

## Role of Techno Park for Create Technopreneurship in Education Industry Case Study: Bandung Techno Park

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**Abstract - Indonesia government are trying so hard to reduce the unemployment rate in Indonesia that always increase every year. One of the solution is to create entrepreneurs in Indonesia. Lately, current universities in Indonesia have added entrepreneurship courses in its curriculum. Besides the addition of courses, they also train the entrepreneurial spirit of college students to create a business incubator. This research was conducted in order to determine the role of universities in the printing techno to create a strategy that may be used as a reference for universities that want to set up a techno park as a science entrepreneur training.**

are: (1) innovation; (2) The information and communication technology; (3) the development of human resources and; (4) the business environment [1]. It is characterized by increasing the number of players engaged in business or technology termed technopreneur

Educational institutions in this case the college has a major role to create superior manpower and productive, by applying science and technology are needed, as well as to increase the added value of sustainable economic activity. In the exercise of that role, the college through various methods, such as making the curriculum-based entrepreneurship and also create a business incubator to train students directly in entrepreneurship.

*Keyword: technopark, technopreneurship, Bandung Techno Park*

The role of higher education in bridging the development of entrepreneurship and technology embodied in the form of Science & Technology Park (S & T Park) or techno park. It aims to deliver the Small and Medium Enterprises / Small and Medium Enterprises (SME / SMB) based innovation in various strategic areas, as a bridge between the business world and research as well as high-tech research center [2]. Techno park already exist in Indonesia, among others, Bandung Techno Park (Institut Teknologi Telkom), Solo Techno Park, Techno Park Batam (Batam Polytechnic) and F-Technopark (Institut Pertanian Bogor). Some of techno park is still in the planning or construction stages, namely from Bandung Institute of Technology, as well as from the Ministry of Research and Technology cooperation with the Agency for the Assessment and Application of Technology.

### 1. INTRODUCTION

#### Background

Enterprises currently have a strong role in Indonesia in reducing the unemployment rate. Through entrepreneurship we could open up broad employment opportunities for the community. It is characterized by the number of formal employment more widespread, which is reflected in the increasing number of formal sector workers from 33.07 percent in 2010 to 37.83 percent in 2011 and reached 38.47 percent as of August 2012 (Speech Coordinating Minister for the National conference on Innovation and IPB Technopreneurship in Bandung, February 19, 2013). Such achievement would not have been successful without the support of various parties; government, private sector, communities, and of course educational institutions.

Utilization of techno park is the same thing with a business incubator, which serves as the entrepreneurial training for students. But in the current utilization happens in college, it can be seen that the existence of a business incubator as media training is less effective. Where the business incubator just there, rather than be used optimally. To

Globalization today has changed the business world flow into the direction of information technology. Variables that influence success in this economic era

avoid these problems, the government began to intensify procurement business incubators or techno park technology field through the Badan Pengakajian dan Penerapan Teknologi (BPPT).

### Problem Statement

Every Universities that has Entrepreneurship in their curriculum, will certainly have a business incubator to help train students in implementing the science of entrepreneurship. The techno park was created as new innovations and create a technopreneur but the existence of business incubators or techno park was still limited. So, the utilize of the place is important to give a good score for the student to be an entrepreneur. Therefore, universities need a strategy for the utilization of the techno park to be optimal.

### Literature Review

Mankani state that technopreneur is a man who identify and exploit opportunities with the passion and courage to build technology-based business independently [3]. In other words technopreneur is an entrepreneur who optimizes various development potential of existing technologies as the basis of business development. A technopreneur should be able to combine their knowledge and entrepreneurial spirit to create a useful product [5]. It also said that in the context of engineering education, creativity should not only produce new technologies that are beneficial for consumers, but also must be economically beneficial for the inventors.

Technopreneurship helpful in the development of major industries and sophisticated, but it also can be directed to provide benefits to people who have weak economic capability to improve their quality of life. Thus technopreneurship expected to support sustainable development. According to Prodan [4] explained that there are three core understanding of the technopreneurship used as a reference, namely: (1) Dorf and Byers (2005) explains that technological entrepreneurship is one style of business leadership by involving the business opportunities in terms of technology, pooling of resources such as talent and capital, and managing rapid growth with a high degree of risk. (2) Shane and Venkataraman (2004) defines technological entrepreneurship is a process that is undertaken by an entrepreneur by combining the company's resources and technical systems, as well

as using the strategy in taking chances. (3) The Canadian Academy of Engineering (1998) explains that technological entrepreneurship is an innovative implementation of science and technical knowledge by one or several people who start and operate a business and assumes the financial risks to achieve his goal. A technological park or techno park is a container that is as a place to connect with the environment that has a direct relation such as resources, people, and facilities. It means technological contains universities, government, industry and the environment that provide the entrepreneurs who will do business with a start-up business incubation process, educate, and also do consulting.

The advantages of techno park were (1) To build a technology-based company that has been secured infrastructure and the existing information and has been through a consultation process exists, (2) To connect science with the existing industry, (3) to develop the local economy by create a training workforce and creative, (4) to provide advisory services and to build a new technology.

## II. METHODOLOGY

Research method used in this study was the qualitative descriptive method as it aims to explore how the techno park role for creates technopreneur in industry. The data collecting through a library study as well as observation and documentation. Observation conducted by interviewing informants on the object of study which is Bandung Techno Park.

## III. RESULT

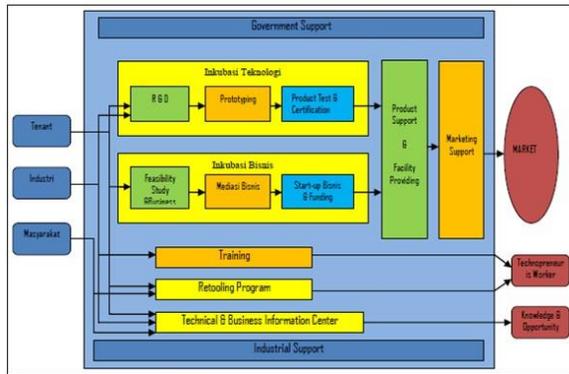
Bandung Techno Park (BTP) is a Science Technology Park (STP) located at Telkom Education Area in Bandung, West Java. BTP here acts as a bridge connecting and facilitating relationships between academia, industry or business sector, government, and communities. BTP also plays a big role to assist in start-up for those who want to develop innovative products in the field of ICT.

The concept of techno park is not just talking about business incubation, but further than that. Based on interviews, sources say that the percentage of business incubators has only 30% of the overall role of techno park. Overall BTP has eight focus areas namely: Research and Development (R & D), Educational Training / Training center, Consultancy, Facility Provider, Business Mediation, Information Distribution, Certification and Production Support.

Initially Bandung Techno Park (BTP) only consists of two parts, namely the Technical Services Unit Information and Communication Technology (ICT UPT) and Telecommunications Design Center (PDT). At present BTP has formed a part again called e-Camp (Business Incubator).

Viewed from the focus areas were outlined and also the purpose of BTP itself, it can be described overall business process of BTP as follows:

Figure 1  
BTP Business Process



Based on the picture above it can be explained the business processes of Bandung Techno Park as follows:

In accordance with the aim of BTP here to act as a bridge connecting and facilitating relationships between academia, industry or business sector, government, and communities. It can be seen there are some who are drawn to be an actor here is the tenant itself, industry, government and communities. Products are offered in BTP here not only focuses on business incubation. In figure 1 above can be seen that the BTP to facilitate business start-up process or anyone creating a product new findings in the field of ICT. For business coaching is a business incubation process consisting of activities feasibility study, mediation business, and start-up businesses and funding. As for the incubation of technology or in this case to make a new product innovations in the field of ICT process begins with R & D, prototyping and then make the final product test and certification of products. Basically this is what made the difference between techno and entrepreneurs in general. The overall results both in terms of start-up or the innovation of a new product will be marketed back to the industry. In this case the whole process is not only done by BTP itself but also a role for government and industry.

With regard to the success of the techno park, but according to sources it is not immune from a wide variety of perceived barriers. Perceived barriers here are (1) the problems in raw material is becoming a major problem with regard to the availability of raw material to be processed and lacking expertise in the process. (2) The next problem is often perceived here is a matter of funding. Although already a lot of cooperation undertaken by the industry sector and the amount of government assistance, but sometimes these funding issues can't be avoided. This relates to the resulting output. This is because a large investment of ICT products with the problem of funding has always been a major problem tenants.

In interviews conducted with informants, said while some of the points that can be used as a reference in order to techno park there can be successful, such as:

- (1) Commitment management; it is important to remember that there is scope in the techno park is very spacious. Its role is also great for the environment. So that a strong internal commitment will ensure the sustainability of the programs that have been planned.
- (2) Infrastructure; infrastructure becomes important because, fields explored here is the ICT that require large investments. Most investment is in infrastructure to support success in fostering tenant.
- (3) The mechanism of selection; be important also for the proper and effective mechanism that will have a major impact on the subsequent activities. And success in terms of start-ups. Usually it begins with the correct selection mechanism.

Studies conducted on the object of study in this regard Bandung Techno Park (BTP) has made us understand the importance of the role of techno park in the printing of a techno. It needs to be clarified here is different from the techno park business incubator. Business Incubator only a small part of the techno park. The main concept of techno park is basically the commercialization of products and research and development.

In connection with the technopreneur, Prodan said there are several keys to successful implementation Technopreneurship that actors (techno), college, company or industry, capital markets or customers, government and the consultant or mentor [4]. It is also the basis for Bandung Techno Park in developing the concept of techno park. Building a business in the field of ICT is more difficult than in other areas, because basically the ICT products have a long date value. Based on the analysis that has been done, it can produce a model or strategy in the

framework of the successful application of Technopreneurship

<p>Key Success <i>technopreneurship</i> according Prodan (2007;37):</p> <ul style="list-style-type: none"> <li>- Actors (technopreneur)</li> <li>- Institution – techno park</li> <li>- Corporation or industry</li> <li>- Funding</li> <li>- Market or customer</li> <li>- Government</li> <li>- Consultant or mentor</li> </ul>	<p>Key Success <i>technopreneurship</i> according Object Study (BTP):</p> <ul style="list-style-type: none"> <li>- Management Commitment</li> <li>- Infrastructure</li> <li>- Selection Mechanism</li> </ul>
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It can be seen that the key to success is based BTP is an internal factor in this is college. For the results of this study make these factors by dividing into two internal and external. Is basically from the object of study and analysis of existing theories. Then the results can be described as follows:

Key Success <i>technopreneurship</i>	
Internal	External
<ul style="list-style-type: none"> <li>- University include techno park (Management Commitment, infrastructure)</li> <li>- Funding</li> </ul>	<ul style="list-style-type: none"> <li>- Government</li> <li>- Industry</li> <li>- Public</li> <li>- Market or customer</li> </ul>

#### IV. CONCLUSION

Based on the research activities already researchers are doing then there are some things that can be inferred:

1. Based on a study conducted by researchers at the object in this case Bandung Techno Park showed that techno park has a very big role in generating a techno.
2. Techno Park is not only a business incubation, but the concept is broader than that. Concerning the research for the development of knowledge and the commercialization of research results.

3. Based on the analysis found that the success of Technopreneurship influenced by internal and external factors. Internal factors that colleges including the techno park (Commitment Management, infrastructure), capital / funding and external factors, namely the government, industry, communities, markets or consumers.

#### V. RECOMMENDATION

1. The study was only conducted a study on the research object, namely a techno park. For their next study can be added to the object of study on techno park to another.
2. An understanding of the concept of techno park is still very poorly understood for academic or community. To serve as advice for the government or related parties can be socialized. Moreover relation to Indonesia with the Asean Economic Community.

#### ACKNOWLEDGEMENT

Authors are very grateful to the Bandung Techno Park for all openness of information. And also all researchers in the field of entrepreneurship especially technopreneurship for the development of this research.

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