the Osterwalder and Pigneur nine building blocks, there are several thing that need to be considered, such as the customer segments which is the targeted customer of its products, the value proposition offered to the customers, the channels distribution on how to deliver the product to the customer, the cost and revenue analysis for the zircon sands, the key activities of the production of zircon sands, the key resources and key partnership for the company.

The customer segments shows that the company customer segments actually specialized and limited to zircon user such as ceramics industries, ceramics industries mostly known as the main user of zircon sands, and the other such as zircon suppliers.

The infastuctures, here that can be categorized along with the infrastuctures such as distirbution channels, key resources, and key activities. Distribution channels shows how the company delivers its product to the customers, in this case, the current process of the company to deliver its product from mine to the customers is by using Fuso trucks, but the one that lacking is the road, the road is still not a paved road, it is a dirt road, and slippery when it comes to rainy days and sometimes becomes the obstacle for the company to deliver its product to the customers. then the company might have to deliver the product to the warehouse and can not send the product directly to the customer, in this case it will also effect and increase the handling costs for the warehouse. The other thing is a bout the other thing about the key resources is that the company still lacking some of it main machineries, machineries that can be used to enhance its production such as extraction machineries called excavator machineries. last but not least is about the key partnership that the company might need to consider for

currently the company does not has any partnership with certain parties. Partnership can assist on the company enhance its business.

The revenue and cost analysis shows that the company still not producting to its maximum capacity. And because of some lacking in the machineries for production the company can only produce in its minimum capacity for about 4000 kg per day, which is can be increase to 6000 kg per day by using the extraction machineries, not only that, the extraction machineries can also assist the company in enhancing the purity of the zircon sands, that result in the higher concentrate of zircon that can increase the company revenue as the zircon sands price is the determine from the percentage of zircon concentrate in the sands. The main expenses for the company come from the salary and meal allowance for the workers, the maintainance of the machineries and gasoline. However the calculation of the zircon price and the expenses all are based on assumption and the scenarios build for PT Zircon.

5.2 Recommendation

There are several recommedations that can be given regarding the business model proposed to PT Zircon. First, the main key factors of this business model that the company might need to pay attention to is the key partnership. It is significantly important for the company to choose the right partnership for its business. The reason is that for the new established company like PT Zircon, PT Zircon considered as new player in the market, so that the market share of the company still can not be compare to other big players in the zircon industries. As new player, the company still need a lots of experience in order to compete with the other player in the industries.

Also as new player, it will be difficult for the company to survive against the competitors. For those reasons, it is considered for the company to form a partnership that can bring mutual benefit to both parties. The purpose of this partnership can be in terms of funding for its company, for the machineries, tools, more infrastuctures can be conducted, and possible more workers to enhance the

production. The other purpose of partnership is that beside the company can share risk with the partner, the company can also learn the operational process from its partner, and take out some useful tips from its partner operation process.

By having additional funding from the partnership, the company can have sufficient funding for machineries, tools, building infrastuctures, and more workers to enhance its production. By the additional resources the company can be not just enhancing its production to the maximum capacity but also can produced the higher concentrate of zircon sands, the better quality of zircon sands that result in increase in the purity in the zircon sands produced. The better quality of the product along with the competitive price, and also the easy direct delivery to the customer, can create and increase the value proposition of the company. Aside of that, the company with the new production acitivities proposed in the chapter four provide the company with another resources of income, by creating the by product the company might have additional revenue that increase the company profit margin.

In terms of partnership, need to be highlighted by the company that, any partnership that will be formed in the future for PT Zircon, must align with Indonesia law, UU No 11 Tahun 1967, that stated the partnership that can be formed is the partnership between the government or local government, and the partnership will be in the form of capital investment.

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Undang-Undang Nomor 11 Tahun 1967 tentang Ketentuan-Ketetentuan Pokok Pertambangan Pasal 5

APPENDIX

Interview by phone with Mr S

Date: May 15, 2012

Time : around 2 pm

Below is the conversation via mobile phone, for any information regarding PT Zircon that we are manage to collect. The conversation is conducted with Mr S, which is the President Director and the owner of PT Zircon.

1. How long has PT Zircon been established?
   PT Zircon established in 2010 and since the we have already begin our production that year.

2. What is the ownership of PT Zircon?
   I own 100 percents the ownership in PT Zircon, and as the owner i also take the role as president director of the company.

3. Where is the location of PT Zircon?
   Our mining plant located in Nanga Kayan, in small area, part of Melawi regency

4. What kind of products PT Zircon produce? How is the distribution channels conducted by PT Zircon?
   PT Zircon only produce one product which is the zircon sands. Our distibution channels is very simple, once we manage to produce some amount of zircon sands, we put it in our warehouse, we do not produce much in a day, we usually sell our zircon sands once the production reach certain amount of capacity. We sell to any customer that interested in our zircon sands after that.

5. Does PT Zircon currently has a business model for its business?
   We do not have and conduct any business model for our company.

6. What is the current process of PT Zircon production activities?

   First, we need 15 set of spiral concentrator for production one set of fuso machine and one set of suction pump machine 6" ; this set is used for the rocks filter and sands filter 3mm. Second, we need one set of fuso machine and one set of suction pump machine 6" ; this set is used for alocate the sands to the cement pool. In the third step, we will need one set of fuso machine and one set of suction pump machine 6" ; this set is used for alocate the sands from cement pool to spiral concentrator. Third step, we need two set DonFeng machine and two set of two water pump machine 4" ; this set is used in the finishing step. Fifth step, we need one set of water pump machine and one set of water pump machine 6" ; this set is used for spraying water in the for the finishing step. The sixth and last step we will need two set of water pump, two set of Don Feng machine, two set of water pump 4" ; this set is also used in finishing step.

7. Does PT Zircon has conducted any partnership with other parties?

   We do not have any partnership with any other parties. We doing it on our own.

8. Has PT Zircon determined its customer segments? What kind of value propositions that PT Zircon offers to the customer? How PT Zircon maintain relationship with its customers?

   We do not have any spesific customer segments, customer relationship or specific value propositions. Once our zircon sands production reach certain amounts, we just offer it to the market and any customers will interest to buy our zircon sands.

9. What kind of resources does PT Zircon has in its current operational process? And what resources that the company need more to enhance its operational process?

   We have twenty experiences workers, and we rent some excavator machines, some donfeng machines and trucks. We will need more machineries, such as

excavator machines, more trucks, conveyor, experts, and more advance technology machineries in order to produce our zircon sands.

10. How many employees PT Zircon has?

    In current statement, we have twenty experienced workers.

11. What is PT Zircon production capacity in a day?

    Our production capacity is about 4000kg of zircon sands in a day. we will need more excavator machineries in order to produce our zircon sands, our targeted production for a day is 6000kg.

12. How PT Zircon determines the price of the zircon sands?

    We determine our price based on price in real time market. Basicly zircon market, the price is determine by the supply and demand in the real time market. The purity of the zircon sands produced also determine the price in the market. Our current zircon sands production purity is about 36 percents, our target is atleast we can produce zircon sands that have purity in 65 percents.

13. in what aspects in PT Zircon operational process that you feel still lacking and you want to enhance?

    In my opinion PT Zircon do need to develop a business model, that we still having so many lacking in our business process. We are currently having shortage of fund, and for that we have considered for partnership options. We have been approached by several zircon producers that interested in working with us, but mostly the investors from India, French and China.