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EXECUTIVE SUMMARY

The need of a business incubator was felt in order to accelerate the growth and success of all the entrepreneurial ventures by providing them accurate support services that would not only include space and capital but intervention at appropriate times providing trainings and coaching and letting them use ones network connections.

A study done to check the feasibility of the business incubator provides the project doers the following insight about the project from before hand i.e. whether the particular setup would help in its affective functioning, does it has a good market potential, the financial base that would be required for making stand the initial infrastructure, support from the business community etc. Apart from all these factors mentioned the study would also identify the potential threats that the business incubation centre would have to face in the form of obstacles. Not only this, but the feasibility study would end by offering various ways to conquer the difficulties faced.

The core areas included in the feasibility report would be following:

1. Market - the composition of the region's entrepreneurial pool and needs of prospective clients
2. Facilities and Services
3. Physical Infrastructure
4. Financial feasibility

This project verifies the feasibility of developing a Business Incubator in the twin city premises. Further more it is strongly believed that such facilities if provided at various leading institutes of the country could play a huge role in the economic betterment of the country, close contact of the business graduates with such a facility would help sharpen their minds and make them a perfect match for all the potential job vacancies in the industry. Fresh minds of the graduates can also be used in providing innovative ideas to the client firms which would not only benefit the Institute but the student community and the client as well.

Every set up needs a strong back end support in order to be successful. So for this purpose it is very important to lay ones emphasis on the key stake holders of the setup and keep them well abreast of all the happening and well involved through out the incubation process. Another major issue faced by the feasibility team is going to be the identification of the local leaders, entities, people, other companies and regulatory bodies whose help an input will have a large impact on the planning and development of the incubator.

An incubator does not necessarily only provide post establishment support but it also provides a wide range of pre incubation services if the client requires. Pre incubation support services would include support with the necessary research, planning, office space and setup, access to right kind of technology and managerial, technical and financial assistance/advice.

Focusing on the needs of the targeted entrepreneurs specifically the following services needs to be provided to them by the Business Incubator.

- 1. Consultants and advisers*
- 2. Physical infrastructure*
- 3. Pre-incubation*

The plan needs to be sketched out with great care and attention to detail. The financial advice, strategies to be followed with proper and practical timeline in the form of Gantt charts should be provided regarding the design and development phase with ample room for adjustments as the Incubator comes across new ways after experiencing and testing the old ones.

After checking the feasibility of the project, if found feasible the Incubator would provide its client companies with appropriate guidance on resource mobilization strategies, types of financing, pricing and other related areas that are a key to identify and implement the most appropriate financing strategy for the client company's operations.

CHAPTER 1 INTRODUCTION

1.1 Background

The main idea of the study is to make a feasibility report on building a Business Incubator at technological university in Islamabad/Rawalpindi, taking Bahria University Islamabad as a case. The idea is to provide students with different projects by the companies working from the Business Incubator which will help them increase their knowledge as well as provide them with a platform to test their skills at an industry level. After the feasibility analysis we will suggest a course of action in the light of findings obtained.

1.2 Problem Statement

In Bahria University, there is no concept of a well established incubator and its benefits for the students and the employees as well. Now, we have identified the need of such an incubator in Bahria University that would be able to conform to requirements of the students that have the real business idea in their minds. They would be given a chance to consolidate over their ideas and hence that would prove to be beneficial for the students. On the other hand, Bahria University itself can earn profit as well as value in terms of Brand image and quality knowledge imparting. Priority issues would be the involvement of the students and the help from the university, without proper address on

the above to dimensions of our priority issues the project seems to be incomplete and unsuccessful.

1.3 Objectives of the Study

The prime objective of the project would be to get a feasibility analysis of the incubators in Bahria University. The project would be focuses on the two major stakeholders that are Bahria universities administration and the students. If the students are unwilling to correspond to the surveys being conducted then the project may not result as an effective problem solution to the opportunity identified. Same is the case with Bahria university administration, if it is unable to coordinate the external institutions with the incubator then the problem still exists.

1.4 Research Methodology

1.4.1 Type of study

This is a feasibility study for the purpose of making it a research project we have considered independent and dependent variables. The independent variables encompass Bahria University faculty and its students of all disciplines. The dependent variable is the completion of this project i.e. the feasibility of business incubator at Bahria University. The industry we have targeted is the education industry. From the education sector we have specifically restrained our research to BAHRIA University. As it suits our research as a target because the students

of computer science and management have the entrepreneurial interests and they can consolidate on the ideas for their future as an entrepreneur. So, it has been taken care of the meaningfulness of the proposed title.

1.4.2 Population/sample

Population for this very project is Bahria University. The sample we would be selected through the random sampling technique as due to the time restrictions. The sample would be a mix of both the genders as to have a true representation of both male and female students as well as of the faculty. We would be considering our samples from the Bahria University faculty and that will be a total of 20, from which 6 would be female faculty members and rest of them would be male. For students we will be having the sample size equaling to 80 students from the computer and management sciences department.

1.4.3 Instruments and measures

Our research will include data collection from both primary as well as secondary resources. To analyze the behavior of the students and teachers we need to conduct surveys. We will be focusing on the data collection through questionnaire method. Questionnaires would be open ended as well as close ended. Interviews will be conducted where we will feel the need. We would be using excel sheets for giving our data form of an information. The responses would be recorded against each question of our questionnaire.

Each response would be depicted in the graphs and that would be determinant of our project's success or failure. The questionnaires and site evaluations can be found in the appendix.

1.4.4 Scope and limitations

The scope of the project was confined to the population and samples being taken from the university i.e. Bahria university. Being more specific the type of business incubators we have selected would be mixed incubators that will cater only the incubatees' from the business and information technology department. The other limitations are the constraints of time and cost that we faced along our project. From not being affected by the aforementioned constraints we restricted our selves to get feedback from the twin city at large. This limitation made much of our analysis easy to do and our work more comprehensive.

The information gathered was also an uphill task for us. As, this project proved to be unique in a sense that it was being addressed for the first time in our university. No previous guidelines on such a feasibility project were found and hence it was difficult to execute a feasibility project according to the guidelines of a research project.

CHAPTER 2 LITERATURE REVIEW

The project deems at the feasibility of a business incubator in Bahria University. The literature reviewed is tried upon to present as much knowledge for the reader to understand about the business incubators and at the end helping us to hypothesize what type of incubators our research should focus for Bahria University.

Incubation has a definite history. It has been long since the word was used for the following definitions as quoted in Webster's Dictionary,

a: an apparatus by which eggs are hatched artificially; b: an apparatus with a chamber used to provide controlled environmental conditions especially for the cultivation of microorganisms or the care and protection of premature or sick babies.

These are the entries made in 1857 as per the dictionary dates. In the mid of 1980's, the conferences of the journal Frontier of Entrepreneurship Research gave the direction for definition of business incubator. In 1985, the specifications for a business incubator were clearly stated in three papers that it must have a rent lower than that of the market and should provides logistical and consultation services (Gatewood, Ogden, and Hoy, 1986; Alien, 1985; Peterson et al., 1985).

The trends shifted from the reduced rent to the value added services. This trend was researched on behalf of the knowledge gained from the business incubation (Alien and Weinberg 1988). Further emphasized on the same fact of the

value added services that the technological entrepreneurs will need more of high tech trainings rather than lowering the budget that they have to pay for the rent and other facilities (Lichtenstein, 1992).

Hackett and Dilts (2004) defined the business incubators by reviewing the literature and using their field work in North America and Asia as follows:

"A business incubator is a shared office space facility that seeks to provide its clients (i.e., "portfolio" or "client" or "tenant companies") with a strategic, value-adding intervention system (i.e., business incubation) of monitoring and business assistance. The incubator can control and link resources that assist in the development of its clients' new ventures, and simultaneously helps contain the cost of their potential failure."

Hackett and Dilts also explained the business incubators as a networking venue rather than just a place as they further explain it as under:

Keeping in view the incubator the totality is the element that should be taken care of. Being more specific as the office building is not just an arrangement of infrastructure, space and facilities likewise the incubator is also not just a space, infrastructure or the building. Rather the business incubators are the networks of many entities. These entities include universities, clients, investors and entrepreneurs. They all have networking among themselves and a definite relationship which is very crucial for the long term sustainability of the business incubators.

The National Business Incubator Association website (www.nbia.org) defines a business incubator as:

"A dynamic process of business enterprise development. Incubators nurture young firms, helping them to survive and grow during the start-up period when they are most vulnerable. Incubators provide hands-on management assistance, access to financing and orchestrated exposure to critical business or technical support services. Most also offer entrepreneurial firms shared office services, access to equipment, flexible leases and expandable space—all under one roof."

So, far it is clear that the business incubators are the space where the new businesses would have a chance to nurture themselves and have a first go to begin.

Is the business incubator for Bahria University needed or it is just following others? For answering this very query we studied researches that supported the need for a business incubator in universities and the benefits that can be reaped from such a practice.

Harwit (2002) believes that many of the incubators provide the scientific and academic talent to China. These incubators provide a source for the relationship between the tenant companies and the universities.

Desire for the self-employment is also addressed by the incubators (Allen and Rahman, 1985). Risk management and insurances services provided by the business incubators provided the incentive to enterprise culture. By incubators

the companies' and the universities both are helped and have a symbiotic relationship.

The purpose of business incubators is to maintain a relationship between the universities and companies so that the development and transfer of emergent technology can take place.

Mian (1996) describes the business incubators as the strategy that promotes the development of new research and technology based firms.

So, the universities should have incubators as to strengthen their image and to serve the technological developments of a country. By such incubation broad aims can be easily fulfilled such as economical advancement and unemployment provided the proper and adequate system of business incubation. So is the case for Bahria University.

Yesebill (2009) visited an incubator and mentioned key points that are necessary for smooth running of an incubator. He gave the information about the strategic aim of any incubator that he describes can be for transfer of technology between universities and companies, place for young entrepreneurs, joint ventures or to improve local economy. The commonality lies between the facts that the incubators provide a higher chance of an economic boom for any country. He also highlights the fact that the incubator's sustainability is mostly relied upon the funding. A part of funding should come from the Government.

Our project is to check the feasibility of an incubator specifically for Bahria University. So, the scope has to be

narrowed to the University itself for the funding. These above mentioned points where a great help for our project for having details of the long run benefits of an incubator.

Another research emphasizes that the feasibility must be given time and money accordingly to have a successful incubation (Logue, 2000). This study would analyze and ponder over certain essential points that can be further researched if needed. The study would set a baseline and foundation for other researches in the future.

The figure2.1 shows incubator categories on the basis of funding provided and their structure. This very classification was done by Grimaldi and Grandi(2003).

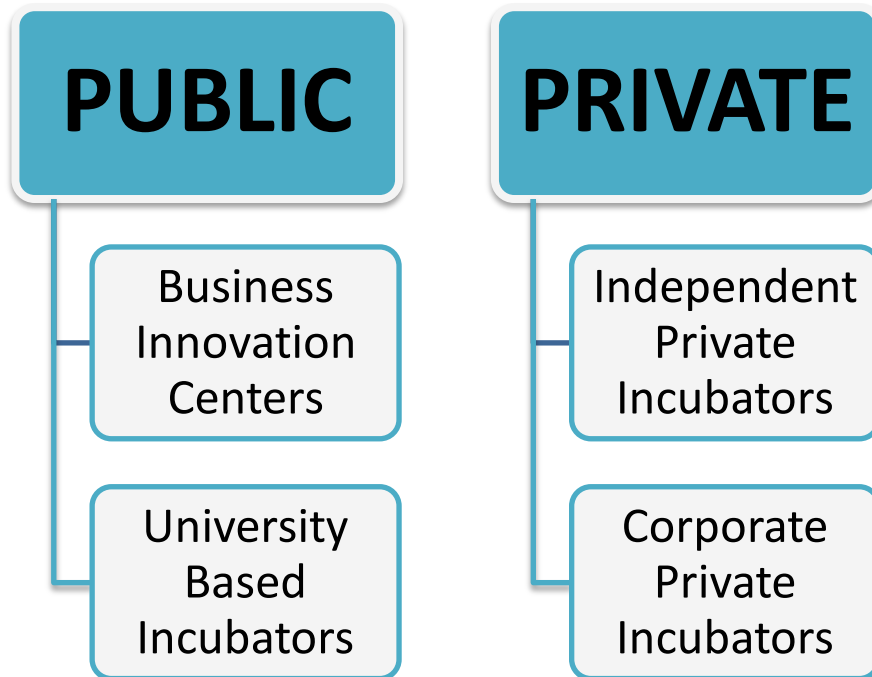


Figure 2.1: Incubator categories based on structure and funding

From this classification we had a clear vision of where our projects inclination is. We aimed at the university business incubators that as shown in the above mentioned figure lied in the public category. So the funding for our business incubators at Bahria should come from the outside of the university. So in this project the factor of the external funding was considered to be the tenant industries and companies. Feasibility of such a system required to foresee any companies that can come and join hands for this dual beneficent cause.

There are different types of business incubators (Jose Alberto and Sampaio Aranha, 2003). They have classified the business incubators into many categories and gave examples for each. Classification is based on strategic aims, localization, focus, operational models and institutions. This study explains the direction that what type of incubators are observed to be more feasible than others. This study shows us the possible benefits and advantages that are associated with the business incubators. Incubation studied with different factors creates interest in this study.

These concepts help us at large to hypothesize what type of business incubator we should be considering and we finalize a need for a university based "**mixed incubator**" at Bahria.

Also the research by Linder (2002) concluded that most commonly seen and practiced incubators are the mixed use incubators. Mixed use incubators are a very helpful and conducive for both the traditional and the technological base advancement. In such incubators both the ideas related

to above mentioned categories are entertained and hence are common to attract more people.

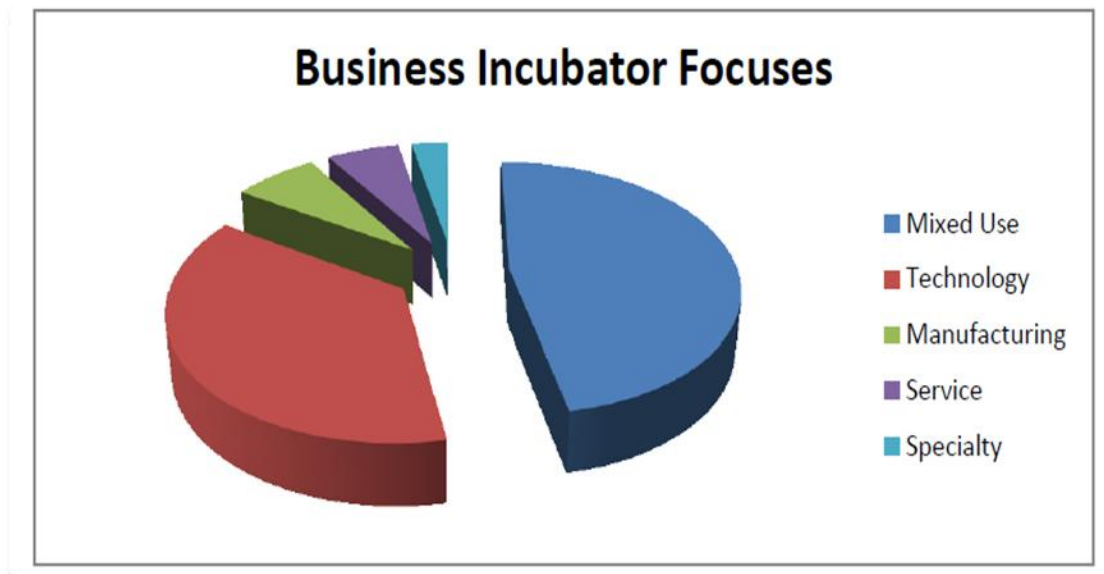


Figure 2.2: Business incubator focuses (Linder, 2002)

Business Incubator at Bahria University whose feasibility is to be analyzed by us is thought to be a mix one rather than aiming at the other more specific ones'. The reason for a mixed incubator is also that the culture of Pakistan and the inclination of the students drive an aptitude towards technological as well as traditional ideas. So it is insured by us to make a hypothesis that has some demographic relevance.

Mike D. Woods and Robert W. Rushing in an article (Small Business Incubators: Potential Local Economic Development Tools) emphasizing Oklahoma State University incubation gave very crucial four questions that are to be addressed before making the final decision of incubator development. These questions are:

A: is there a sufficient demand for the incubators and the services they provide?

B: is the managing committee of the incubator willing to work hard for the incubator's success and sustainability?

C: is there availability of the location and suitable place where the tenants and clients are convenient to access?

D: is the community supportive for the incubation idea?

Our study is more of a feasibility check and is a step prior to the decision of an incubator so these questions are of primary concern to us. These points are also presenting a sketch and direction to analyze and pivot our research to above mentioned areas.

Jonathan Perry and Michael I. Luger (1999) also presented an idea to see more dimensions in the feasibility as they also prepared a report of feasibility for a business incubator at UNC-Chapel Hill. In the research the important point for our consideration is that they explained in the research that many a researches give a negative cost benefit analysis for the incubators but the intangible side is not observed. By intangible benefit the researcher means the repute and image of the university achieved after a successful establishment of business incubator.

This point gives us another positive point that will help us to make more and more proponents of our hypothesis and also gives us support from the management and university. As, university image and repute are valuable for the

management hence they will agree upon to make the business incubator feasible.

Nicholas, Kirk, Yekaterina, Mardelle (2008) in their study gave recommendation for a business incubator in the city of Worcester. The study gives us an overview of the operating costs that are incurred for a business incubator for that very city.



Figure 2.3: Operating costs of an incubator

These operational costs are for the city incubator while our feasibility check is for the university. Hence, we would be considering some of them in our study.

In another study a director of incubator was asked to list the top three recommendations for the business incubators and his answer to the question was market research and feasibility, operating costs estimation and sources of funds for long term sustainability of the incubators (Florida Gulf Coast University, 2003)

These findings of the Florida Gulf Coast University are a prime driver of this project we are pursuing. This interview with the director provided us fruit for thought. Also keeping in view the contemporary trends of education system in Pakistan, we choose to make a feasibility of business incubators at Bahria University.

CHAPTER 3 INDUSTRY OVERVIEW

3.1 History

The history of business incubation is generally categorized into three generations for better understanding as how and which industry adapted incubation.

First Generation: During this period chiefly Real Estate businesses adapted the business incubation model. Support provided by the business incubation led to more profitable and sustainable Real Estate business that involved better understanding of the demographic data available to the business men. Business incubation centers shared the services required by this industry and thus helped them take decision based on solid and accurate calculations.

Second Generation: This was the time when Business Incubation model started to show its true colors. By providing expert business development support, the BI centers really started to prove their mettle. By helping businesses in how to analyze their weaknesses as per changing market trends and world's economic situations, BI centers made it possible for the businesses to adapt and modify themselves to cater for the changes, thus avoiding many collapses.

Moreover BI centers implemented the business coaching exercises in an effective manner, enabling newbie entrepreneurs to become more educated and equipped to take-

on the challenges of the real world business. This made the businessmen more comfortable and prepared, before they entered the real world.

Third Generation: During this period, the efficacy and the fruitfulness of BI centers had already been established and many hands were available to lend help both in the sector of professional expertise and financial support.

By now the BI centers were stable enough to lend in-house debt/equity finance to clients. Financial donors had developed great faith in BI centers and this confidence made it possible for the BI centers to lend the money to the potential new businessmen to establish, maintain and run their business without the thought of financial worries. This helped the new businesses survive the most critical part of their survival (the initial quarter), where most of the businesses fail.

Now without any doubt, Business incubation had emerged as one of the most powerful economic development tool spreading around the world. While the developed countries were reaping the fruits of this system, the developing countries were also catching up with them, seeing the great benefits of the system.

3.2 The Incubator Industry

- > 4,000 Business incubators
- > 450 science/technology parks
- > 300 for-profit incubators
- > 70 countries have 2 or more incubators
- > 60 National and Regional incubator associations

3.3 Geographic Distribution of Incubators

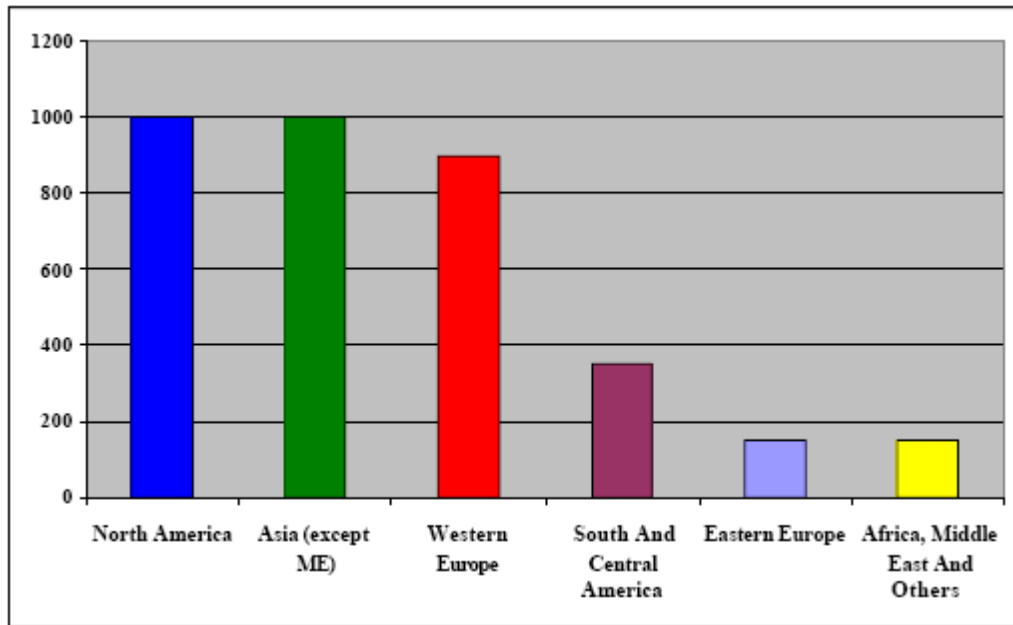


Figure 3.1: Geographic distribution of incubators

Furthermore the analysis were underway relating to diversify the role of BI centers by offering 'outreach' and 'virtual' services, making it possible for those businessmen who cannot come to the BI center, avail the technical and professional help that the system could offer them.

3.4 Definition

Business incubation of business incubation centers cannot be defined in a hard-coded manner like most of the other things.

Business incubators provide a conducive and supportive environment for new businesses to grow and survive the initial difficult period, alongside providing them with professional/legal guidance and financial support. Role/scope of BI centers is not limited hence a complete definition might not be possible. BI centers might offer physical space to exercise business, network access and initial capital to start, professional help, market trend analysis, soft loans, and guidance in project/business management, share office resources etc and so on.

There are number of definitions of incubation which keep on evolving as the incubation industry changes and adapts to different situations and environments. The most commonly used definitions.

"An organization designed to accelerate the growth and success of entrepreneurial companies through an array of business support resources and services that could include physical space, capital, coaching, common services, and networking connections."¹

¹ <http://www.entrepreneur.com/encyclopedia/term/82280.html>

3.5 Business Incubation: The Cycle

Business Incubation centre will seed the research projects from the sponsored research, agreements, grants and fellowships etc. In its outcomes new knowledge and technology will be emerged resulting in educated and experienced students, which is every university's mission of education.

On the other hand this transfer in technology when commercialized results in profits and revenues. More people will invest in it which will on one side increase the funding for universities and on the other side create new opportunities which will automatically have an immediate economic impact on the society. It will result in overall improving the standard of living of the people.

During this process the advantages and benefits achieved are numerous.

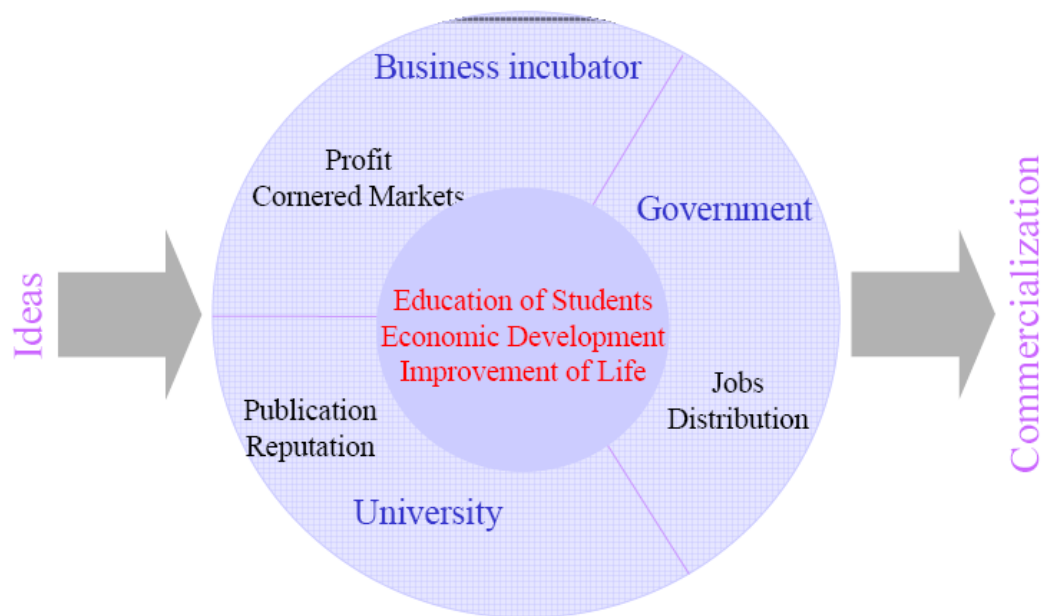


Figure 3.2: Incubation from idea to commercialization process

3.6 Business Incubation: The Benefits

The ideas of businesses can be generated through anywhere, i.e. government, university or the incubator itself. When successful benefits are for everyone for example to incubator it returns in the form of profits, to university in the form of good reputation and brand development and to Government it gives jobs to the people of the society, reducing unemployment.

Some of the many benefits that an incubator can provide are:

Benefits for Tenants

- Employee training
- Initial minimal capital outlay
- Shorter learning curve
- Resource library
- Business networking
- Financing
- Below market rental rates
- Flexible leases

Advantages to Tenant employees

- Use of shared office equipment (fax machine, copier, computer and internet etc)
- Telephone coverage support

- Receptionist/secretarial assistance/support
- Opportunity to interact with a wide variety of businesses/people
- Not having to perform janitorial/maintenance services
- Networking other businesses
- Seeing decision made at ground level and being part of the decision making process

Advantages to incubator investors (state/federal organizations)

- Fill gaps in local economy
- Tax base expansion
- Enhanced community image
- Job creation
- Job diversity
- Economic development and economic innovation

Advantages to community where incubator is located

- Investment opportunities
- Revitalization of deteriorated areas
- Stimulation of real estate development
- Enhanced community image
- Creation of marketing outlets for community products and services

- Job creation
- Economic development, economic diversity and economic innovation
- Retain home-grown talent in community
- Creation of viable local companies
- Tax base expansion

3.7 Current Status of Technology Incubators and Parks in Pakistan

Pakistan like other developing countries is trying to implement the BI center model to help grow the business in the country.

The purpose is clear: Generate economic activity by helping and mentoring the new businessmen to be successful. This is done by implanting the university incubation centers, which by the commercialization of research and development output, link the academia with industry. This creates a great opportunity for all the students to work in a real time industry scenario and for the entrepreneurs also as they can have the youth working with them in actual market setup.

Higher Education Commission made some efforts to develop academia-industry linkages at the HEC with the support of some universities. A campaign was launched; intellectual exercises were held and as the results were encouraging enough for the government to invest more time and money in the project. International donor agencies also increased the funding in the science and technology and higher education sectors in Pakistan.

Following things in good spirit, the government of Pakistan and the HEC, developed the following BI centers.

3.7.1 Small and Medium Enterprise Development Authority (SMEDA):

SMEDA has been playing a very important role in technology incubation. By lending professional expertise and financial help, SMEDA has helped almost every production based industry of Pakistan, including but not limited to: the power loom up-gradation, auto part vendors, carpet weaving program, Agri-mall, agriculture credit services, ginning sector, ceramic and pottery sectors, etc.

3.7.2 Technology Incubation Centre (TIC):

Pakistan's first ever Technology Incubation Center (TIC) was established by the National University of Science and Technology. The TIC, offered favorable conditions for research and provided opportunities for new endeavors in Engineering, ICT, and virtual sectors.

3.7.3 Software Technology Park, (STP) Islamabad:

The Software Technology Park of Islamabad has all infrastructural requirements available to foster business growth. Offering a large band width communication network besides other important features, this place has been playing a pivotal role in country's efforts to become a technology hub.

3.7.4 Electronics Industries Promotion Centre:

The National Institute of Electronics (NIE) Islamabad has established an incubation centre for the development of its own lab prototypes into pilot production lines.

3.7.5 Indus information Technology Park:

This project is in the planning phase, destined to be the largest business incubation centre of the country. This would be the first complete IT Park in Pakistan providing all necessary facilities to the startup companies and entrepreneurs of IT business.

3.7.6 Scientific and Technological Development Centre (STEDEC):

Purpose of STEDEC is to provide finances and to promote incubation programme being managed by SME's and to provide help in-order-to establish a mechanism to commercialize the findings and conclusions of the organizations doing R&D. The government is also planning to fund those private entrepreneurs which have practicable ideas that may initiate economic activity and have the potential to be successful.

3.7.7 Pakistan Council for Scientific and Industrial Research (PCSIR):

PCSIR has launched an idea of establishing a deviated version of Technology Business Incubators (TBIs), aiming at attracting venture capital from SMEs to use it to be a magnet for the research organizations that don't have capital to setup such a large infrastructure. The PCSIR have signed agreements with national and international firms in this regard.

CHAPTER 4 ORGANIZATIONAL OVERVIEW

Pakistan Navy established Bahria Institute(s) at Islamabad and Karachi in the late eighties. These Institutes have been contributing to the cause of promotion of education at the national level. And Over the years these grew in size and facilities to offer under-graduation and graduation level education.

4.1 Organization's Objectives

Like every education sector institute, Bahria University has the will and the determination to be one of the finest colleges of the country. Emphasis is to prepare the younger generation to become future leaders, through development of their mental, moral and professional strengths by ensure academic excellence through quality education.

CHAPTER 5 FEASIBILITY STUDY

After analyzing the benefits of business incubation centre and studying the condition of Pakistan's market, as a business student ourselves, we will try to evaluate the implementation of a BI centre at Bahria University.

To achieve our goal, we divided our task in sections.

Section I:	Limitations of the Region's Entrepreneurs
Section II:	Requirement and Aspirations of the to-be Clients
Section III:	Student Survey
Section IV:	Faculty Survey
Section V:	Study of Services and Facilities
Section VI:	Availability of Physical Infrastructure

5.1 Limitations of the Region's Entrepreneurs

Entrepreneurs in Pakistan are faced with a lot of challenges and in-lieu of BI center implementation, everyone seemed interested but none was willing to take the initiative.

Our entrepreneur is faced with a lot of challenges, the biggest being the higher cost of production. This has limited the productivity and has stolen the confidence of the investor to engage in new endeavors. Our entrepreneur is now battling for his existence.

The recent recession has hit the cause strongly and the confidence is even more shaken. However the aspirations and the will was found in all, that a government owned BI center will surely help the existing and the newbie businessmen to be successful.

Business community wants more support from the government and requires not only professional but financial help also. The region's entrepreneurial pool is rich in ideas and has all the conviction from the sector, but the difficult financial and political conditions are hampering the community to feature in full-swing, in the BI center setup.

Keeping in mind that the idea of BI centre can only be successful if the private sector lends a helping hand alongside government's efforts, the reluctant behavior of the business community is hampering the way in making this idea a reality.

The administration of Bahria, on its own has been active in getting the industry leaders to come and deliver their experiences to the young students and to educate them to the emerging market demands. So that when they come to the real world market, they are better educated and have a fair idea of what to expect.

So, to implement a proper BI center at Bahria, the private helping hand was not available. Still the analysis was fruitful in finding the needs and aspiration of the market men, which can be used for future studies.

5.2 Requirement and Aspirations of the to-be Clients

All the new businessmen wanted a very string helping hand and strongly supported the idea of BI center. In their opinion the BI centre can be the best tool available which can guide them to the success road, managing the difficulties of the new business with the support and professional help from the centre.

Every potential BI client was of the opinion that only those businesses be given a chance to use the BI resources, which has the potential to be a successful business. Strict scrutiny and detailed analysis of the new men's idea is also a must, to ensure that the incubation setup does not breed any weak or dull businesses.

Almost all the new businessmen wanted to have an idea strength-based financial help. This ensured the strongest contenders to get the lion's share. The financial help was also to be made proportional to the performance of the business and the speed at which it was getting independent.

In general everyone wanted to have the following facilities.

- Employee training and Shorter learning curve
- Financing
- Resource library
- Shared services
- Below market rental rates
- Flexible leases Credibility
- Business networking

5.3 Analysis Derived From Student Survey

A questionnaire was designed for students to get the insights of their requirements from an Incubation center. Not only was this but the questionnaire primary purpose to check that whether the incubator is suitable to Bahria University based on the other side (Students) input.

There are two main categories:

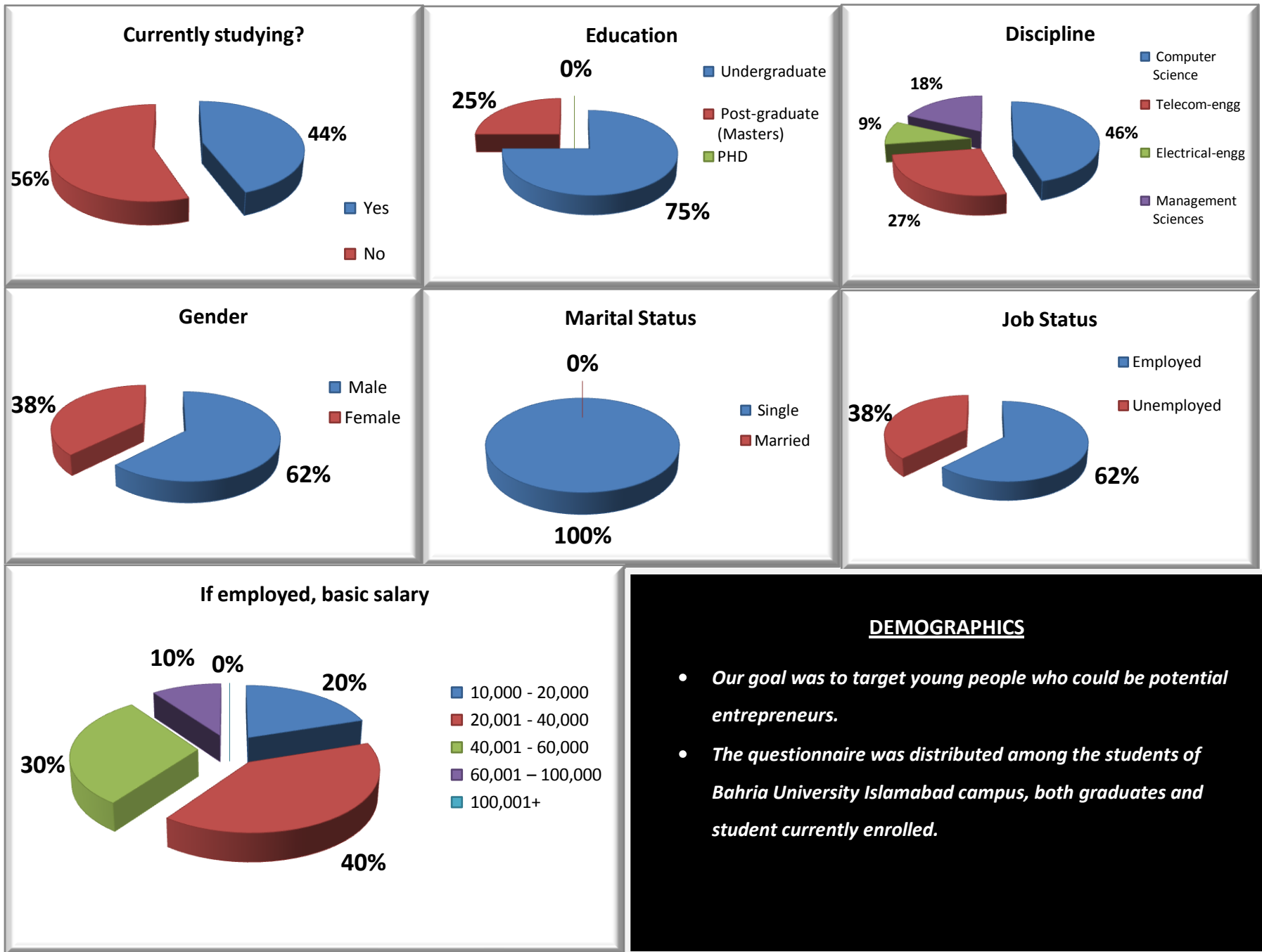
1 - BUSINESS ASPIRANTS OR INTENDERS

The people who wish to establish a business now or in the future, students for example. This is the future market for business incubation. The main problem with this set of people is that they do not know what they don't know, may have unrealistic expectations and only a proportion will have the necessary commitment to follow through and embark on a business venture in the future. In other words, this group is a most unreliable source of data.

2 - NEW START OR EXISTING BUSINESSES

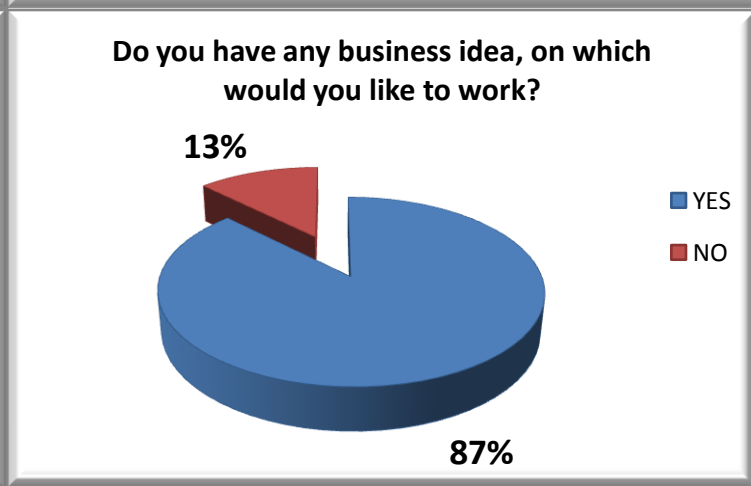
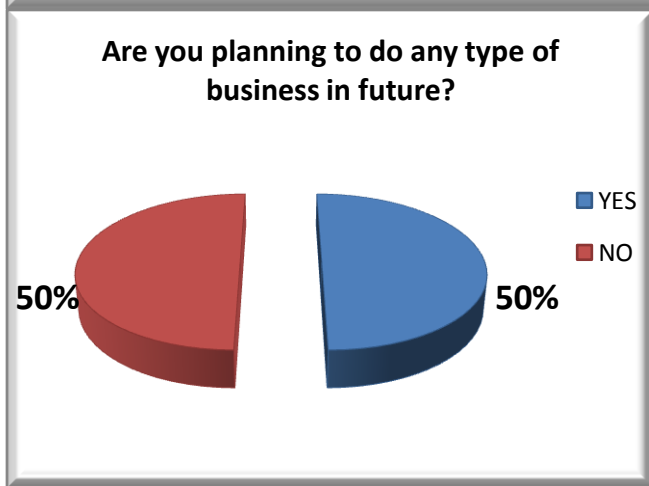
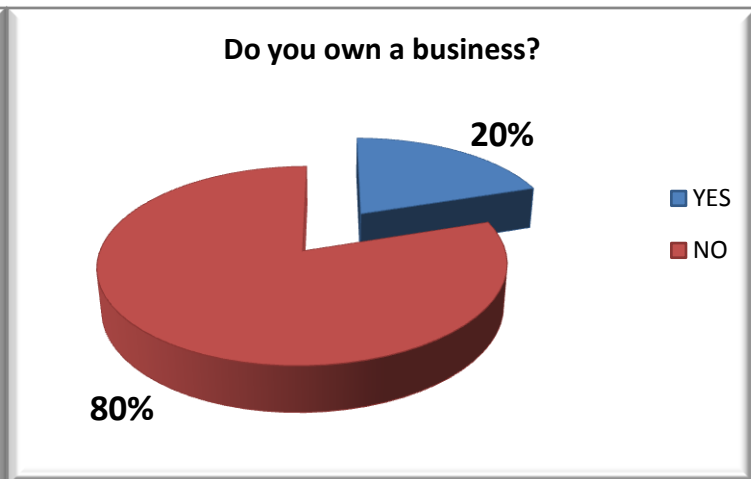
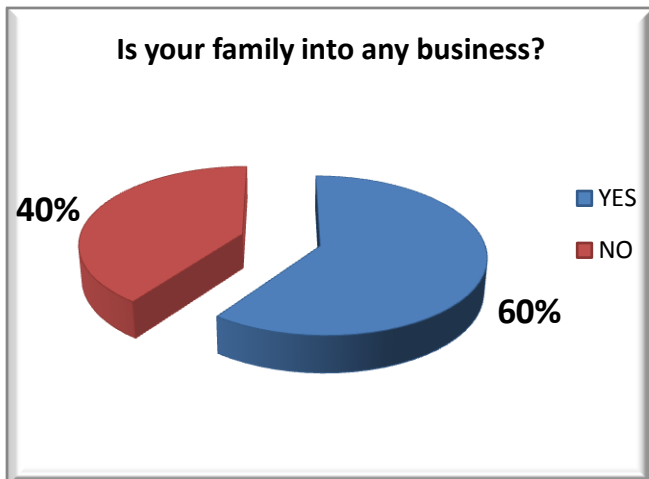
The people who have already started a business. Some of these people might be in the business incubation market, but others will no longer need support. These people are a source of good information as they have gone through the process. However, the individual businesses might not become clients and if conditions change substantially they may not be representative of the future market.

Questionnaire Survey 1: Business Incubation Center is attached at the end of the report in Appendix - I.



DEMOGRAPHICS

- *Our goal was to target young people who could be potential entrepreneurs.*
- *The questionnaire was distributed among the students of Bahria University Islamabad campus, both graduates and student currently enrolled.*

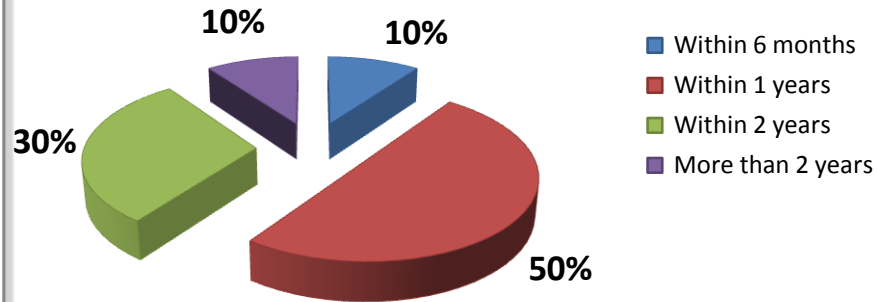


BUSINESS ASPIRANTS OR INTENDERS

Most of our intenders have a family owned business but some of them are not participating in them, as it is clear from the figures, 80% of the sample don't own a business.

Interesting observation is that 87% of the sample has a business idea on which they would like to work, but 50% of those people are interested in doing the business in near future.

If Yes, when do you plan to start this business?

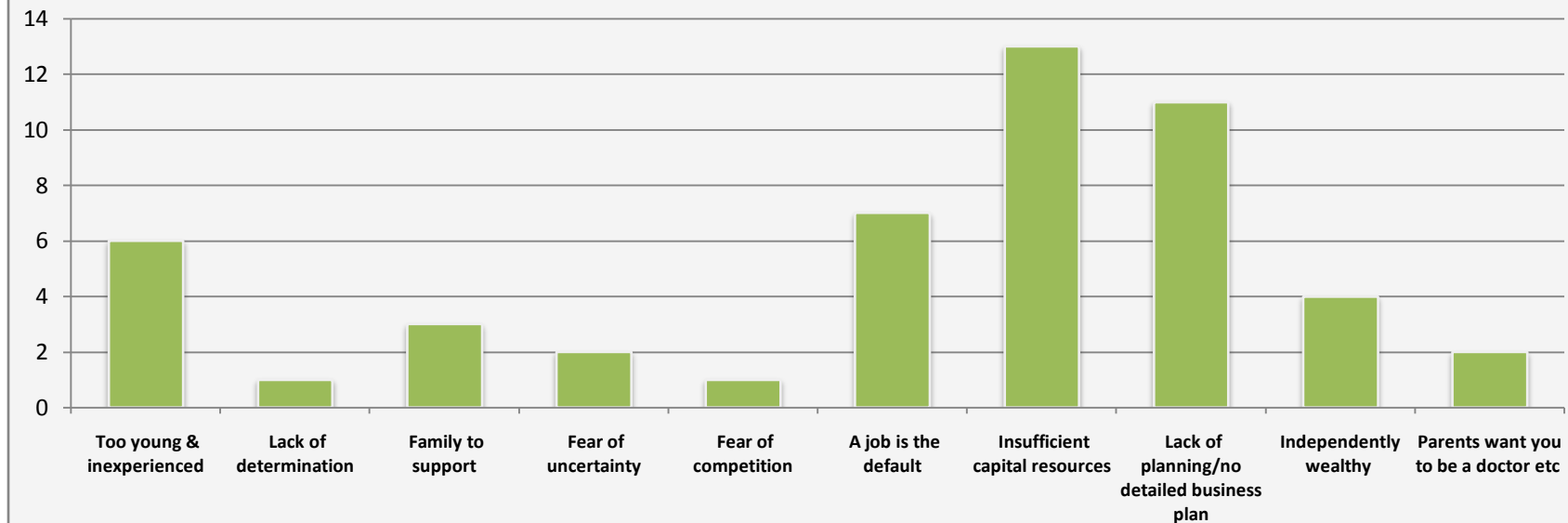


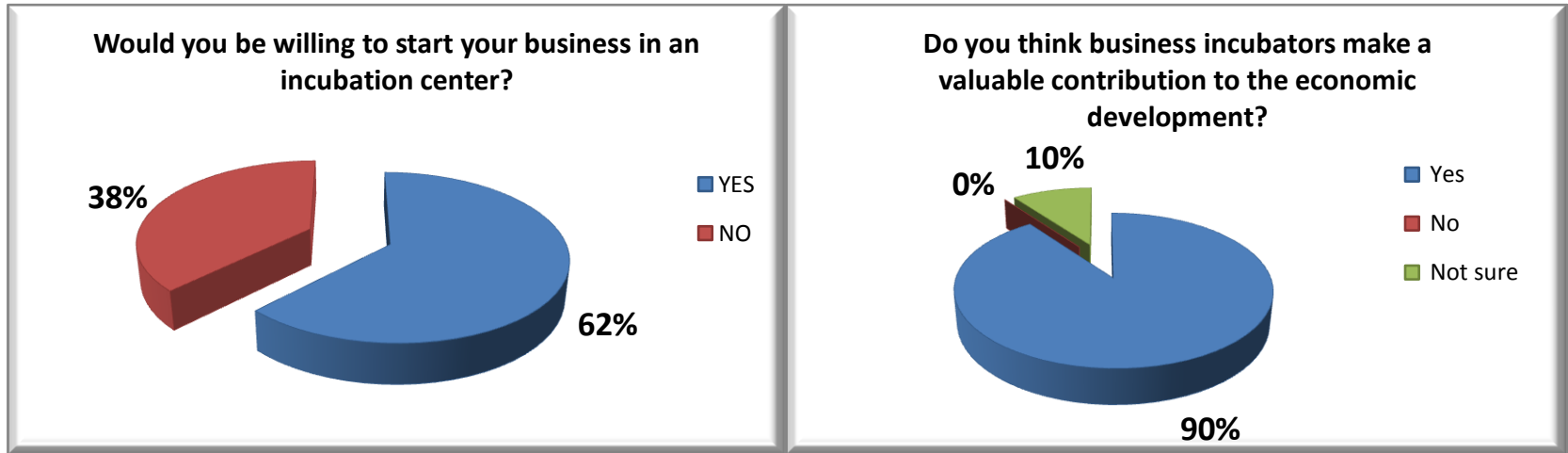
BUSINESS ASPIRANTS OR INTENDERS

Intenders who are planning to open up their businesses, 90% of them are planning to start it in 1-2 years period. That's a positive sign for us, showing positives about the potential market.

The two main reasons that discourage people to open up their business are insufficient capital resources and lack of planning/detailed business plan. So, we have to focus on these two things when we plan to build an incubation center. Awareness has to be generated that incubation center helps you develop and nourish your ideas and also provides you resources to work on them.

If No, Give Reason





BUSINESS ASPIRANTS OR INTENDERS

The intenders who want to start up their own business, 62% of those are willing to open up with the incubation center. This percentage is a little below of what we expected, and some of the comments that potential aspirants gave were:

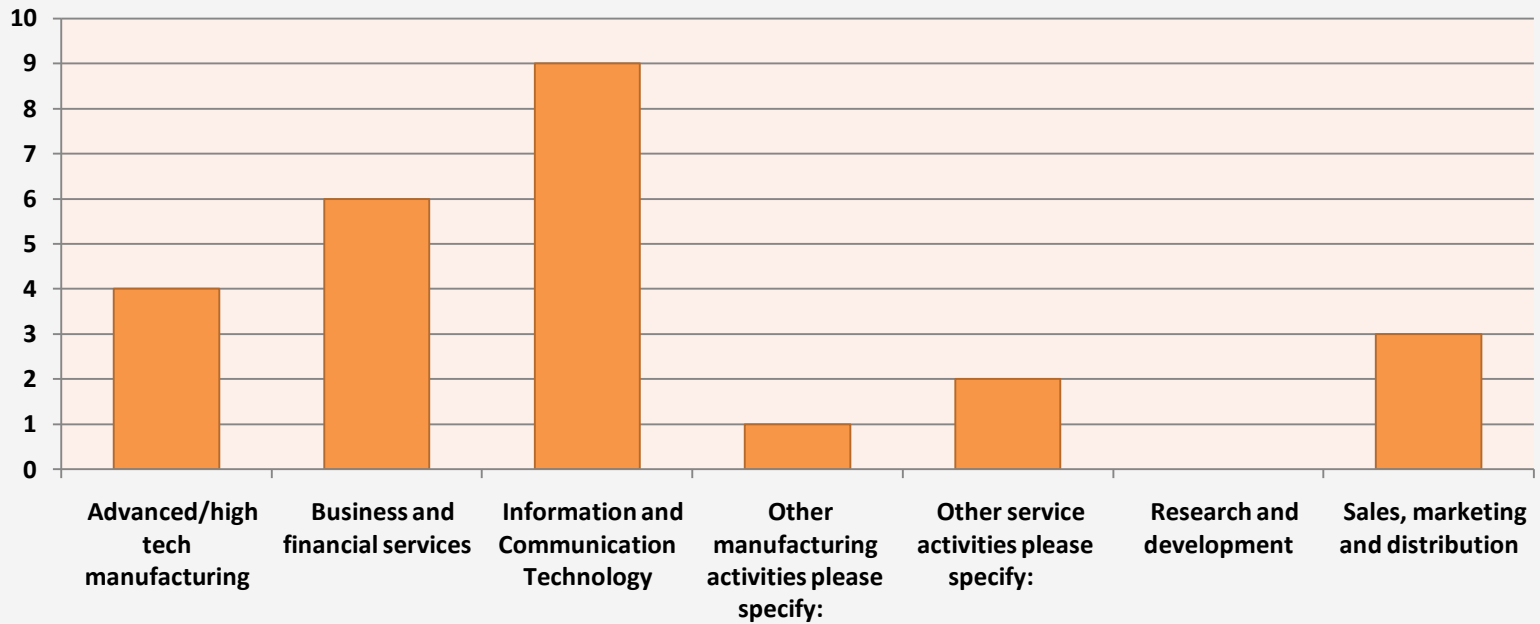
- Lack of trust
- Not enough motivation right now and though business incubators seems like a good thing to start, there still remain uncertainty

Maybe these people are not sure about what facilities an incubation center provides. It's important to understand the agreements, rules, and policies should be made keeping in mind these types of comments. Still 62% is a good figure to encourage the development of an incubation center.

90% of people who want to start their business believe that incubation center adds to economic development of a region. 10% who are not sure probably don't have enough knowledge.

So, the overall result is positive, and we strongly believe that there is a strong pool of entrepreneurs willing to work, and they are in need of a platform to start.

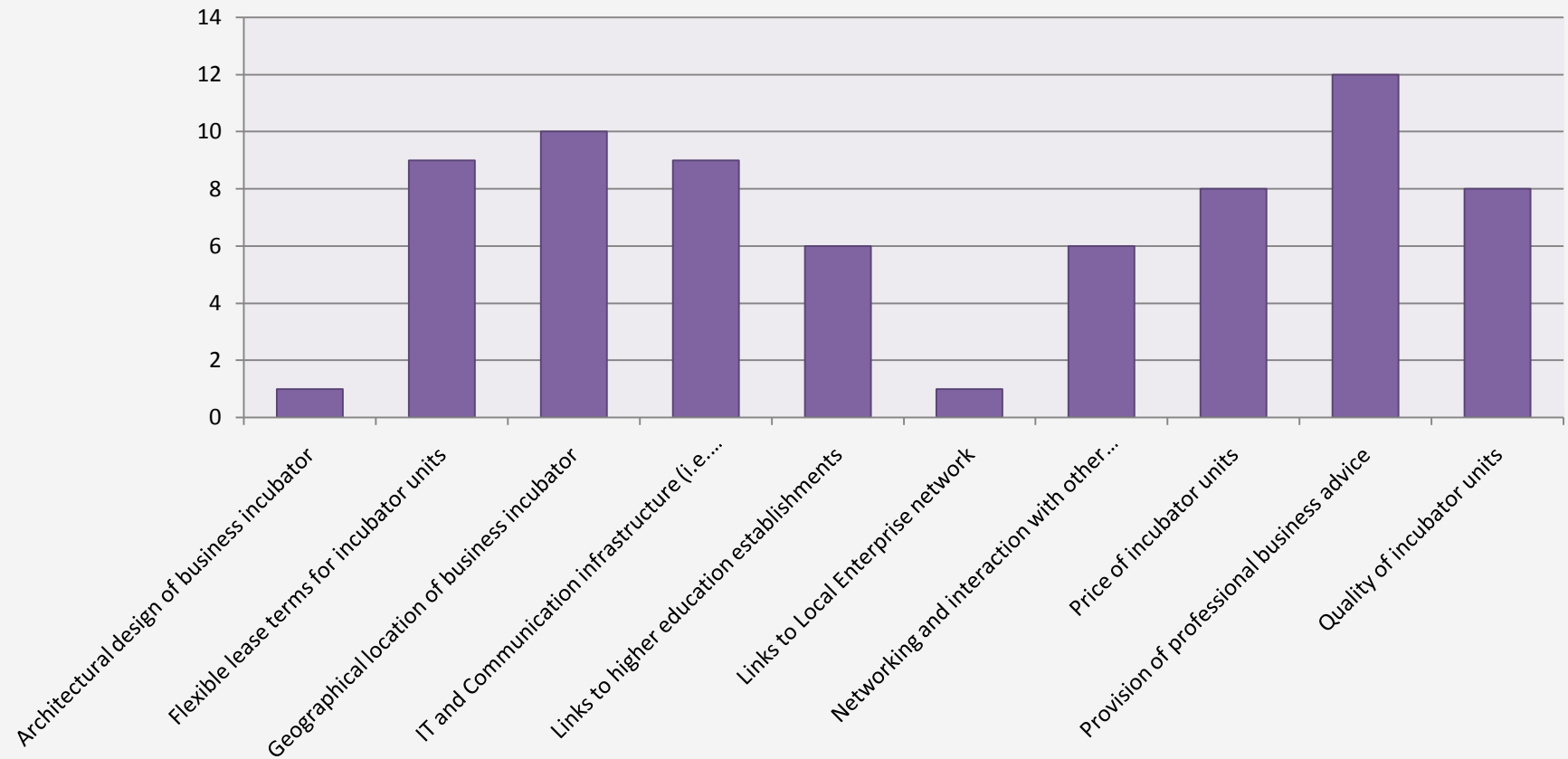
What best describes your main business idea(s)? Please select the closest description.



FOCUS: TYPE OF BUSINESS

It was very important for us to see what business ideas people have. As our incubation center is focused on mixed businesses, we are looking for ideas relating to it. It was encouraging to observe from the data that the three main businesses potential intenders have are Advance/high tech manufacturing, business financial services and information & communication technology.

If you were to consider locating in a business incubator how would you rank, in order of importance, the following criteria?



IMPORTANT FACTORS TO BE CONSIDERED WHILE DEVELOPING A BUSINESS INCUBATOR CENTER

Data we got shows that in fact all the factor mentioned above are very important. But the factor which got most of the votes is Provision of professional business advice. We have to make sure that the incubation center has the best consulting group; our university has a very strong faculty, who has worked with industry and has strong relations with industry, which is very encouraging. The two factors that got least votes were the architecture and link to local enterprises. Link to local enterprises receiving fewer votes was a little surprising. Pricing and flexible terms are very important factors in the success of the incubation center.

CONCLUSION: QUESTIONNAIRE SURVEY 1

From the details provided in the above graphs it becomes clear that there is a great demand for a business incubation center at Bahria university, even if we look at the inside market of the university students only. Majority of the students are looking forward to such a facility and this initiative can be started off at a very small scale basic level from a single room in university premises dedicated fully for this purpose. Students are one of the key stakeholders in this project so their buy-in is very important. A green signal from this side has made things go in favor of the final decision going for the incubation center establishment rather than against it.

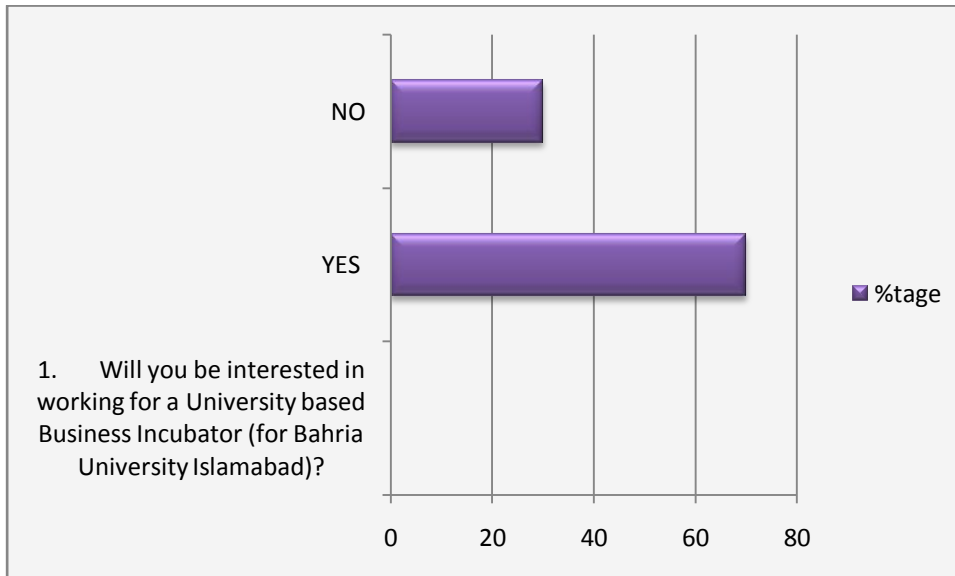
The above survey helped us analyze the potential entrepreneurial pool in Bahria University Islamabad. Important factors to be considered during the development phase are also highlighted.

The results reflect that there is a moderate capacity of business culture that prevails in our young generation and students want to start up their businesses.

"Bravura ideas should be moved from walls to commercialization"

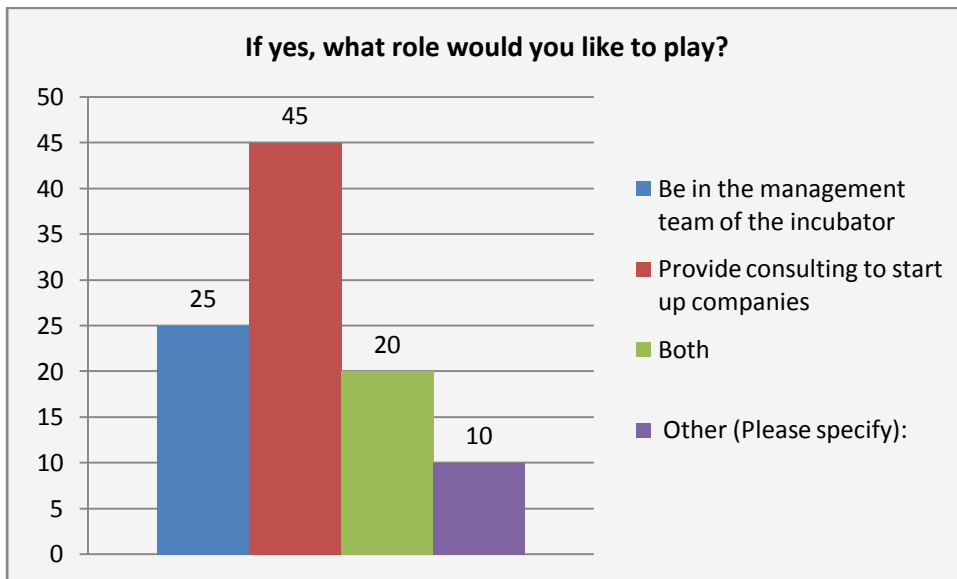
5.4 Analysis Derived From Faculty Survey

Faculty Questionnaire is attached in APPENDIX -II

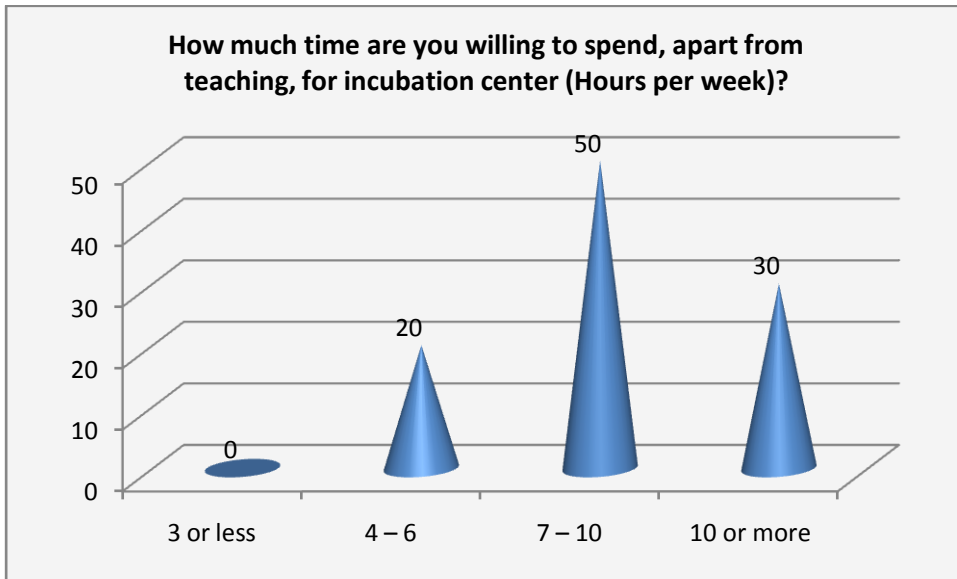


Based on the findings of our questionnaire it is very evident that the faculty is more than willing to help out the university in setting up a business incubation center at Bahria University Islamabad Campus. However it is also important to note that 30% of the faculty member showed no interest in supporting this cause and if we generalize this number, it can have meaningful impacts on the final recommendations to the university administration.

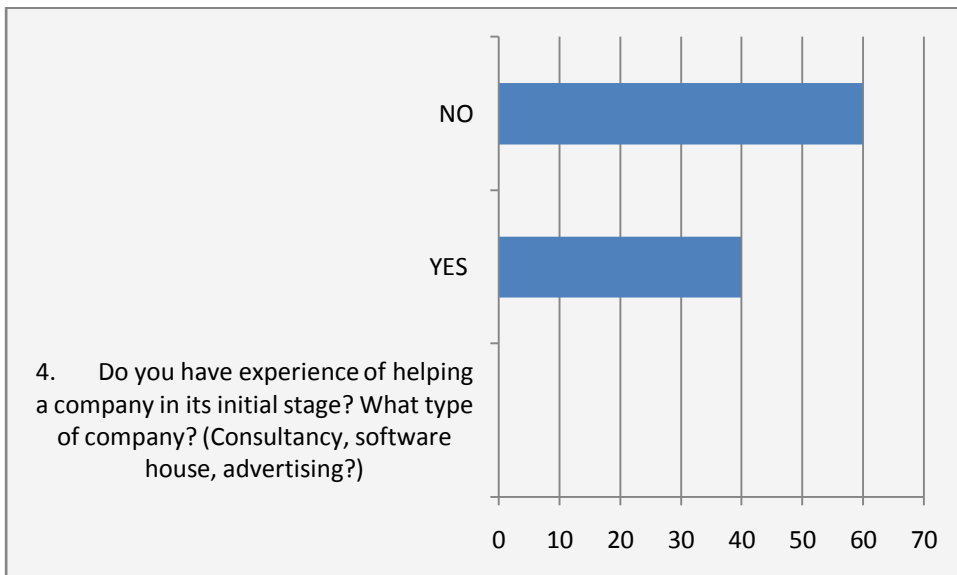
As one of the major stakeholders of university the support of Faculty members to the incubation center is a must. Majority (70%) of the existing faculty members are willing to join hands with administration for this project.



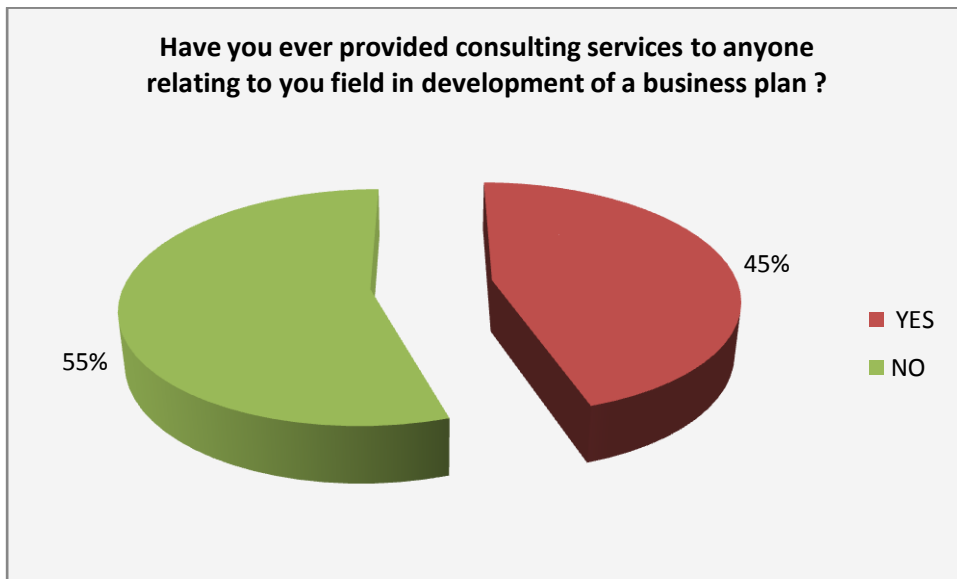
There are two very basic but important roles that the faculty needs to play, one is to provide the managerial expertise required by the incubation center itself and second are the core consulting services to the students looking for help. Almost 50% of the faculty is willing and interested in providing the core consulting services followed by 25% of those who are willing to render their services for managerial purpose or both. Hence we have got ample support from the faculty of Bahria University in launching such a project.



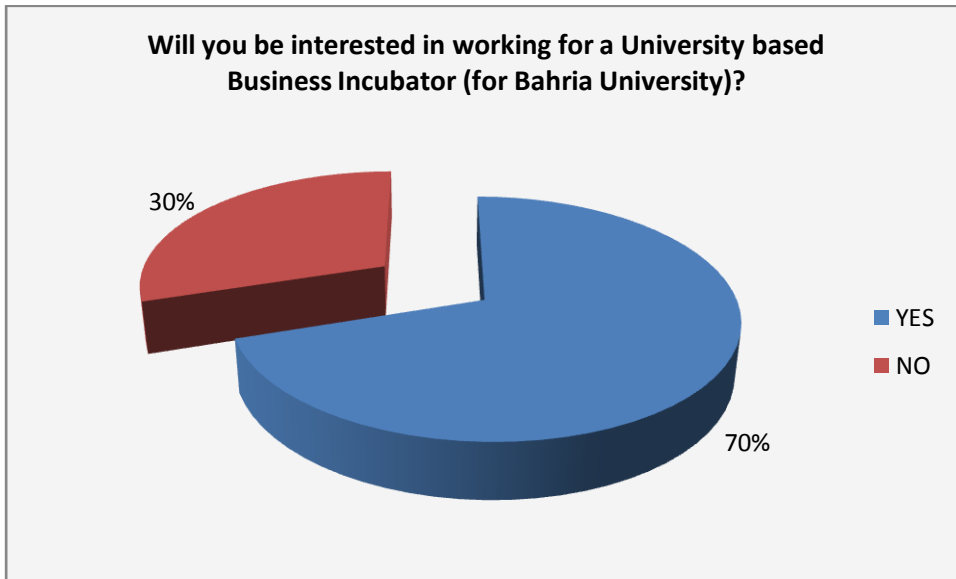
The graph above shows the willingness of the faculty to dedicate their time to the incubation centre. As evident from it, most faculty members are available for more than 20 hour per week basis. So the availability of key resource required is ensured.



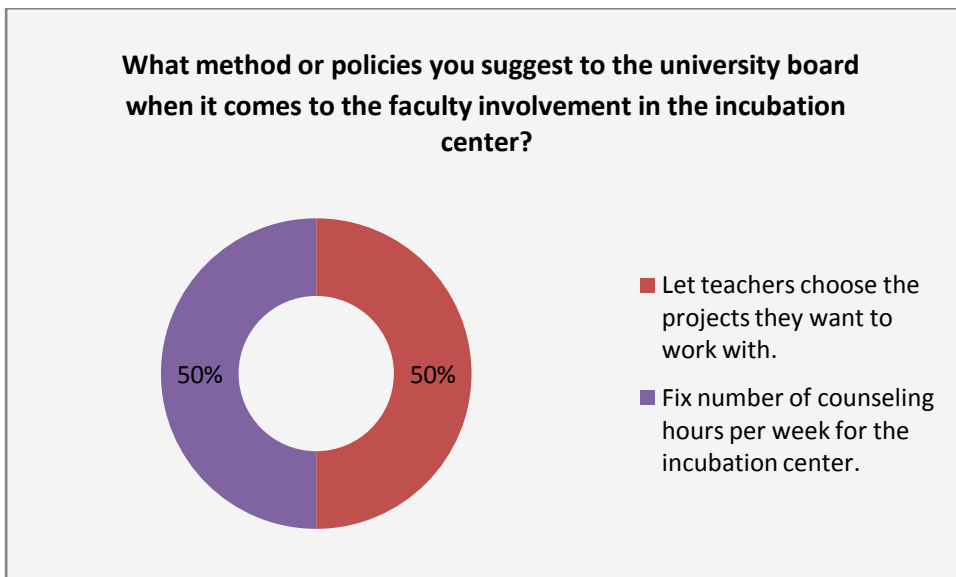
This graph shows the existing cumulative experience of Bahria University Faculty in terms of helping out a company in its initial stages. Majority of the Faculty do not poses such experience but as we have 40% who do have their role can be in counseling side, rest can be utilized for their managerial expertise.



Here again we have almost equal number of faculty members who already have provided their assistance to somebody in developing a business plan. This experience will be of great help to successful working of the incubator.

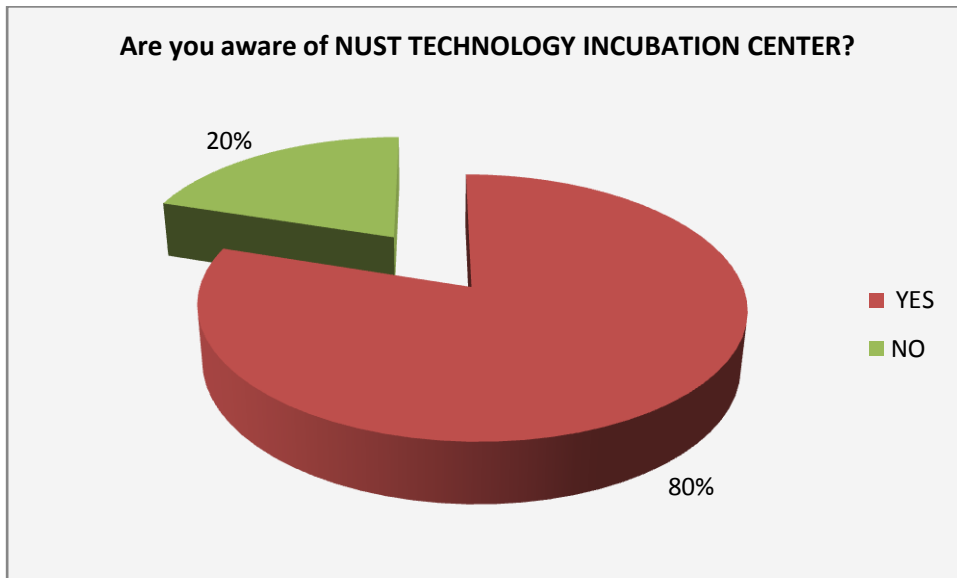


The above graph again ensures that the faculty will be available and will render their services to business incubation center. According to our survey 70% of the faculty members are willing to be part of this project.

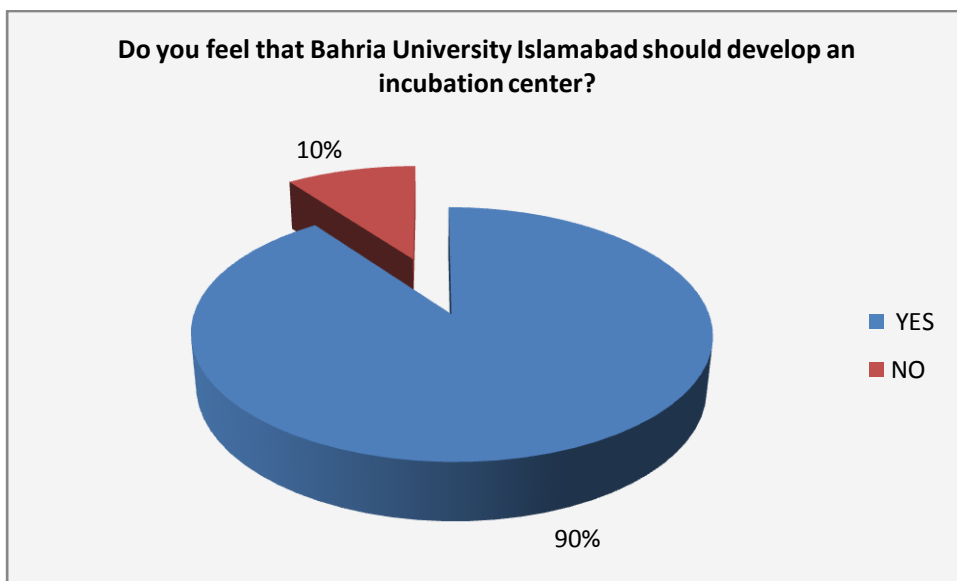


If we look at the policies that should form the ground rules for faculty, we have got two equal options. Either

we allow the faculty members to choose projects of their liking or we fix their counseling hours per week.



Here again 80% of the faculty knows about the NUST Technology Incubation Center.



Here again we have huge amount of support in favor to launch a business Incubation center at Bahria University Islamabad.

CONCLUSION: QUESTIONNAIRE SURVEY 2

Based on the above presented faculty analysis and student survey analysis the need for Business Incubation center is established. The major resources required to fulfill that need are also available in-house.

Initially the Incubator can be started in a small room with some permanent faculty members providing their services to limited number of students who passed the selection criteria of supervision as described earlier. With the passage of time when the demand of Incubation services will raised the project can then be expanded in its horizon.

To minimize the impact of additional cost on the management to build a separate office for the Incubator in the university premises, a room of new campus can be utilized initially on the pilot basis and in evening session.

The Incubation project if successful, on the long run will reap a lot of benefits for the university in terms of building brand name to contributing to the overall economy on a small scale.

Existing faculty can be a valuable resource when it comes to consulting and advisory services.

5.5 Study of Services and Facilities Layout

An incubator can provide a broad range of services such as research support and business planning, office space, research support and business planning, technical legal and financial issues, advice on management, marketing, , and many more.

Following are the services that should be provided to meet the needs of the targeted entrepreneurs and the facilities they require.

5.5.1 Consultants and Advisers

Consultants are specialists in technical and managerial matters, who help the incubator's manager in the selection as well as in the monitoring of the tenant companies. They also advise and guide the entrepreneurs in strategies and in business management, according to their expertise. The most common areas are marketing, finance, accountancy and strategic and legal planning. However, other activities such as international commerce, technological management, and intellectual property, may required by some enterprises according to their development stage.

In short, choosing the right consultant is as important as choosing the right business for the incubation.

Objectives

This Guideline sets out approaches for incubators working with consultants and advisors to benefit incubated companies.

During the business development and consolidation stages, incubated companies require a range of support measures to improve their performance. It is the incubator's responsibility to provide the tenant companies with a board of specialists in management and other fields, who are able to guide the entrepreneurs in growing their business. The consulting services offered to incubated companies need to be done with the objective of analyzing the needs of the companies, identifying solutions and recommending measures to be taken.

However, to maintain a permanent board of specialists can be too expensive for incubators, since the knowledge fields required are numerous and diverse. A good option is to establish a network of partnerships with professionals from different work areas.

This external professional's network, if well managed, can assure the entrepreneurs of high quality guidance at low costs to the incubator, as some of these professionals are likely to be willing to work as volunteers. The network could be divided into three main categories: ***consultants, mentors and advisers.***

Consultants are specialists in technical and managerial matters, who help the incubator's manager in the selection as well as in the monitoring of the tenant companies. They also advise and guide the entrepreneurs in strategies and in business management, according to their expertise. The most common areas are marketing, finance, accountancy and strategic and legal planning. However, other activities such as international commerce, technological management, and intellectual property, may required by some enterprises according to their development stage.

A **mentoring group** in an incubator is generally formed by successful entrepreneurs with valuable experience, and even by graduated companies of the same incubator that wish to share their experience with new entrepreneurs. These mentors are volunteers who provide their services for free, so the mentors offer great additional value to incubated companies. There could be a mentor for each client company, as well as a mentor for a group of incubated companies. The number and mix of mentors will depend on the capacity of the business incubator to attract and engage a reasonable number of successful entrepreneurs as volunteers.

The **advisers** are also experienced business professionals willing to provide direction and support to the entrepreneurs. Many enterprises in the beginning of their activities lack an efficient Board of Directors. Thus, the role of these advisers is to act as a temporary council for the companies until a formal Board of Directors is formed (Wolfe, 2000).

In short, there is an increasing demand for consulting services by those who are determined to improve their competitive capacity. However, just as in any other activity, incubator managers must be careful when forming a network of consultants to ensure that this effort will bring concrete and positive results for the company.

Important factors to be considered

- The important stages in the establishment of a professionals network (consultants, advisers and mentoring group) are:
- Identification of the enterprises' needs
- Identification and selection of consultants
- Identification of successful entrepreneurs willing to contribute to the work of the incubator (may be achieved by consulting entrepreneurs' associations, etc.)
- Establishment of contacts and making the partnerships formal
- Establishing rules and criteria for the development of the services, such as deadlines, quality, values.

Results

- Efficient board of consultants and mentoring group
- Enterprises with high technical and managerial performance

5.5.2 Pre-Incubation

Before the entry to an incubator, and to use the benefits it offers, potential entrepreneurs must have a proper legal structure for their company, a business plan and a market based product/service. The pre-incubation process is designed to help enterprises reach these entry criteria in an efficient manner so that they can benefit fully from the incubation process. Pre-incubators are generally located in universities and may be focused on supporting technological companies.

The pre-incubation stage should be planned before incubating an idea so that the following three main objectives can be addressed:

- A legally constituted company
- A duly approved coherent business plan
- A product/service ready to be offered to the market (or at least a prototype).

Results

Increase in the number of well-structured business plans presented to incubators.

5.6 Availability of Physical Infrastructure

We will discuss the facilities and the size of the incubator in this section that suits our needs.

5.6.1 Facilities and Equipment

Minimum facilities at the start in the unit would be:

Furniture:

Office Table & office chairs (Small Work station)

ICT Infrastructure:

Telephone outlet, Internet connection outlet/Wi-Fi

Other equipment:

1 to 2 Desktop PCs with LCD.

Air Conditioned Room.



5.6.2 Estimated cost

- **Furniture**

○ Work-stations	Rs. 25,000 x 4 = Rs. 100,000/-
○ Chairs	Rs. 2000 x 16 = Rs. 32,000/-
○ Chairs	Rs. 2000 x 8 = Rs. 16,000/-

- **Infrastructure**

○ Telephone sets	Rs.1,000 x 8 = Rs. 8000/-
○ Printer	Rs.10,000/-

- **Other equipment**

○ Desktop PC with LCD	Rs.30,000 x 16 =Rs. 480,000/-
-----------------------	-------------------------------

TOTAL COST

Rs. 646,000/-

IMPORTANT NOTE:

All the prices mentioned above can vary and depend upon the institution/person that wants to buy the equipment and depends on the equipment quality. The pictures are provided just to give an idea; the unit does not necessarily have to have this type of equipment. The design of the architecture depends upon the institution itself, it could be very simple as in the pictures shown above or it could be like a work-station show below. So price can vary. (No construction cost is added as our university Bahria Islamabad Campus already has a lot of space available on its extra campus ground floor.)

5.6.3 Size of the Business Incubator

At the very beginning we will recommend that the incubation center should be opened with 4 workspaces. It can be increased according to the need and demand of the market. And building/constructing such unit would not be a problem for our university as they have a very efficient construction team working on the campus.

Total Size and design: Ground Floor Extra Campus – Room

All figures are in foot (1 Red Brick = 1 Blue Brick = 12 inches = 1 foot)

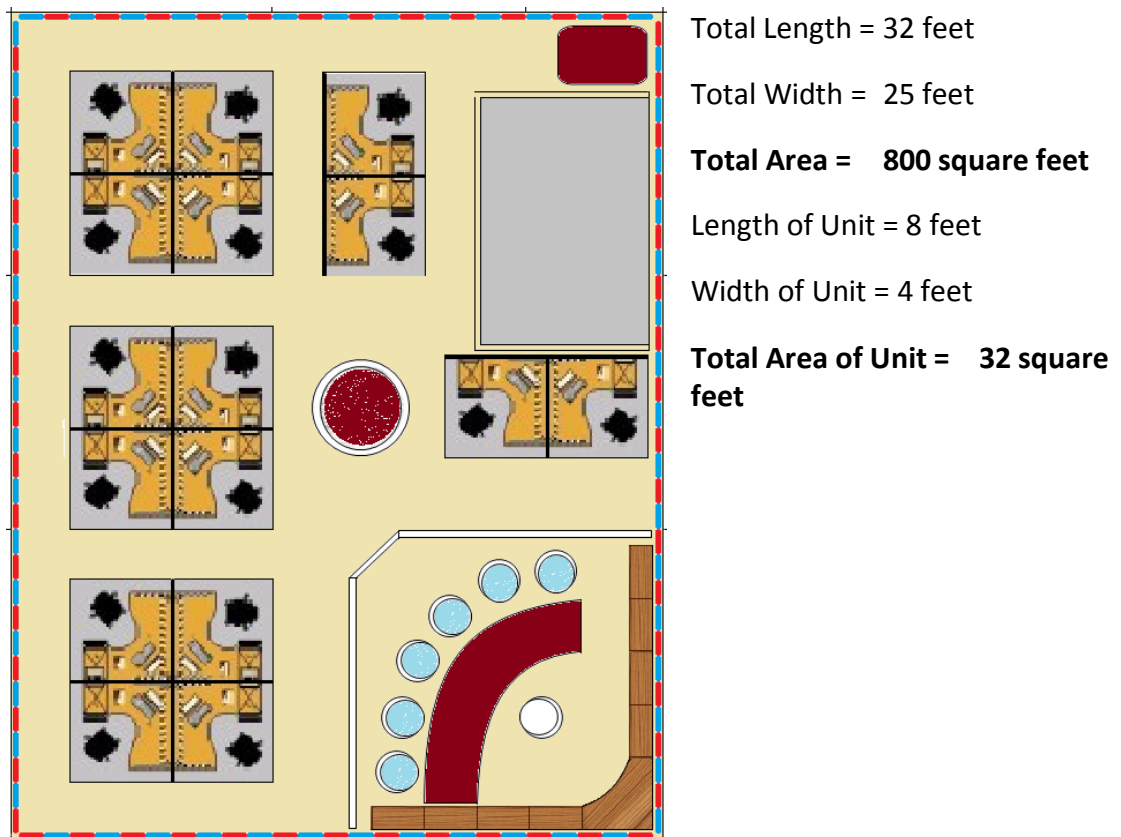
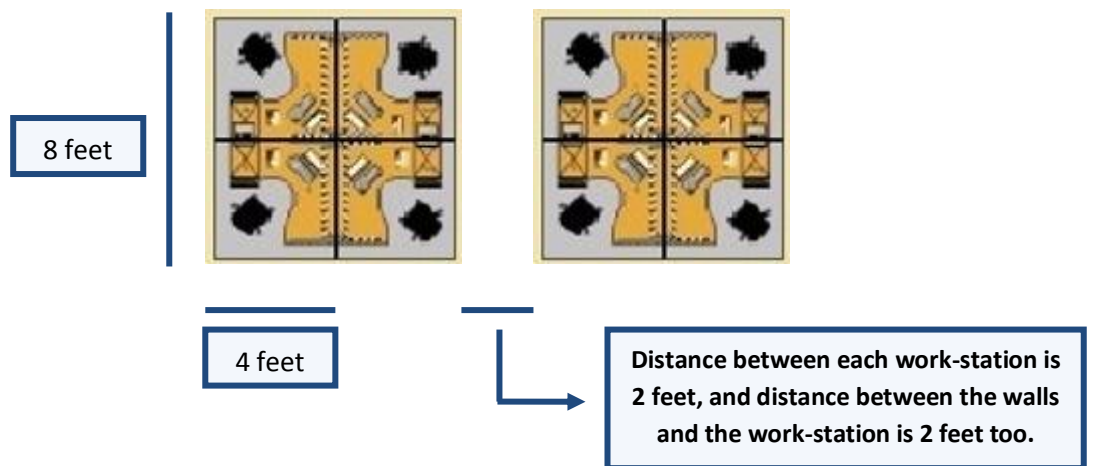


Figure 5.1: Blue Print/ Layout of Proposed Incubator

Recommendations :

We recommend this structure for our university. Efficient use of limited space and this is the type of structure that should be deployed at the start. It has many benefits, a well developed office base structure, where people can interact with each other and knowledge spill-over takes place. People carry out themselves better as the area is open, people know how to talk and behave when others are listening to them. For meetings and small presentations there is a small conference room as well. Other than this university conference rooms (EDC) can be used. Other facilities like kitchen and washroom can be used of the university.



5.6.4 Proposed Incubation Screening Process for selecting of projects

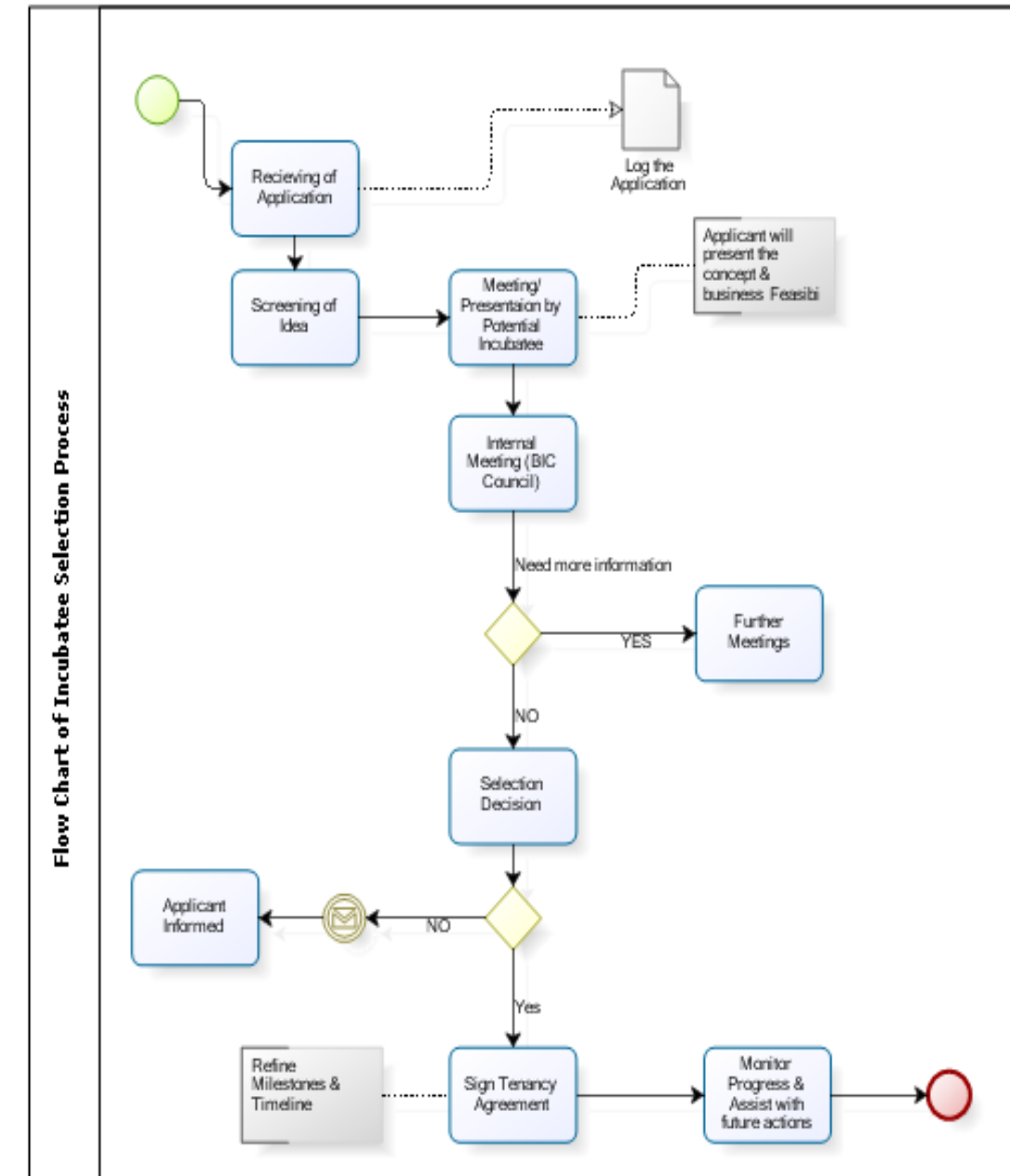


Figure 5.2: Flow Chart of Incubatee Selection Process

CHAPTER 6 PROPOSED BUSINESS INCUBATOR - PROFILE

We will discuss in detail the following topics to summarize our proposed business incubator:

1. Legal status

2. Incubator's Focus

3. Stage of enterprises

4. Incubator's Operational Model

5. Incubator's 'For Profit' or 'Not For Profit' Status

6. Incubator's location

7. Organizational Structure

8. Finance an incubator

6.1 Legal Status

We can have two broader categories of incubators. Either they can be called Stand-alone that is they are independent or they are integrated with some existing organizations that can be educational institutes and research companies.

Objective:

The definition of the legal status of an incubator basically comprehends the stand-alone or connected/associated incubators. Then to decide strategically what should be the prudent decision as both the categories have their own benefits and advantages.

Advantages of Stand-alone Incubators:

- If the incubators are a standalone unit than there are more probability and flexibility to fetch funds.
- By having a stand-alone incubator one can think of quick decision makings as approvals and recommendations can easily pass on by the unit itself for further action.
- Solo incubators are more likely to stay away from any kind of political interventions.
- Due to quick decision making, solo incubators can cope easily with on-time work and contracts.

Advantages of Associated incubators:

- The connected or associated business incubator will borrow the resources such as the administrative structure that is financial statements and material of the associated institution.
- It can also reap benefit from the brand image of that particular organization to whom it is associated.
- Networking for a connected incubator would be much easier as it can use the resources such as faculty and researchers (of the university or as the case may be).

Important factors to be considered

Following points should be kept in mind while defining the legal status of the incubator.

Associated Units:

An associated business incubator would clearly define and differentiate the degree of independence or autonomy relating to the financial resources, expenses, decision-making and recruiting, etc.

Managerial sustainability:

An associated incubator must maintain a relationship among other organization and must carve its independent identity. It should also maintain relationship inside the host organization rather than just acting as a parasite

so that it establishes itself some dignity rather than a meager project of that organization.

Specific legal status:

An in-depth evaluation is composed of the benefits/drawbacks of each category of legality allowed by the legislative bodies. Prior to this study the existing incubators are classified into two types of legal status:

- The foundations.
- Non Government Organizations (NGO's)

Responsible Parties

The management that has the independency and command over the project should have the autonomy to decide what legal status of the incubators. They can also use a legal advisor as an outside consultant for having a direction by looking at the advantages and disadvantages of the various choices.

LEGAL STATUS OF OUR BUSINESS INCUBATOR

Business incubation with university relationship

Our business incubator is connected to the university, i.e., Bahria University. As we have discussed above there are benefits of both the types, whether it is a stand-alone center or connected to an institution.

Context & Features

Educational organization as they give birth to the associated incubators, they have a role to play. These institutions provide the facilities by offering the financial help, relationship and networking, expertise sharing and the space to the incubators.

University incubators target but are not limited to the technology sectors. They may also go for other sectors as well.

Strengths (Broad)

- A business incubator that is connected can overcome the space between the research work and the market introduction for that research very easily.
- It can through its relationship with the university faculty develop competitive businesses using the intellect brains.
- Financing and funding can be easily done by the hosts for the incubators.

Challenges (Broad)

- Cultural differences can be a challenge e.g., whether the institutes takes pain for the research work or not.
- The administration of the university is risk adverse or risk taker. Or the university has bureaucratic or very old style of management.

Results

From the above explanation it is very easy for the project team to decide what the beneficial points are and what are the hard slogs of each category of business incubators keeping in view the legal status. So, they can easily take a decisive action for the decision of their incubator.

6.2 Incubator's Focus

Business incubator's focus is mainly concerned with the structure and types of services being offered by a specific Business Incubator. So in order to have clear target of what to offer, business incubators have been classified into seven categories namely

1. Traditional Incubator
2. Technology-based Incubator
3. Mixed Incubator
4. Cultural Incubator
5. Social Incubator
6. Agribusiness Incubator
7. Sectoral Incubator

Without getting into detail about each of these types, the **Technology Based Incubator** suits the current prevailing market trends.

Technology based incubators are those that deal with the direct involvement of the science and new researches being conducted around the globe. These incubators give a product service or process by merging the new technology in them. They basically feed on biotechnological, information technology and electronic advancement.

In such an incubator the basic purpose is to generate as much profitable ventures as an entrepreneur can keeping in view the technology related ideas and innovations. The incubators of such sort must not go for a selected industry or product lines rather it should aim at the overall industries. The ideas from each industry must be catered. Business incubators are meant to provide the entrepreneurs with a broader horizon for which they can accomplish something innovative and productive.

Critical Issues

The business incubators must look into the inside of the region and should specify some of the most critical issues before deciding on the focus selection of the incubator.

Vocation

Whenever to decide the focus for the business incubator, one has to make a comprehensive survey the networks in the region. Currently, there are three Software Technology Parks in Islamabad which accommodate approximately 60 IT/Software development companies. It is safe to say that besides these firms, more IT companies have emerged in this market significantly increasing the number of IT companies in the twin cities. According to a recent survey by the Pakistan Software Export Board, the number of substantial IT companies operating in the twin cities is 395. Hence the incubators must have an eye on the companies that are innovative and are in need of new products. By serving them they can be more sustainable and in the market.

Entrepreneurial Culture:

An essential factor to be taken care of in business incubator's focus is to develop new businesses in the existing markets. By making a business incubator there is a way for such new talents to come forward and utilize the resources that are being offered to them if they bring a viable plan.

6.3 Stage of Enterprises

There are different stages of enterprise and the project team and even the related university must have a definite question and query about the support that a business incubator will provide. One must have the knowledge of at what stage the incubator would be helpful.

Let us have a brief look at the process that are involved in the creation and development of a business. These distinct four steps are;

1. Conception:

Conception is the process that basically initiates in the mind of entrepreneur. The process involves the idea generation and market need assessment. Conception phase focuses on the development of a reliable business plan.

2. Birth:

This is a phase that indicates that the company has an identity by successfully accomplishing a prototype. This formulation is based on the detailed business plan that was made by the entrepreneur in the first phase. Legal bindings may also be met in the same phase.

3. Consolidation:

This is the phase where the business seeks as many contacts, relationships and references as it could. This phase is to increase the clientele size for that specific firm.

4. Growth:

In this phase the business will enter or wish to enter into new markets and expansion of the existing processes. This can be done by sequential entry or randomly.

Stages/Critical Issues

These are the guidelines on which a business incubator will or should help the incubatees. Young entrepreneurs can come and submit appropriate proposals and the above phase map can help the incubators to screen applicants. Also, the incubatees can ask for help while designing their business plan from the incubators to make it more attractive and worth work.

Responsible Parties

Responsible parties while considering the stages of enterprise must encompass a member from each institution involved that has the primary concern for what is being done in an incubator. The university, research institute or the project team undertaking incubators must have a representative while defining the enterprise stages.

Results

After above mentioned data, we reach to the conclusion that for Bahria University our incubator will address and support the entrepreneurs in the stages of conception and birth.

The business incubator's target at the very beginning is to take university students, particularly Bahria university student's projects, project(s); that is unique and has strong viability to be commercialized.

The goal is to promote entrepreneurial thinking in our society; we want to encourage people to do businesses. So, the main focus is to generate good ideas, ideas that could be turned in to big projects and hence big businesses.

The entrepreneurs does not even have to have fully developed business plans, the incubator will help them develop the plans.

Incubator will also support emerging companies that are not legally registered, but those who have developed business plans; even those have products or services ready to be delivered.

6.4 Incubator's Operational Model

Incubators have different operational models. There differences are based on the space i.e. office, factory etc, business support and the networks. The categorization of operational business model is 'Bricks and Mortar' incubators and 'virtual' incubators.

The incubator being used by us is a bricks and mortar rather than the virtual incubator. Later on, it can be used as a virtual incubator but as physical existence is necessary for BI, Bricks and Mortar business is being used.

Bricks and Mortar incubator offers its incubatees with a physical place that has the facilities for the entrepreneurs to give birth to their business ideas. Bricks and Mortar operational model believes in tangibility of the incubator. Such a model encourages the relationships and salvation of the problems that may occur during the process. It is more natural than Virtual incubators.

Important factors to be considered

Services: Bricks and mortar incubator's provide services that are very simple. For instance they provide a telephone, a photocopier, a receptionist and the likes.

BAM incubators are pointed for their limited scope as they will only concentrate on the physical area and will not interact with outside companies as much. In case of universities, there is an advantage of getting contacts from industry by using the faculty and professionals of that particular university.

Weakness:

There are two main weaknesses of BAM,

- Limited scope of services.
- No fund raising activity.

Responsible Parties:

The members of the team are the main people as they are responsible for carrying out the job. They must select the best possibility out of the two categories. Further, the concerned university must also provide help to decide the proper model.

Results:

Bahria University should select BAM model and provide relationship and network to the incubator. They must also manage a management out of faculty that must be there all the time to guide, coach and direct entrepreneurs.

6.5 Incubator's 'For Profit' or 'Not For Profit' Status

It has been proved by many researches that money drives people. When running an incubator one would need a particular amount of structure, manager, receptionist and other likely things that can facilitate entrepreneurs. These would cost some expenses. So, one has to make money in order to make university incubator workable and sustainable.

There can be a non-profit incubator or a profitable one. Non-profit incubators are one that do not have the intentions to make money but are more inclined towards the welfare of a community. NGO's can be a good example for Non-profitable incubators. Profitable incubators on the contrary are intentionally build to gain money by utilizing the skills and innovations of entrepreneurs. We suggest a profitable incubator as to meet the requirements of BAM incubator.

These expenses can be gained from the students that participate as they can pay a particular fee. Also, the companies that will be intended to have new business ideas will support. Venture capitalists can be a viable source if the business flourished.

So, a profitable incubator is much practicable and reliable option for this university incubator for Bahria.

Important factors to be considered

In order to have a better research base inside the campus and to have a bridge between the industry and its students, universities make use of In house Business Incubators that would get research projects from the industry and use that to increase its stature.

6.6 Location of Business Incubator

Following are the basics that a location should exhibit as far as the business incubator is concerned.

Accessibility:

Business incubator must be accessible by the students, tenant companies and the university itself. So that people can come to the incubation center easily.

Availability of communication:

Business incubator must have a flawless communication system wherever it is being located. The use of communication is the key to attract and contact the companies. Except that nowadays one has to have communication for survival.

Availability of basic sanitation services:

Any office or workplace has basic sanitation services. Incubators also possess a location that caters for the water and separate space to facilitate the in-comers.

Availability of Transportation:

The company's' representatives must have a proper way towards the location of the incubators. There must be a route that can be used by the reps. An ideal situation is own parking area for the visitors.

Results:

Location of an incubator at a key location can help publicize the incubator. Bahria University for our team is a prudent choice.

6.7 Organizational Structure

Pires (2003) gave the management structure for any incubator. He pointed out three layers that must be embedded in a structure to be sustainable.

Board of Directors:

Board of directors is the ones that are executives and are at the top level of management. They are the brains and they make the strategies, policies how teams operate, maintaining and controlling relationships of staff and the incubator.

Incubator management:

This level is the one the keeps the note of the incubator's working in a sense they are the directors and presidents. So, they have the responsibility to manage and be accountable for whatever is being done in the incubator.

Consultant Committee:

These are those consultants that have the expertise that account for the attraction of the companies to the incubators. They may be legal advisors or market trend analyzer. They help and aid management to carry out legal and smooth operations.

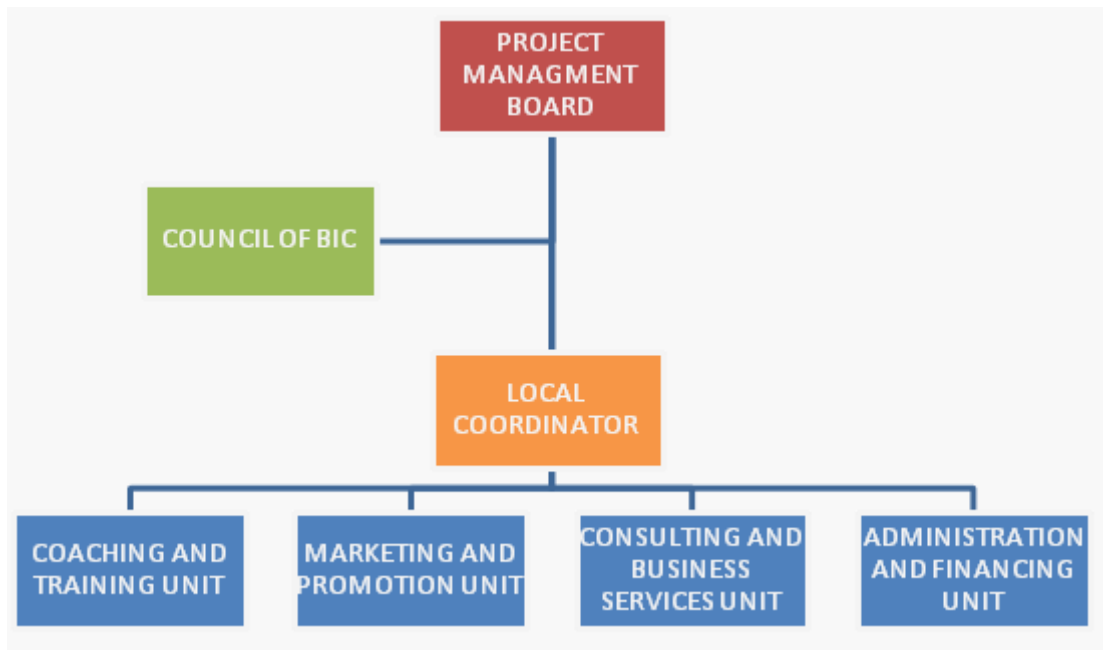


Figure 6.1: Organizational Structure for Business Incubation Center

SUPERVISORY BOARD MAY INCLUDES

- *Local government member from economic development department*
- *Local bank representative in charge of small business loans*
- *Member of small business association*
- *Member of university faculty in charge of small business program*
- *Member of university in charge of continuing education*
- *Member of Chamber of Commerce business development committee*
- *Member of local venture forum*

6.8 Raising Funds

Following sets out a step-by-step process for evaluating the most suitable source of funding for an incubator itself (or an incubated enterprise), and how best to proceed.

Objectives

This guideline outlines a clear and effective strategy for identifying and negotiating with entities that provide financing or investment funds that contribute to the development of the incubator or the tenant companies.

Important factors to be considered

- **Potential Projects:** Detailed analysis of the Incubator's Business Plan and Strategic Plan, to identify the main elements that require funds and which might attract the interest of agencies involved in fund raising and financing. The result of this stage is a list of potential projects that could be the target of fund-raising.
- **Potential Partners:** Identification of entities with the potential to sponsor, finance or invest in the project in question, outlining their objectives and form of operation, and a contact person. A survey should be carried out primarily through the Internet and through contacts with partners having experience in the relevant field.
- **Detailed Survey:** On projects already supported, with the aim of identifying priorities and opportunities for raising funds by the incubator. **Analysis and**

Next Steps: Analysis of the survey information and decisions on the presentation of a proposal for funding.

- **Summary Proposal:** Preparation of a summary proposal for funding the project, aimed at clearly establishing the project concept, principal benefits and requirements.
- **First approach:** Approach the supporting entity to establish first contact and define the negotiation process. This approach should be made by those responsible for the allocated project area, using potential strategic partners of the incubator to establish an appropriate channel of communication.
- **Preparation of the Proposal:** In the event of a successful first contact, with confirmation of potential support, proceed to the preparation stage of a detailed proposal, in accordance with the procedures established by the supporting entity.
- **Analysis Process:** Having completed the Proposal, the process of analysis, negotiation and approval begins. The time required for this stage will depend upon the supporting entity's approval process, their attention and availability.
- **Contract Phase:** Clear definitions of responsibilities, timetables, issues relating to industrial property, financial disbursements, etc. are required for the project contract.

- **Execution:** Following the contract phase is the execution phase, which encompasses monitoring, follow-up and evaluation on the part of the supporting entity.

Responsible Parties

Incubator Director(s), Technical Team and Strategic Partners

Indicators

- "One-Page" fund-raising proposals approved and presented
- Volume of funds obtained
- Investments made to carry out the fund-raising actions

Results

- Funds raised within workable time frames
- Areas of investment of interest to the incubator, on acceptable financial terms.

CONCLUSION

This report has reviewed the concept, definition, classification of business incubators. A detailed feasibility study analysis has been done whether a business incubator should be developed in Bahria University Islamabad Campus. A very brief business plan has been given as well of how to go about building it and what are the Important factors to be considered and things to be kept in mind while the development of this center. It was also demonstrated how to fund incubators and what services to be offered and the factors that contribute to the success of the incubator. Incubators are growing at a steady rate worldwide, and it is noted that incubators has a very positive impact on education.

There is a model given by Dr. Nabil Shalaby in his article "***Business Incubators and Universities - Mutual Benefits***".

He gave this model as he realized the positive roles incubators could play in the educational institutions. Its important for us to discuss this model here as well, and see how we could use it for our university (Bahria University). He gave this model for all the universities in Kingdom.

This model will be applied in tracks chosen by the student himself in the course of study and after graduation. Following are the steps pursued by the student since entering the university until graduation:

1. Student enrolment to university
2. The student studies communication skills, working in a team, leadership skills and creative thinking. This is in addition to reverse engineering skills and how to add more value to an industrial product. Student also learns the principles of modeling.
3. The student studies entrepreneurship, there the student learns the skills as a potential entrepreneur and the creative skills to transform the idea into a business. The student learns the skills of setting up and running a small business. Among the benefit of the student in this programme is to contact with the industry through the (Mentor Programme). He will find links to several funds options at the end of semester.

There after the student have three options as follows:

- 1. The student enrolls to the summer training course and implements a specific project to fulfill graduation from university.**
- 2. The student joins the traditional cooperative track and does a project in order to graduate from university.**
- 3. The student enrolls the creative cooperative track (incubation) and does a project to graduate and then graduating from university.**

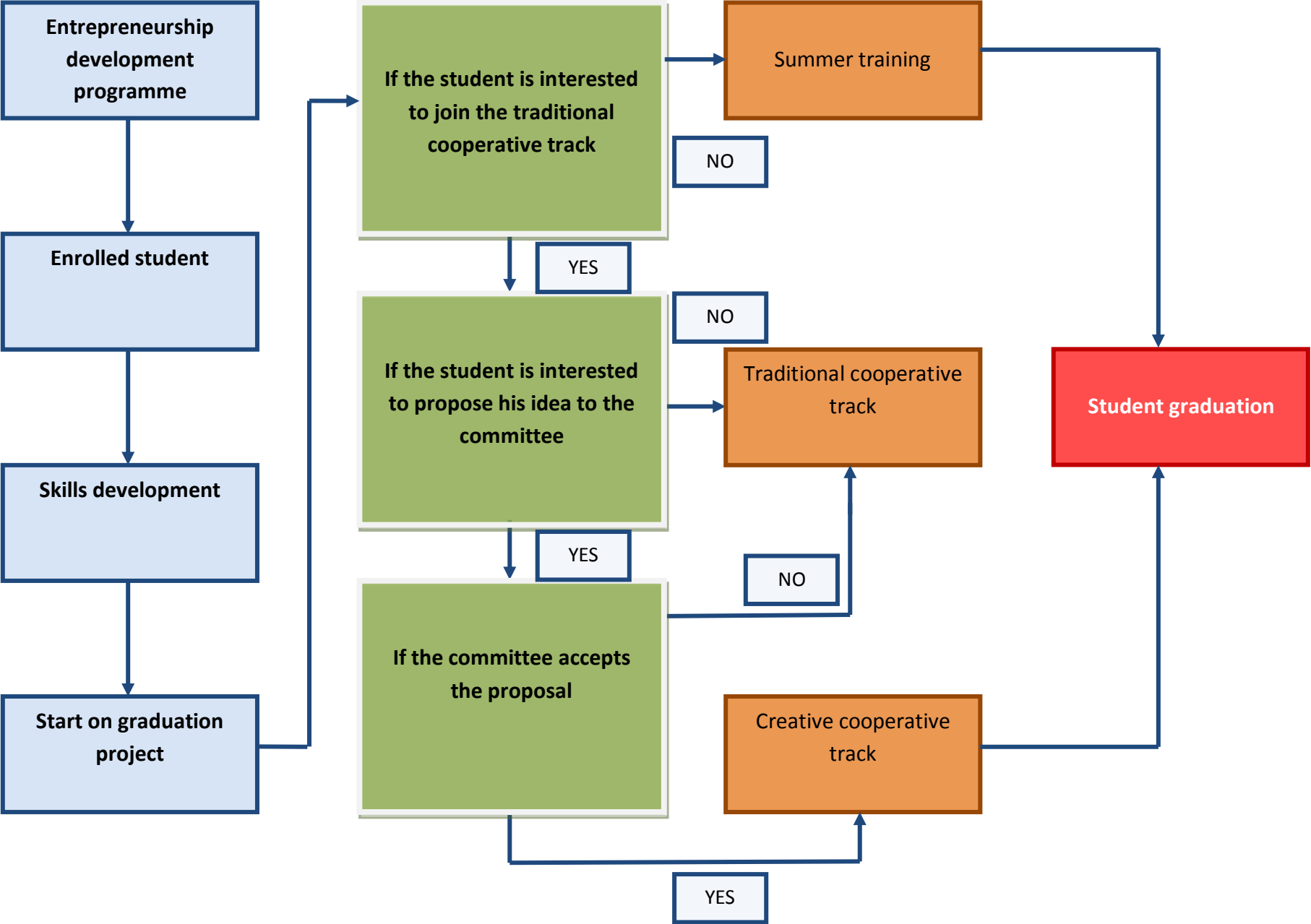
In case of selection of the student the creative cooperative track (incubation), he has to prepare a proposal to be assessed by the arbitration committee,

consisting of representatives of incubator and a select group of businessmen and financiers to assess the draft graduation project, resulting in the two following directions:

1 - **First Direction:** Committee accepts the proposal and therefore joins the incubator as required by the creative cooperation track (incubation), then turn his idea into a creative business, which has been marketed by the private sector or by the student himself.

2 - **Second Direction:** Committee rejects the proposal and therefore rejects joining the incubator and then returns the student to the traditional cooperative track and ends its requirements and graduate.

INNOVATIVE MODEL FOR LINKING EDUCATION TO INCUBATION CENTER



This will increase the contribution of education outputs in technological development and economic growth of the country. Knowledge and technological capabilities are becoming increasingly crucial for national development. Using technology incubator and incubation system is a practical way for creating knowledge and technology based firms. Technology incubator can strength and promote technology ventures. Technology venturing through incubators activities is an important tool for the commercialization of R &D outputs and transfer of technology.

RECOMMENDATIONS

Based on the above presented faculty analysis and student survey analysis and the various model presented in the report the need for Business Incubation center is recognized and it is feasible to build an incubation center within the premises of Bahria University and as the major resources required to fulfill that need are also available in-house.

Initially the Incubator can be started in a small room with some permanent faculty members providing their services to limited number of students who passed the selection criteria of supervision as described earlier. With the passage of time when the demand of Incubation services will be raised the project can then be expanded in its horizon.

To minimize the impact of additional cost on the management to build a separate office for the Incubator in the university premises, a room of new campus can be utilized initially on the pilot basis and in evening session.

The Incubation project if successful, on the long run will reap a lot of benefits for the university in terms of building brand name to contributing to the overall economy on a small scale.

As Islamabad campus is already carrying out an expansion project a room space in that can be acquired in the initial stages that will be designated to Incubator if it is successful on the pilot study basis.

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APPENDIX

Appendix I: Questionnaire Survey 1, Business Incubation Center

Is your family into any business?

- Yes No

Do you own a business?

- YES NO If Yes, **please proceed to page 4**

Do you have any business idea, on which would you like to work?

- Yes No If No, **please proceed to page 5.**

Are you planning to do any type of business in future?

- Yes No

If Yes, when do you plan to start this business?

- Within 6 months
 Within 1 years
 Within 2 years
 More than 2 years

Would you be willing to start your business in an incubation center?

- Yes No

If Yes, **Go to Page 3**

If NO, **please reason and proceed to page 5:**

If No, Give Reason

More than one reason can be selected.

- Too young & inexperienced
 Lack of determination
 Family to support
 Fear of uncertainty
 Fear of competition
 A job is the default
 Insufficient capital resources
 Lack of planning/no detailed business plan
 Independently wealthy

Parents want you to be a doctor etc

What best describes your main business idea(s)? Please select the closest description.

- Advanced/high tech manufacturing
- Business and financial services
- Information and Communication Technology
- Other manufacturing activities please specify:
- Other service activities please specify:
- Research and development
- Sales, marketing and distribution

If you were to consider locating in a business incubator how would you rank, in order of importance, the following criteria? PLEASE PICK THE TOP FIVE in order of importance (1 is Most Important; 5 is Least Important).

- Architectural design of business incubator
- Flexible lease terms for incubator units
- Geographical location of business incubator
- IT and Communication infrastructure (i.e. broadband, Wi-Fi)
- Links to higher education establishments
- Links to Local Enterprise network
- Networking and interaction with other incubator tenants
- Price of incubator units
- Provision of professional business advice
- Quality of incubator units

Perceived scale of business in the next 5-10 years?

- Local (one city) National International Virtual

Company

Please proceed to page 5

Name of your company

What best describes your main business idea(s)? Please select the closest description.

- Advanced/high tech manufacturing
- Business and financial services
- Information and Communication Technology
- Other manufacturing activities, please specify:
- Other service activities, please specify:
- Research and development
- Sales, marketing and distribution

What is your experience as an entrepreneur in Islamabad and Rawalpindi?

- Started one
- Started multiple
- Other

Where is your entrepreneurial focus?

- Sector specific (i.e. Food)
- Diverse, a range of business areas

If you were to consider locating in a business incubator how would you rank, in order of importance, the following criteria? PLEASE PICK THE TOP FIVE in order of importance (1 Is Most Important; 5 Is Least Important).

Architectural design of business incubator

Flexible lease terms for incubator units

Geographical location of business incubator

IT and Communication infrastructure (i.e. broadband, Wi-Fi)

Links to higher education establishments

Links to Local Enterprise network

Networking and interaction with other incubator tenants

Price of incubator units

Provision of professional business advice

Quality of incubator units

Why do you think other companies use business incubators, PICK THE TOP FIVE REASONS in order of importance (1 is most important; 5 is least important)?

Architectural design of business incubator

Flexible lease terms for incubator units

Geographical location of business incubator

IT and Communication infrastructure (i.e. broadband)

Links to higher education establishments

Links to Local Enterprise network

Networking and interaction with other incubator tenants

Price of incubator units

Provision of professional business advice

Quality of incubator units

Do you think business incubators make a valuable contribution to the economic development?

Yes No Not sure

Currently studying?

Yes No

Education:

Undergraduate Post-graduate (Masters) PHD

Discipline:

Computer Science Telecom-engg Electrical-engg Management Sciences

Marital Status:

Single Married

Gender:

Male Female

Age:

Name:

Occupation:

Job status:

Employed Unemployed

If employed, basic salary:

10,000 - 20,000

20,001 - 40,000

40,001 - 60,000

60,001 – 100,000

100,001+

Thank you for your time

APPENDIX II: FACULTY QUESTIONNAIRE

1. Will you be interested in working for a University based Business Incubator (for Bahria University)?

A – YES B – NO

If NO, Reason: _____

2. If yes, what role would you like to play?

A – Be in the management team of the incubator B – Provide consulting to start up companies

C – Both D – Other (Please specify):

3. How much time are you willing to spend, apart from teaching, for incubation center (Hours per week)?

A - 3 and less B - 4 – 6 C - 7 – 10 D – 10 plus

4. Do you have experience of helping a company in its initial stage? What type of company? (Consultancy, software house, advertising etc?)

A – YES B – NO

If YES, specify: _____

5. Have you ever provided consulting services to anyone relating to you field in development of a business plan (or any business)?

A – YES B – NO

6. What method or policies you suggest to the university board when it comes to the faculty involvement in the incubation center?

A - Let teachers choose the projects they want to work with.
 Basic Pay increase: Fixed per project

B - Fix number of counseling hours per week for the incubation center.
 Basic Pay increase: Basic salary increased to a certain amount

Any suggestion: _____

7. Are you aware of any INCUBATION CENTER in Islamabad/Rawalpindi?

A – YES B – NO

If YES, can you name 1: _____ 2: _____

3: _____

8. Do you feel that Bahria University should develop an incubation center?

A – YES B – NO

If NO, Reason: _____
