

# Impact of Science and Technology for Innovation And Creativity Campus (IbIKK) The Machinery Appropriate Technology And Trainer Tools in Engineering Faculty Wijaya Putra University

Slamet Riyadi<sup>1)</sup>, Aminatuzzuhro<sup>2)</sup>, Andy Usmina Wijaya<sup>3)</sup>

<sup>1)</sup>Fakultas Teknik, Universitas Wijaya Putra

<sup>2)</sup>Fakultas Ekonomi, Universitas Wijaya Putra

<sup>3)</sup>Fakultas Hukum, Universitas Wijaya Putra

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## ABSTRACT

**Introduction:** IbIKK Program of Machinery Appropriate Technology and Trainer Tools is expected to encourage universities in building the access that produce services and technological results of his own creation. IbIKK form in college can be a business entity or partner with other industries and can be set up and managed by a group of lecturers in accordance with the level of competence in the laboratory, pilot plant, workshop, department, faculties, schools, units, research and development centers or institutes another inside the university. Once established, IbIKK expected to further evolve by developing mastery of science, research, diligence and foresight tried to capture the opportunities that exist in society.

**Implementation Methods:** The system selected and applied to develop the business, are Business Planning, Planning Product Marketing, Loan Proposal, Application of science and technology Elected, Management Planning, Product Development and Production Process. The results achieved data base of student research results are used by WP Teknik: Extractor Coconut Oil Sieve Machine, Makers Food Preservatives Food Save Machine, All in Krispy Crackers Machine, Animal and Fish Feed Pellet Making Machine, Dryer Oil Food Machine, Food Dough Dodol Machine, Presses and chopper Leaf Tobacco Machine, Machine and Dispenser Water Purifier, Parer and onion chopper and Rattan Penyerut Machine, Machine of Maker Donuts, Free Energy Machine, Machine Noodle Dough cutter, Machine Dryer Oven, Sausage Maker Machine, Machine Maker Kripik Apples (Vacuum Frying), Cassava chopper machine, Salted Egg Curing Machine, Maker Atomic Peanut Machine, Banana Sale Machine Manufacturers, Machinery Makers brains milkfish, Opaque Jepit Maker Machine, Engineering Nuts maker Egg Machine, Design Engineering Air Being Modifiers Water Machine, Creation Tool Display Steamer Machine, Improve Quality In Bakpao Machine, Noodle Making Machine, Fish Pellet Manufacturer Machine.

**Data base** IbIKK Program of Machinery Appropriate Technology and Trainer Tools: CDI Ignition System Viewer Tools, Engine Stand Zenia Viewer Tool and Viewer tool Conditioning, Engine Stand Toyota 7K, Engine Overhaul Toyota 5K, Trainner Body Electrical Standart, Internalization UWP and External (public, industrial, and local governments) about the existence IbIKK, Quality Improvement Resource: Engine Management System Training, Welding Training listrk and Acytlin, Training Integrated accounting Brevet A & B , marketing increased in Surabaya, Sidoarjo, Gresik, Mojokerto, Lamongan and Madura, marketing techniques using web, Setup for showroom, consumer social Level Marketing, Paten Registration of Ice Puter Machine, Publication, Permit Business Unit CV Wijaya Putra Engineering.

**Key words:** Machinery Appropriate Technology, Trainer Tools, Productions Units

## I. INTRODUCTION

Related to cultural development efforts knowledge-based economy, universities need to be given access in the form of knowledge and technopark which utilize the knowledge, education and research faculty. By organizing Science and Technology For Innovation And Creativity Campus ( IbIKK ), college opportunity to earn income and help create new entrepreneurs. The results of university research which is a new innovation and has economic value as well as the protection of Intellectual Property Rights ( IPRs ) such as copyrights, patents, is a very valuable asset to the growth and development of IbIKK.

IbIKK program is expected to encourage universities in building the access that produce services and technological results of his own creation. IbIKK form in college can be a business entity or partner with other industries and can be set up and managed by a group of lecturers in accordance with the level of competence in the laboratory, pilot plant, workshop, departments, faculties schools, research and development centers or

institutes another inside the university. Once established, IBIKK expected to further evolve by developing mastery of science, research, diligence and foresight tried to capture the opportunities that exist in society. IBIKK program's mission is to create access to the socialization of intellectual products in the community college environment within the framework of community needs. The purpose IBIKK program are to:

1. speed up the process of developing an entrepreneurial culture in universities;
2. helps create access for the creation of new entrepreneurs;
3. support the autonomy of the college campus through revenue independently or in partnership;
4. provide opportunities and work experience for students;
5. encourage a culture of utilization of research results to the community college; and
6. fostering cooperation with the private sector including industry and marketing sector.

## II . IMPLEMENTATION METHODS

The determination methods of operation which will be used in this IBIKK program is to use science and technology applied elections in order to produce commercial products machinery appropriate technology. Selection of technology machines appropriate technology aims to improve the competitiveness of competency-based university that still exist and is able to flourish, can transfer the technology of machine building appropriate technologies that have an impact on increased revenue faculty and students as well as the WPU . The selection and application of science and technology in this context must be done carefully , so that the appropriate technology was chosen seed. The implementation method selected and applied to develop the business, are:

### **Structuring Process Improvement Production**

Things done in the production process, namely:

- a. Making the layout (layout) means of production in the production room to facilitate understanding of production flow.
- b. Menginfentarisasi tools that are used in the production process include machinery equipment that are used for the production of appropriate technology machinery and equipment machinery and equipment maintenance of fire extinguishers.
- c. Create work instructions (work instruction) to facilitate understanding of the implementation work.
- d. Make regular equipment maintenance schedules in order to keep equipment well maintained and can be operated optimally.
- e. Making the division of responsibilities to facilitate the coordination of work of employees in the event of failure of the product / process will make it easier to search the cause.
- f. Make a distribution schedule tasks employees.

### **Structuring Management**

IBIKK management arrangement will be made and will be implemented computerization of administration is by using management software administration. Implementation of this software is very helpful in the process of financial accounting because everything centralized in the finance department. Advantages of using this software is all sectors ranging from stocks of raw materials, production processes , inventory in the warehouse, marketing, until the financial profit and loss and balance sheet. A boss accountant does not need to laboriously get information for financial administration as it can be monitored from wherever they may be.

### **Increased Marketing**

Can not be denied that promotion is one of the factors necessary for success and marketing strategies applied especially at this time when the rapidly expanding information age , the promotion is a powerful weapon in the effort to develop and maintain . A product purchased will not be known even if the consumer does not know the uses, advantages, where the product can be diperoleh and at what price. For consumers that the targeted product or service needs to be given clear information. The role of promotion is useful for:

- a. Introducing a product or service as well as quality to the public.
- b. Notify the usability of the goods or services to the public and how to use.
- c. Introducing new goods or services.

## Structuring Management

IbIKK Management Unit will be the arrangement and will be implemented computerization of administration is by using management software administration. Implementation of this software is very helpful in the process of financial management because everything is centralized in the finance department. Advantages of using this software is all sectors ranging from stocks of raw materials , production processes, inventory in the warehouse, marketing to the financial profit and loss and balance sheet. A manager should not be difficult to get information for financial administration as it can be monitored from anywhere.

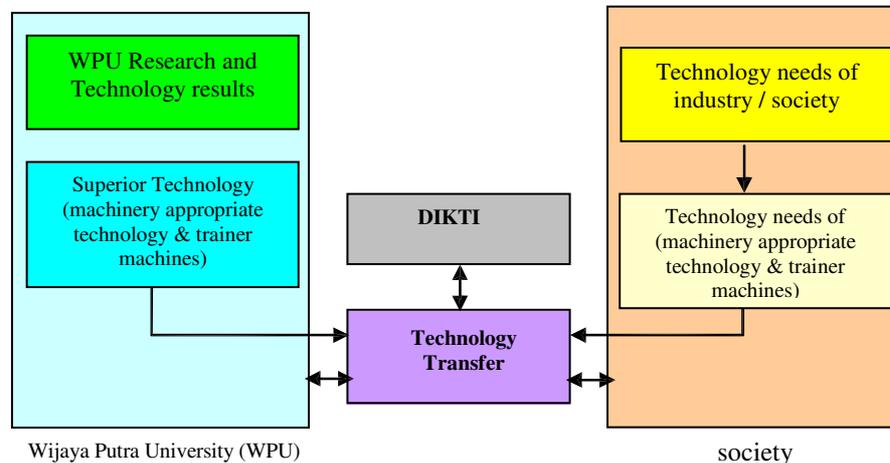


Figure 1. The interrelationship between the DIKTI, WPU with Industry and The Community in Technology Transfer

Consumers are all individuals and households who buy or acquire goods or services for personal consumption. Meanwhile, according to the Consumer Protection Act (BFL), the Consumer is any person user of goods or services provided in the community, either for themselves, their families, other people, and other living beings and not for sale. Every consumer trying to meet their needs with maximum fulfillment. The number and diversity of goods that can be filled depends on the revenue or income. The level of prosperity and well-being of a person or society depends on the level of consumption used.

The level of existing customers in the UWP IbIKK unit during this very diverse. Starting from level (level) which is up to the industrial level (high). This is reflected by the buyer tools appropriate technology conducted by UWP IbIKK unit. From this it can be concluded that the production of UWP IbIKK unit has been received by various circles.

## Improving the Quality of Human Resources

Human resources who will manage the unit is 1 person IbIKK managers, 1 administrative and financial parts, 2 parts design, one person part of promotion and marketing, and 5 parts production.

## Structuring Facility

In order for the implementation of the program in the UWP IbIKK be executed properly it would require facilities that can support the activities. The facilities are owned by Unit IbIKK include:

1. Administrative space
2. Machining production space
3. Welding space
4. Assembly room
5. Storage space

## Structuring Showroom

Showroom which has been created by UWP IbIKK units in the first year is expected to be utilized to facilitate customers to see and understand the types of products that exist in the unit IbIKK UWP. Consumers can describe the type of product to be ordered. To the showroom in unit IbIKK made to the prospective buyer and the buyer appropriate technology tools can see the shape of a tool that will ordered later.

## Financial Planning

IbIKK Unit activities will generate income for the Faculty of Engineering and institutions WPU Surabaya , for faculty and students . As for the economic analysis as follows :

With the application of science and technology for innovation and creativity campus will happen the positive impact that the presence of:

1. The increase in production per month from 2 to 4 pieces
2. The quality of the resulting better

3. The design produced in accordance with consumer tastes

### **Commercial Prospects**

An important aspect of marketing are product, price, distribution and promotion . At this time these aspects are not properly managed.

1. Aspects of product
2. The resulting production has low quality because it worked more on conventional machines, a little touch of technology so it can not resemble / equal to the production plant.
3. Aspects of prices
4. Pricing is not based on a calculation of the costs but more dependent on the willingness of consumers, so the price is unstable and even more prone to the fulfillment of cash.
5. Aspects of distribution or sale
6. Distribution channels are not settled, but based on the delivery demanded by consumers . Marketing area includes the islands of Surabaya.
7. Aspects of promotional
8. Promotion is very little done that at exhibitions held by the government, and more to do with sponsorship.

### **III. RESULTS AND DISCUSSIONS**

IbIKK activity programs implemented within 3 years of the implementation of this has resulted in a number of activities to support the attainment of the objectives of this IbIKK program. Some of the activities that have been implemented in the past year are as follows:

#### **1. Data Base Research of Lecturer and Student**

Usability research has two things: develop science (theoretically) and helps overcome, solve and prevent problems that exist at the object under study. The usefulness of the results of research connected with the means proposed after conclusion. The usefulness of the results of follow-up research is user information obtained from the conclusions. Wijaya Putra hereinafter referred WP Mechanical Engineering has been using research conducted by the students of Mechanical Engineering and Industrial Engineering WPU. The Data Base Research Lecturer and Student are:

##### **1. Machine of Engine Oil Sieve and extractor Coconut (Two in One)**

Machine of Oil Sieve technology design and extractor Coconut is evolving technologies by combining tools and bleeder coconut grater into a single tool. In designing a tool not only consider the technological aspects, but also pay attention to other aspects according to the needs and the level of consumer interest. Therefore needed an alternative design to the application of the method of Quality Function Deployment (QFD), to determine and interpret the desires and needs of consumers in the small industry and households. Through the stages in the design process and product development.



Figure 3 .

Product IbIKK Lecturer and Student Work:  
Machine of Oil Sieve and extractor Coconut

##### **2. Machine of Maker Food Preservatives Save.**

Food Preservatives Maker is based on the amount of food preservatives on the market, many use the preservative that is very dangerous for the health of the human body, such as borax and others. Then create a machine that can produce distilled liquid, vapor results from combustion.

##### **3. Machine of Maker Krupuk Krispy All in.**

Machine of Maker Krispy Krupuk designed by combining the stirring and cooking the raw material into one machine. This is done to minimize the existing space and can perform the activity of making crackers in one place making it more efficient.

**4. Machine of Maker Pellet Feed and Fish.**

Pellet Machine Manufacturers Fish Feed and designed by combining the two instruments, namely: rice husk crusher and pellet maker. The most interesting of these tools is the raw material pellets derived from rice husk, rice husk is very abundant because available around us and cheap so it is very interesting to improve its economic value. This machine is also very practical approach to mobilization portable very high.



Figure 4.

Product IBIKK Lecturer and Student Work:  
Machine of Maker Pellet Feed and Fish

**5. Oil Food Machine Dryer.**

Oil Food Dryer Machine designed to control the rotation of the cylinder where the food to be dried. It is intended to foods and soft textured hard putaranya speed can be set so as not to be damaged.



Figure 5.

Product Work IBIKK Lecturer and Student:  
Oil Food Dryer Machine

**6. Dough Dodol Food Machine**

Dough Dodol Food Machine is designed for speed and flexibility of dough dodol that will be created. It is in need for an efficient and high economic value.



Figure 6.

Product Work IBIKK Lecturer and Student:  
Dough Dodol Food Machine

**7. Presses and chopper Tobacco Leaves Machine**

Machine Presses and Tobacco Leaf chopper designed by combining the two instruments, namely: a tool presses on the two shafts which coincide and tobacco leaves chopper. With a sleek and attractive form of this tool is the choice of tobacco farmers could increase production capacity post-harvest.

**8. Purification and Water Dispenser Machine**

Purification and Water Dispenser machine designed by combining two tools, namely: water purifying device and Dispenser. The point of the purifier water is water that has not been cooked from taps can purifier is put into place and then directly related to the functioning Dispenser as heating and cooling water. And can be directly in consumption, this device combines two functions.



Figure 7.

Product Work IbIKK Lecturer and Student:  
Purification and Water Dispenser Machine

**9. Parer and onion chopper Machine**

Parer and onion chopper Machine designed for the needs of the restaurant that requires speed in peeling onions along with chopper.

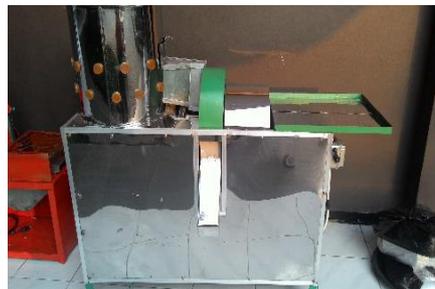


Figure 8.

Product Work IbIKK Lecturer and Student:  
Parer and onion chopper Machine

**10. Recycling Plastic Breaking Machines Portable**

Recycling Plastic Breaking Machines Portable is based on the amount of plastic waste polyetyline that exist in society. So in need of tools that can crusher recycle plastic waste. Then create a machine that can crusher to recycle plastic waste that can be utilized back. Portable Plastic -breaking machine designed for entrepreneurs recycled plastic into plastic ore pellets. With this tool plastic ore crushing process can be done quickly and efficiently.

**11. Become Peanut Peeling and Peanut Egg Machine**

Peanut Peeling Machine and Peanut Egg Being designed for small entrepreneurs snacks made from peanuts. With this tool exfoliation process the peanuts to snack bancang eggs can be done quickly and efficiently with one tool.

**12. Boards and potato chips fryer machine**

Boards and potato chips fryer machine designed for small entrepreneurs snacks made from potatoes and potato tubers. With this tool Slicing the potatoes and potato tubers to snack on potato chips can be done quickly and efficiently with one tool.

**13. Donut maker machine,**

Donut maker machine designed for small entrepreneurs snack made of flour. With this tool manufacturing process donut food can be done quickly and efficiently with one tool.

**14. Free Energy Machine**

Free Energy Machine is based on renewable energy that is in need in the community to use the principle of conservation of energy.

**15. Noodle Dough & Cutter Machine**

Noodle Dough & Cutter Machine is designed for entrepreneurs snacks made from flour. With this tool Mie-making process is done by making a noodle dough further in lalukan pemipihan sekanjutnya cutting the dough into noodles. With this tool the process can be done quickly and efficiently with one tool.

**16. Oven Dryer Machine**

Oven Dryer machine designed for entrepreneurs snacks processed to make bread or snacks. With this tool the process of making bread or snacks can be done quickly and efficiently with one tool.

**17. Sausage Maker Machine.**

Sausage Maker Machine is designed for entrepreneurs snacks and meat processed flour. The sausage maker machine screw technology that is more power-efficient. The sausage making process, by incorporating the mixture into the tube on tap by using screw or a screw that move electricity. Outputs sausages directly on steam that are underneath.

**18. Apple Chips Maker (Vacuum Frying) Machine**

Apple Chips Maker (Vacuum Frying) designed for small businesses snack made from apples. With this tool Manufacture process Kripik Apples (Vacuum Frying) into snack chips can be done quickly and efficiently with one tool

**19. Cassava chopper machine**

Cassava chopper machine designed for small entrepreneurs snacks made from potato tubers. With this tool Ubi-root process trashes wont be snacks potato chips can be done quickly and efficiently with one tool.

**20. Fumigation Salted Egg Maker Machine**

Salted Egg Fumigation tools designed to bloat salted egg, because the taste and texture of salted egg with fumigation process has a taste of its own.

**21. Nuts Atom Maker Machine**

Maker Nuts Atom is designed for small businesses snacks made from peanuts and flour. With this tool manufacturing process kacang egg snacks can be done quickly and efficiently with one tool.

**22. Sale Bananas Maker Machine**

Sale Banana Maker is designed for small businesses snacks made from bananas. With this tool the process of making snacks Sale Bananas can be done quickly and efficiently with one tool.

**23. Cooking Tool Design Build Solar Cells Machine**

Free Energy machine is based on renewable energy from the sun is stored in the accumulator and is in need in the community

**24. Bandeng Brainsfood Maker Machine**

Maker brains Bandeng designed for small entrepreneurs snacks made of milkfish. With this tool manufacturing process Bandeng brains can be done quickly and efficiently with one tool.

**25. Opaque Pinch Maker Machine**

Opaque Pinch Maker Machine is designed for small businesses snacks made from flour. With this tool manufacturing process kacang egg snacks can be done quickly and efficiently with one tool.

**26. Nuts Egg Maker Machine**

Nuts Egg Maker Machine is designed for small businesses snacks made from peanuts and flour. With this tool manufacturing process kacang egg snacks can be done quickly and efficiently with one tool.

**27. Modifiers Become Air Water Machine**

Modifiers Become Air Water Machine designed to get anyone drinking water taken from the open air so it is very useful in areas with water shortages.

**28. Steamer Bakpao Maker Machine**

Steamer Bakpao Maker Machine is designed for entrepreneurs selling food fast in warm conditions, so no need to warm up first

**29. Noodle Making Machine**

Noodle Making Machine is designed for entrepreneurs snacks made from flour. With this tool Mie-making process is done by making a noodle dough further in lalukan pemipihan sekanjutnya cutting the dough into noodles. With this tool the process can be done quickly and efficiently with one tool.

**30. Fish Pellet Manufacturers Machine**

Fish Pellet Manufacturers Machine designed by combining the two instruments, namely: rice husk crusher and pellet maker. The most interesting of these tools is the raw material pellets derived from rice husk, rice husk is very abundant because available around us and cheap so it is very interesting to improve its economic value.

**2. Sarana dan Peralatan Yang Digunakan**

Pada proses kegiatannya untuk memproduksi suatu Mesin Teknologi Tepat Guna dan Alat Peraga Tim IBIKK UWP menggunakan mesin- mesin produksi yang telah dipunyai (aset UWP). Beberapa mesin yang digunakan dalam proses produksi antara lain:

- a. Scan Tools - Car Brain \*
- b. Mesin Cutting\*
- c. Alat Stand Over Houl\*\*
- d. Mesin Jumping Changer\*\*
- e. Mesin Changer Accumulator\*\*
- f. Mesin Rol Bekuk Potong Elektrik\*\*
- g. Mesin Kombinasi ( Potong, Tekuk, Rol) Plat\*\*
- h. Pembelian Alat Plotter Printer \*\*\*
- i. Pembelian Mesin Las Portable \*\*\*
- j. Pembelian Mesin Las TIG \*\*\*
- k. Pembelian Tools and Tools Box \*\*\*
- l. Pembuatan Web dan Sistem Informasi IBIKK Mesin Teknologi Tepat Guna Dan Alat Peraga \*\*\*

Keterangan:

\* Pengadaan Alat Produksi IBIKK UWP Mesin Teknologi Tepat Guna dan Alat Peraga tahun I

\*\* Pengadaan Alat Produksi IBIKK UWP Mesin Teknologi Tepat Guna dan Alat Peraga tahun II

\*\*\* Pengadaan Alat Produksi IBIKK UWP Mesin Teknologi Tepat Guna dan Alat Peraga tahun III

**2. Facilities and Equipment Used**

In the process for producing Machinery Appropriate Technology and Trainer Tools of IBIKK WPU use machinery production that is already held (asset WPU). Some mesin are used in the production process, among others:

- a. Scan Tools - Car Brain \*
- b. Cutting machines \*
- c. Tool Stand Over Houl \*\*
- d. Jumping engine Changer \*\*
- e. Accumulator Changer engine \*\*
- f. Cut Electrical machinery Rollers Bekuk \*\*

- g. Combination machine (Cut, Bend, Rol) Plat \*\*
- h. Purchasing Tools Printer Plotter \*\*\*
- i. Portable Welding Machine purchase \*\*\*
- j. TIG Welding Machine purchase \*\*\*
- k. Purchasing Tools and Tools Box \*\*\*
- l. The Making Web and Information System Engineering IBIKK Machinery Appropriate Technology and Trainer Tools \*\*\*

Description:

\* Procurement of Machinery Appropriate Technology and Trainer Tools of IBIKK WPU 1<sup>st</sup> year

\*\* Procurement of Machinery Appropriate Technology and Trainer Tools of IBIKK WPU 2<sup>nd</sup> year

\*\*\* Procurement of Machinery Appropriate Technology and Trainer Tools of IBIKK WPU 3<sup>rd</sup> year

**3. Data base technology needs machinery appropriate technology from the public and prospective industries 1 piece.**

**Ice Puter makers Machine**

The design of the Ice Puter makers Machine technology (hard ice cream) has evolved from manual to automatic. In designing a tool not only consider the technological aspects, but also pay attention to other aspects according to the needs and the level of consumer interest. Therefore needed an alternative design Ice maker Puter with the application of the method of Quality Function Deployment (QFD), to determine and interpret the desires and needs of consumers in the small industry and households. Through the stages in the design process and product development, as well as the results of the questionnaire are tabulated in QFD found that respondents wanted an ice machine puter power-efficient, have ease of maintenance and reliable and produce good quality products. From the results of the research produced a prototype for an ice machine puter with an electric motor DC 12V 40W, portable design, with a production capacity of 5 liters each. And equipped with automatic key features, battery 12V 7Ah and a glass for the presentation.

**4. Internalization and Exsternalisation (public, production, and Local Government) IBIKK Unit aware of the results of socialization.**

Socialization is one form of promotion about the existence of unit IBIKK to the general public in both internal and external WPU. In the first year of this program IBIKK had socialized in an environment where the unit IBIKK internal WPU. In this socialization theme raised about the importance of information technology and patents in the research conducted by students and faculty. Researchers in broad terms can refer to any person who perform activities using a particular system in acquiring knowledge or individuals who perform a number of practices which traditionally can be attributed to educational activities, thoughts, or philosophical. When more elaborated broadly, anyone can become researchers as well as students.

**5. Quality Improvement Resources**

The development of today's technology is very fast and varied. Technology is one of the causes of the existence of competition must be faced by every business. Business competition becoming more stringent. Such circumstances force any existing businesses must compete to update the quality of science and technology respectively. IBIKK WPU unit as one of the businesses indirectly also participate in a business competition in the market means of Machinery Appropriate Technology and Trainer Tools. IBIKK WPU business continuity unit will continue if always follow the development of appropriate technology and props available. For the IBIKK WPU unit participated in the training Engine Management System Training, Welding Training listrk and Acytlin, Training Integrated accounting Brevet A & B of Machinery Appropriate Technology and Trainer Tools. Expected results obtained in the training was an increase in technology that can be applied in the production process of Machinery Appropriate Technology and Trainer Tools in unit IBIKK WPU.

**6. Marketing increased in Surabaya, Sidoarjo, Gresik, Mojokerto, Lamongan and Madura**

If the views of marketing that has been done so far only around the western Surabaya and surrounding areas. But for almost 1 (one) year, the addition of market share in the wider area include Surabaya, Sidoarjo

regency, Gresik, Mojokerto, Lamongan, and Madura. With the growing extent of the area of marketing is done then the order of the unit IBIKK UWP is also increasing. Proven order until today has reached around 20 (twenty) pieces of apparatus ordered by some educational institutions and industry in Surabaya and surrounding areas.

#### **7. Marketing web techniques**

Can not be denied that promotion is one of the factors necessary for success and marketing strategies applied especially at this time when the rapidly expanding information age, the promotion is a powerful weapon in the effort to develop and maintain. A product purchased will not be known even if the consumer does not know the uses, advantages, where the product can be diperoleh and at what price. For consumers that the targeted product or service needs to be given clear information. The role of promotion is useful for:

- a. Introducing a product or service as well as quality to the public.
- b. Notify the usability of the goods or services to the public and how to use.
- c. Introducing new goods or services

IBIKK WPU promotion web marketing products in online shopping address <http://wptechno.com>.

#### **8. Structuring showcase showroom size**

Showroom can be utilized to facilitate customers to see and understand the types of products that exist in the unit IBIKK UWP. Consumers can describe the type of product to be ordered. To the showroom in unit IBIKK made to the prospective buyer and the buyer appropriate technology tools can see the shape of a tool that will ordered later.

#### **9. Social Marketing Consumer Level**

The level of existing customers in the UWP IBIKK unit during this very diverse. Starting from level (level) which is up to the industry level (high). This is reflected by the buyer tools appropriate technology conducted by UWP IBIKK unit. From this it can be concluded that the production of UWP IBIKK unit has been received by various circles.

#### **10. Paten Registration**

At this stage of the implementation of IPR registration program was carried out consultations and advocacy regarding the registration process tools tool that is expected to get a patent and industrial design requirements meliputi discoveries in the field of industry and industrial designs. Consulting and advocacy is done to intellectual property rights in the Office of the Ministry of Justice and Human Rights of Surabaya. Registration Paten conducted IBIKK program is Ice Puter Machine

#### **11. CV Wijaya Putra Engineering**

As a measure of acceleration of this business unit immediately stood CV Wijaya Putra Engineering, Diana later steps can be tender and procurement can be done independently, so it is not dependent on other business entities.

#### **12. Plan for Next Phase**

Based on the annual output targets planned by the team IBIKK UWP then in the first year there are several activities that are still in the process of implementation and sedan are planned to be implemented. IBIKK activity program are as follows:

##### **a. Management Improvement standardized business unit**

Management improvement efforts planned by a team IBIKK order in IBIKK business activities can increase performance include.

##### **1. Production planning programmed arrangement .**

There are additional targets diservikasi production in uplod in web <http://wptechno.com> for 1 next year, namely:

1. Product Design
2. Information System

##### **2. Accounting bookkeeping programmed.**

Applied cycle diaries, ledgers, trial balance and financial statements

**3. Auditing programmed.**

Financial audit carried out by the system budget and actual

**4. Tax is calculated based on the tax regulations**

Improvement of the management pattern based management functions that include planning, organizing, actuating and controlling

**5. Improvement of inventory models.**

Model supplies of raw materials, the product uses the average inventory system

**b. The new Entrepreneur of lecturers and students**

**c. Quality control is applied every machine product of Machinery Appropriate Technology and Trainer Tools of IBIKK WPU accordance with industry standards**

#### IV. CONCLUSIONS AND RECOMMENDATIONS

##### Conclusion

Based on the results and discussion, kegiatan IBIKK Engineering and Appropriate Technology Viewer tool as follows: System is selected and applied to develop the business, are:

1. Business Planning
2. Planning Product Marketing
3. Proposal of Credit
4. The application of science and technology Selected
5. Management Arrangement
6. Product Development and Production Process

##### The results achieved:

1. Data base of research and technology
2. The data base technology needs machinery appropriate technology from the public and industry 2 pieces:
3. Manual management work IBIKK
4. Internal and External WPU (public, production, and local government) IBIKK Unit aware of the results of socialization.
5. Viewer Tool 2 pieces
6. Marketing increased in Surabaya, Sidoarjo, Gresik, Mojokerto, Lamongan
7. The marketing technique using catalogs, brochures, leaflets
8. Showroom
9. Level of social consumer from low to high level
10. Registration HKI
11. CV Wijaya Putra Engineering

### **Suggestion**

Management improvement efforts planned by a team IBIKK order in IBIKK business activities can increase performance include:

1. Production planning programs.
2. Accounting bookkeeping programmed.
3. Auditing programmed.
4. Tax is calculated based on the tax regulations
5. Improvement of the management pattern based management functions that include
6. Improvement of inventory models.

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