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ANALYSIS OF BUSINESS MODEL CANVAS IN DEFINING MANAGEMENT STRATEGY AT DIRECTORATE OF INNOVATION AND SCIENCE TECHNOLOGY ITS

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ABSTRACT

ITS is one of the organizations that promotes technology innovation and commercialization, as well as the growth of creative entrepreneurship, job creation, and the economic worth of final research undertaken by lecturers and students. Science Techno Park ITS provides technology transfer offices, incubators, accelerators, and financiers to innovators and researchers, as well as four clusters: marine cluster, creative design cluster, robot and information and communication technology cluster, and automotive cluster. This research was conducted at DIKST ITS by analyzing 9 elements of the Business Model Canvas (BMC), namely customer segments, value proposition, channels, customer relationships, revenue streams, key resources, key activities, key partnerships, and cost structure. The analysis results indicate that DIKST ITS management team should reassess the business model that has been implemented thus far. It is vital to outline business processes as well as the primary activities that should be developed in the future. so that a technology-based ecosystem with excellent human resources may be formed and income at ITS can be supported.

Keywords: Science Techno Park ITS, Business Model, Business Model Canvas (BMC).

1. INTRODUCTION

One of the factors for defining a country's or region's level of competitiveness is the success and achievement of growing productivity, economic growth, and people's welfare. Competitiveness is one of the buzzwords associated with local/regional economic development. According to (Camagni, 2002) one of the fundamental concerns that leads to sustainable expansion of local/regional affluence and prosperity is competition. To be able to solve crucial challenges in the area economy, the industrial cluster plan must be implemented. In order to facilitate the growth and development of industry in Indonesia, especially small and medium-sized industries based on innovation, it is necessary to provide services for industry in a specially prepared area, and a vehicle that will facilitate the flow of inventions into innovations to increase productivity and competitiveness (Republik Indonesia, 2017).

According to (BAPPENAS, 2015-2019), one of the national priorities is the development and development program of Science and Technopark (KST) throughout Indonesia. The government then proposes to begin building and development of 100 KST throughout Indonesia in the Draft Government Work Plan 2016 (Muhammad, Muhyiddin, Faisal, Angger Anindito, &

BAPPENAS, 2017). ITS is one of the institutions that promotes technological innovation and commercialization, the creation of new businesses and jobs, and economic development as a result of downstream research conducted by lecturers and students. ITS offers the door to domestic and international strategic collaboration with the industrial world. In order to support research operations while enhancing ITS's ability to manufacture creative goods, ITS has underlined in its strategic plan that ITS DIKST is a strategic endeavor that will be developed based on ITS's superior fields thus far. The research conducted at ITS will be developed and evolved into a technology-based startup company (spin off) (DIKST, n.d.). This is intended to support the KST function, specifically as a vehicle for collaborative research and sustainable development between the Central Government, Regional Governments, Universities, Research and Development Institutions, and industry, as well as facilitators for the growth of Innovation-based companies through incubation and/or Spin Offs, and as service providers. KST service recipients will benefit from increased value and quality (Republik Indonesia, 2017).

This study aims to analyze the elements in the Business Model Canvas (BMC), namely Customer Segment, Value Propositions, Channels, Customer Relationships, Revenue Streams, Key Activities, Key Partnerships, Key Resources and Cost Structure for DIKST ITS (Management PPM Team, 2012). This is done to present an important element in the business model, so that we can define the current business model and accommodate innovative ideas in a straightforward and transparent manner from the management level, so as to create new strategies through improving business models and new business model prototype design.

2. LITERATURE REVIEW

2.1 Science and Technopark

Based on (DIKST ITS, 2020) the Directorate of Innovation and Science Technology Area (DIKST) is an institution at ITS Surabaya to support innovation and commercialization of technology, development of business creation and employment and economic development from the results of downstream research by lecturers and students. The Directorate of Innovation and Science Technology Area (DIKST) has seven focuses, including the automotive industry, maritime and creative industries. Settlements and the environment, ICT and Nano technology incorporated in the Science Technopark (STP). The ITS Directorate of Innovation and Science Technology Area (DIKST) was established to connect university research with the industrial world. The research conducted at ITS will be developed and expanded into a technology-based startup enterprise (spin off). As a result, the key actors in the quadruple helix, namely academics, business, government, and society, establish an innovation ecosystem. DIKST ITS is responsible for several number of business processes, including Product Research and Development, Engineering and Prototyping, Submission and Certification, Training and Certification, Business Incubation and Innovation, Technology Transfer (including IPR, Licensing, and Consulting), as well as Facilities, Mediation, and Promotion. ITS DIKST provides facilities to researchers/inventors/innovators to support all of these business processes, including a Technology Transfer Office, Incubator and Accelerator, Capital, and support for the Science Technology Area, which includes the Maritime Cluster, Creative Design Cluster, ICT and Robotics Cluster, and Automotive Cluster.

2.2 Business Model

A business model is a way of thinking about how a company develops, delivers, and collects value, whether that value is economic, social, or other (Osterwalder & Pigneur, 2010). A business model is a representation of a company's core characteristics, such as its goals and

objectives, products and services, strategy, infrastructure, organizational structure, and operational policies and processes, that may be utilized in both formal and informal. According to (Chesbrough, 2010), the business model's goal is to identify a company's potential distinctive contribution to the value creation system, as well as the contract's boundaries and relationship with its surroundings. The business model identifies the company's function in the network as a means of identifying markets and targets a broader range of stakeholders than just paying customers.

2.3 Business Model Canvas

Based on (Osterwalder & Pigneur, 2010) Business Model Canvas (BMC) is a framework that discusses the business model by presenting it in a visual form in the form of a canvas painting, so that it can be understood and understood easily. This model is used to explain, visualize, assess, and change a business model, in order to be able to produce more optimal performance. BMC can be used for all business lines without being limited to the business sector. BMC is very helpful to speed up the process of analyzing business strengths and weaknesses. The Business Model Canvas can explain the relationship between the nine elements of a business model (Management PPM Team, 2012) that is visually depicted, so that the innovations made in the company's business model will be easier to understand and understand. Here are the 9 elements of the business model canvas (Osterwalder & Pigneur, 2010):

1. Value Proposition

In business there is always a product or service to offer. In the Value Proposition area block includes what products or services are offered to potential customers.

2. Customer Segments

Customer Segments become the most important block area because it is from customers that we will get income.

3. Channels

Channels are a means to convey the value or benefits of the product to the customer segment.

4. Customer Relationship

Within this scope what is assessed is how to build relationships with customers. So that customers do not easily turn to other businesses, it is very important to establish good relationships. In addition, strict and intensive supervision is also required.

5. Key activities

Key activities include all activities that must be carried out by a business person to produce a good and satisfying product or service. Included in this scope are branding, packaging, internet market and others.

6. Key Resources

Included in the Key Resources area are various resources owned by a business or organization to realize a value proposition such as people, brands, equipment, and technology.

7. Key Partnership

Key Partnership contains the parties who determine the running of a business. Key Partnership affects the success of a business. A good business is not only able to establish relationships with customers, but also with other relevant parties such as suppliers and the marketing team.

8. Revenue Stream

Business model canvas is covering the steps that must be mastered by a businessman. Such as the use of advertising costs, subscriptions, retail sales, licenses, and so on.

9. Cost Structure

Includes what costs must be incurred to form, produce and market a business product or service. With proper cost management, the business we run will be more efficient, economical and minimize the risk of loss

3. METHODS

The qualitative research methods were used to perform this study. Qualitative research methods are research approaches that involve data analysis based on facts discovered in the field and then translated into hypotheses or theories (Sugiyono, 2013). The goal of adopting this qualitative method is to identify essential facts in the field that can be used as detailed study material. This study employs a Business Model Canvas approach, in which researchers uncover current difficulties through interviews in which the questions correspond to the nine main features of Business Model Canvas. This data mining process is carried out by involving the directors and senior managers in each cluster of DIKST ITS. In this process, we can briefly explain how they perform with their current business model.

4. RESULTS

The most difficult challenge in an organization is to create a fresh and innovative business model. This is done in order to obtain the greatest business model plan that may be used in the future. The ITS DIKST business model mapping yielded the following results:

<u>Key Partnerships</u>	<u>Key Activities</u>	<u>Value Proposition</u>	<u>Customer Relationships</u>	<u>Customer Segments</u>
1. Development Agency 2. Financial Institutions 3. Central Government 4. Local Government 5. Another Science and Technopark 6. Educational and Research Institutions	1. Product Research and Development 2. Engineering and Prototyping 3. Testing and Certification 4. Training and Certification 5. Business Incubation and Innovation 6. Technology Transfer 7. Facilitation, Promotion and Mediation	Its Innovation Area and Best Resources	Business Facilities and Continuous Incubation and Some Tenants Can Use The Facilities For Free	1. College 2. Local Government 3. Micro, Small and Medium Enterprises 4. Its Community Member Community 5. Other Science and Technopark Associations
	<u>Key Resources</u>		<u>Channels</u>	
	1. Human Resources 2. Source Of Funding		1. Researcher 2. Innovator 3. Incubation Program 4. Promotional Activities	

<u>Cost Structure</u>	<u>Revenue Streams</u>
1. Service Program Fee	1. Commercialization Of Technology
2. Salary and Honorarium	2. Parent Agency Funds
3. Operating Costs	3. Training Service
4. Promotion Fee	4. Government Funds
5. Other Costs	5. Rental Facilities

Figure 1. Business Model Mapping

To be able to formulate this strategy, a business model canvas is used which consists of the following 9 elements:

1. Value Proposition

The value that DIKST ITS wishes to emphasize is its innovation area as well as its top resources. DIKST ITS owns a variety of resources, including lecturers, heads of sub-sections, instructional personnel, and contract workers. In addition, each office, such as the technology transfer office (TTO), incubator, ICT Robotics, creative industry, maritime, automotive, and the main office, namely DIKST ITS, already has a distribution of resources. Human resource competencies that are in line with needs are also present in each existing office. DIKST ITS maintains a strategic office for each service it provides, which supports the service's business activities.

2. Customer Segments

DIKST ITS is tasked with creating world-class universities that contribute to the nation's independence and serve as a model for education, research, community service, and the creation of innovations, particularly in the fields of industry and maritime affairs. Several consumers are served to make this happen, including other institutions, local governments, MSMEs, the entire community, and other technopark science area associations. Each ITS DIKST service already has its own collaboration partners, which are clearly defined in each cluster.

3. Channels

Researchers either professors or students, innovators, incubation programs, and promotional efforts are the four channels held by ITS DIKST to communicate its value proposition to consumer segments. Customers will be served by ITS DIKST in compliance with current business processes. It will be made available to researchers.

4. Customer Relationship

Customer Relationships that are built with customers are business facilities and continuous incubation. In addition, some tenants can also use the facilities for free. One of the customers at ITS DIKST are researchers. These researchers can get facilities such as guidance and funding on a scheduled and well-monitored basis.

5. Key Activities

DIKST ITS uses seven main services to produce good and satisfying products or services, including product research and development, engineering and prototyping, testing and certification, training and certification, business incubation and innovation, technology transfer (which includes IPR recording, licensing, and consultation), and facilities, promotions, and mediation.

6. Key Resources

Key Resources owned by DIKST ITS are divided into 2, namely:

- a. Human Resources
DIKST ITS employs 21 individuals, including 17 educators and four contract workers. For the distribution of these 21 employees, there are 7 human resources in DIKST, 3 human resources in the incubator, ICT Robotics, Automotive, and Maritime, and 1 person in the technology transfer office and creative industry.
 - b. Sources of funding
DIKST ITS is the owner of two types of funding sources: investment money and operational funds.
7. Key Partnership
No organization, including DIKST ITS, can function without the help of others. DIKST ITS owns a key partnership with five partners, including development institutions, financial institutions, the national government, municipal governments, other technopark science sectors, and educational and research organizations.
 8. Revenue Stream
DIKST ITS generates revenue from a variety of sources, including technology commercialization royalties, parent agency funds, training services, government subsidies, and facility rental fees from each office rented by DIKST ITS.
 9. Cost Structure
ITS DIKST requires several costs to finance service programs, salaries, and honoraria for resources in order to realize its vision of becoming a world-class university that contributes to the nation's independence and becomes a reference in education, research, and community service, as well as the development of innovations, particularly those that support industry and maritime affairs. related human resources, operational costs for running all of its services, as well as promotional costs for renting out co-work space facilities to the general public, and other unforeseen expenses.

6. CONCLUSIONS

Based on the findings of the analysis of the 9 elements of the Business Model Canvas at DIKST ITS, it can be concluded that DIKST ITS has fulfilled its vision of becoming a world-class university that contributes to national independence and becomes a reference in education, research, community service, and innovation development, particularly those that support industrial and marine sectors.

This is demonstrated by the implementation of several key services, including the production of new technology-based entrepreneurs (Startup Companies) by ITS incubators located in creative industry locations, and the development of new technology-based entrepreneurs (Startup Companies) by ITS incubators located in creative industry locations, building an ecosystem to create the growth and development of innovation, new products, and new start up. The next factor is having people resources who can grasp science and technology in order to boost economic competitiveness and national independence through collaborative research programs, down streaming, and commercializing higher education innovative research results. The down streaming and commercialization of the outcomes of higher education innovation research has stalled due to a number of factors, including the intellectual property rights process. Building linkages between research institutions and industry so that all business operations involving

partners work smoothly, and expanding human resource capacity in the sectors of science, technology, and creativity so that many innovations can be developed are among the other services supplied.

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