

# Innovation Development of Desapolitan ASTP Jimbung-Bayat Purba

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## ABSTRACT

Bayat District has a vast potential for development if supported by adequate resources. The potential that can be developed is mainly related to tourism with the Desapolitan Agro Science Techno Park (ASTP) concept. Jimbung Village, located in the Krakitan District, is the focus area for assisted village activities. In general, this assisted village activity aims to implement, develop and innovate community empowerment in realizing self-sufficiency and community welfare based on innovation in developing community potential so that it can develop and optimize resources. The approach in community empowerment activities is adopted from various empowerment concepts such as Focus Group Discussion (FGD), Quadruple Helix Model, and G2R Tetrapreneur Model. Performance assessment indicators were set from Identification of Potential and Problems of Desapolitan, FGD, training and mentoring, observation and identification, evaluation, and introduction of Agro Science Techno Park Desapolitan Jimbung.

**Keywords:** ASTP, Innovation, Smart village

## 1 Introduction

Efforts to promote general welfare can be carried out by empowering rural communities through the *aided village* program. To create innovative tourist villages, assisted villages based on Desapolitan are created. The assisted village program called Desapolitan in Klaten consists of several villages: Jomboran Village, Jimbung Village, and Krakitan Village. All the potential in those villages can be developed collaboratively to improve the community's welfare. This activity is focused on developing the Agro Science Techno Park (ASTP) concept in Jimbung village, district of Kalikotes, Klaten Regency, in Central Java. Most of the community's population works as farmers, farm laborers, and fish breeders. There holds considerable potential as attractors for tourists, but it has not yet been fully explored. Using the concept of the Desapolitan Agro Science Techno Park (ASTP), this potential may be fulfilled, primarily about tourism.

Kalikotes is one of the sub-districts located in Klaten. Administratively the Kalikotes sub-district consists of seven villages that have boundaries:

- a) The North section: North Klaten District
- b) The South section: Wedi District and Bayat District
- c) The West section: South Klaten District and Central Klaten
- d) The East section: Trucuk District

One of the seven villages of District Kalikotes is Jimbung Village. Eleven thousand five hundred fifteen people call Jimbung Village home in total. It has a population density of 2,879 persons per km<sup>2</sup>. With the Jombor Swamp near Jimbung, the Desapolitan Agro Science Techno Park plan has huge tourist potential. Development and innovation in swamp management may increase the area's technological and economic potential. With the idea of Desapolitan Agro Science Techno Park (ASTP), Kalikotes District has various potentials that may be expanded, particularly tourist potential, based on its current features and circumstances. The support of UMKM products in this area will accelerate the development of economic



and environmental regional potential. Many sectors or multi-stakeholders carry out the development of the Desapolitan Bayat-Purba area so that this project can proceed according to the concept. This program's viability depends on the participation of all sectors. However, management operations in this sector, with many potentials, are not yet operating correctly. Consequently, this region requires area management with a new system that can support all current activities, provide positive value, and promote the village's development at all levels.

### **1.1 Research Problem**

In program assisted village based on the Desapolitan Agro Science Techno Park concept in Jimbung Village, we found some problems, such as:

- a) The development of Desapolitan Bayat-Purba is still insufficient, and it is essential to execute sustainable development in this region.
- b) Due to a lack of effective communication between the community, the administration of Desapolitan Bayat-Purba, and the local government, the development process in this region is not proceeding according to the stated plan.
- c) While establishing Desapolitan Bayat-Purba, the local community does not participate actively by joining BUMDes, Gapoktan, and other organizations.
- d) Due to the limited use of digital technologies for promotion and marketing, information regarding the growth of the Desapolitan language in Bayat-Purba is not well recognized.
- e) In the Desapolitan Bayat-Purba region, neither the local community nor the management group has established a holistic innovation; therefore, the operations are not operating correctly.

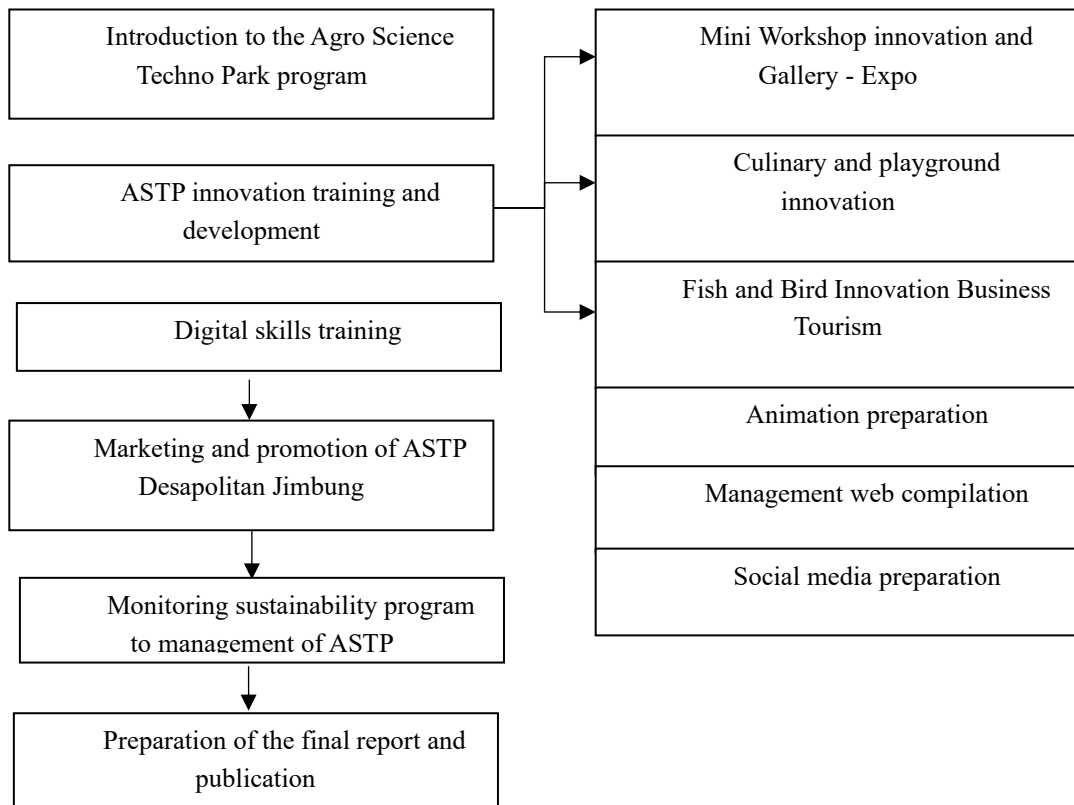
### **1.2 Research Purpose**

Agro Science Techno Park (ASTP) Jimbung village is on long-dormant old land fisheries agribusiness. The extensive modifications aim to transform ASTP into a new icon of Jimbung Village. This site would be a tourist attraction, commercial district, and human resource development learning center. Renovations were tailored to the available funds. Funds from Central Java in 2021 and grant funds from DitPKM (Directorate of Community Service) University of Gadjah Mada were used to revitalize buildings, bird parks, galleries, culinary stalls, and training halls as a learning center. The vision of ASTP is to make it innovative, creative, and productive to increase the economy and welfare. ASTP's mission is to develop science and technology for geographical environment resource management to achieve agro-production, agro-industry, agro-technology, agribusiness, and agrotourism. ASTP Jimbung is the only ASTP in the growing village. The purpose of ASTP Jimbung is to develop natural environment resources for research and modern IT development based on agricultural applications, to create ASTP Jimbung as a new economic center, and to facilitate and coordinate between stakeholders. Furthermore, the flagship program of ASTP is education training, technology research for culinary and open space, product expo galleries, and business collaboration.

## **2 Research Methodology**

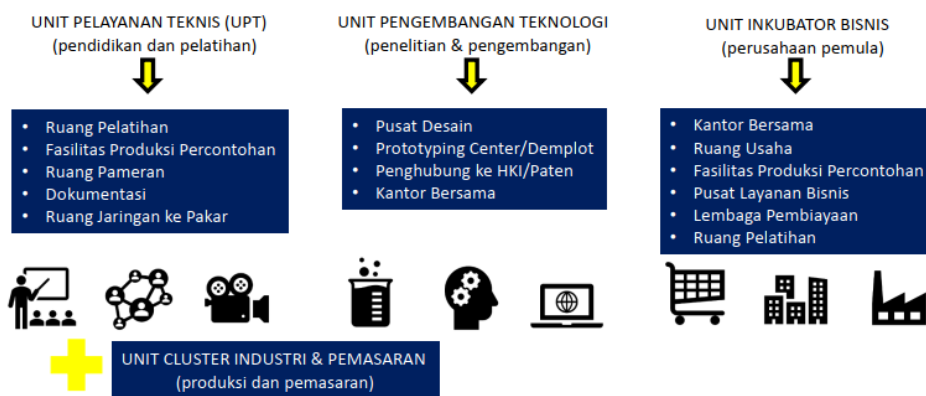
Planning for implementation of this community service program is needed to achieve the purpose of this program which can be compiled into a flowchart as shown in Figure 1 below: Socialization was used to provide community service initiatives based on creating supported villages that include various activities. The Agro Science Techno Park (ASTP) innovated via community group training in the workshop system and exhibition gallery (Figure 1). Community organizations obtained digital skills training that was utilized for ASTP media marketing. In addition, the community received training on disseminating and promoting the results of digitizing all ASTP-related information in an online system through social media and websites.

In addition, the management team used monitoring and evaluation to determine the development and sustainability of this initiative. This monitoring's main objective was to find issues for the upcoming program and observe how the current program was performed.



**Figure 1:** *Flowchart of the Assisted Village Community Service Method*

Desapolitan Agro Science Techno Park's development was based on the Science Techno Park area concept. The supporting component of Science Techno Park consisted of a technical service unit, a unit of technology development, a business incubator unit, and an industrial and marketing cluster unit (Figure 2). Each component supported the formation of the sustainable area from upstream to downstream [1].



**Figure 2:** *Components of the Science Techno Park Area [1]*

The approach in community empowerment activities was adopted from various empowerment concepts such as Focus Group Discussion (FGD), Quadruple Helix Model, and G2R Tetrapreneur Model. The Quadruple Helix Model is a concept of aligning the interests of various stakeholders in empowering the community [2]. The G2R Tetrapreneur model shown in Figure 3 is a model to create a sustainable

entrepreneurial movement based on four pillars, namely the entrepreneurial chain, entrepreneurial market, entrepreneurial quality, and entrepreneurial brand [3].

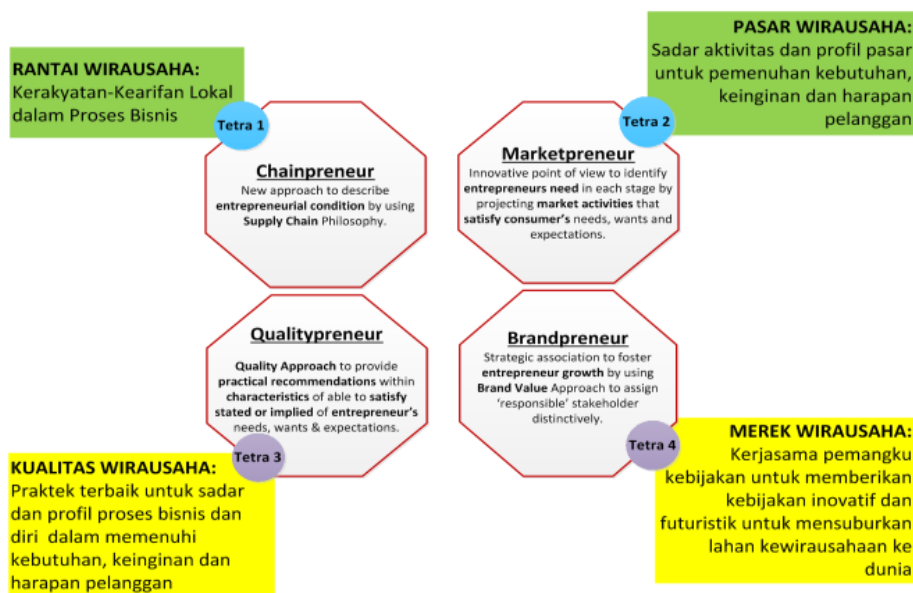


Figure 3: G2R Tetrapreneur Model [4]

Tetra 1 is an application concept of supply chain philosophy focused on adapting to market conditions [4]. Tetra 2 is development or innovations found to identify market needs so the products can match market needs [5]. Tetra 3 is a quality assurance approach from the processing of superior products, so the quality of the product is guaranteed [6]. Tetra 4 is a development strategy for marketing activities by branding the trademarks of each product.

### 3 Results and Discussion

Application of the ASTP concept in Jimbung village began with identifying the potential and problems in this village. After that, Focussed Group Discussion was held to introduce ASTP and innovation assistance for developing Desapolitan Agro Science Techno Park. The outcomes of FGD led to the development of new community activities that promote ASTP. After that, digital skills training and assistance were held. This training and assistance enabled Jimbung village to enhance ASTP and improve community involvement. In its second final year of development, the ASTP program in Jimbung village assessed the program's lack of execution and enhanced its quality. As a result, the Agro Science Techno Park Desopolitan Jimbung was publicized.

The inauguration soft opening of ASTP Jimbung was the media of promotion to introduce Desapolitan Jimbung as a tourist and educational destination for the public. Gallery expo or exhibition of UMKM (Small or Medium Enterprises) products from the community surrounding the village was also provided in the soft opening launching ASTP Jimbung. The stand available in the soft opening of ASTP Jimbung is one promotional medium to the public about UMKM products innovation of the surrounding community in Jimbung village so they could increase income and economy of Jimbung village later on. ASTP Jimbung was used not only as a tourist destination, culinary and marketing superior product of Jimbung village but also as a place to hold various meetings, such as village deliberations, socialization activities, and others. In addition to serving as a venue for community meetings, ASTP Jimbung also served as a hub for community events. Following the next phase of ASTP in Jimbung village, there was a program to construct and acquire waste management to support and establish a sustainable rural tourist community. This program aimed to

increase awareness of waste management and an environmentally friendly situation that locals can feel and become an added value for immigrants and those traveling in Jimbung village.

#### 4 Conclusion

Implementation of this program has achieved the target and goals to strengthen the development of Jimbung village as one of Desapolitans through the participation of the community of Jimbung village. ASTP Jimbung, as a landmark of Jimbung village, has become a tourist destination and increases the economic activities of the community in Jimbung village. Innovation of agricultural UMKM strengthens economic development based on rural tourism. ASTP Jimbung is the center of the economy, social activities, and educational center.

#### 5 Declarations

##### 5.1 Acknowledgments

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##### 5.2 Publisher's Note

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