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Availability:

This version is available at: 11583/2593589 since:

Publisher:

Alta Scuola Politecnica

Published

DOI:

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Innovation: Why and for Whom

Course Coordinator: **Prof. Bucchi**

WHY SHOULD WE CARE ABOUT INNOVATION? WHAT ARE THE KEY ARGUMENTS TO SAY THAT “NEW TECHNOLOGY” NECESSARILY CAUSES WEALTH AND BENEFIT FOR SOCIETY? WHAT ARE THE LIMITS OF THESE ARGUMENTS?

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ABSTRACT

This paper discussed the importance of innovation generally and also taking into account the ASP ¹ project “*Integrated Technologies for the Sustainable Management of Underwater Cultural Heritage (TETI)*” as a case study. The paper elaborated the feathers of innovation that can affect the innovative process and the necessity to develop innovative solutions for the success and development of the market. The paper also discussed the key arguments like “new technology” necessarily causes wealth and benefit for society, the factors that can affect the new technology and the limits of these arguments.

1. INTRODUCTION

Innovation means development of new ideas or innovative solutions to a given problem. Innovation can be the development of new technology or can be the use of already existing technologies to develop a innovative solution. New technology brings weath and benefit to the society but some times new technology also becomes controversial [1].

Our project TETI is basically related to find the innovative ideas and solutions for conservation, preservation, the security system, the power system, the acquisition infrastructure and the creation of a underwater virtual museum for underwater cultural, historical or archeological heritage. The underwater museum will be assessible for those who are not able to dive, but want to visit the underwater world. The site for our project is located in Pantelleria, Italy.

In 2001 UNESCO² has elaborated a Convention [2] which sets out basic principles, and practice for the research and protection of underwater cultural heritage. This Convention aims to ascertain and strengthen the protection of underwater cultural heritage.

2. WHY SHOULD WE CARE ABOUT INNOVATION?

Invention refers to a new idea or concept but innovation refers to the development of that idea into product. The Conversion of invention into innovation requires a lot of refining and efforts.

The importance of innovation can be seen from the following different aspects [3]:

2.1 Industrial Secrets:

Innovation can be R&D³ based or non R&D based. Most industries invest money to develop some innovative products that satisfy the customer’s needs and that are better, cheap and efficient as compare to products already exist in the market to satisfy the same needs. So, innovative solutions can be regarded as industrial secrets.

2.2 Rapid Economic Growth:

Due to strong competition, every company tries for continuous innovation to develop the innovative products and gain more profits and popularity as compare to their competitors. So, continuous innovation helps in continual and rapid growth of economy of an industry [4].

¹ Alta Scoula Politecnica , 6th Cycle

² United Nations Educational, Scientific and Cultural Organization

³ Research and Development

2.3 Globalization of markets:

Globalization of markets has raised the importance of innovation because the competition has increased and more and more companies are investing money in R&D for the development of innovative products.

2.4 Advancement in IT⁴:

As the advancement in IT is increasing day by day, it also helps different companies to develop efficient products with different variations that will help them to become a leader in the market. Also, due to developments in IT, companies introduce new products in shorter time span. So, innovation results in increase in availability of variety of efficient products to the society. Thus, advancement in IT also motivates the importance of innovation.

2.5 Funds Availability:

As the amount of money invested in R&D by companies has increased as compare to government, so it also helps in more research and development of innovative products.

In our TETI project, our purpose is to preserve and conserve the underwater heritage and also to create underwater virtual museum. Innovation is very important as we have to find an innovative solution for the preservation and conservation of underwater heritage. As, advancements in IT is increasing very rapidly so it will helps us in solving our problems e.g. to select the efficient wireless underwater data transmission system, sophisticated intrusion detection system for security and efficient way for preservation of underwater cultural, historical or archeological heritage by using variety of compounds of different chemical compositions.

As far as competition is concerned, there are only two projects of same nature that are currently in progress, one is "*Cancun Underwater Museum-Mexico*". Its the largest underwater museum of Cancun and it is situated in Mexico Caribbean Sea. This project was started in Nov. 2009 and it has been funded by the government of Mexico and other organizations for Cancun development [5]. The second project is "*Alexandria Underwater Museum, Egypt*". This museum will be settled in Alexandria Bay. This project will be started in 2010 and it has been financed by Government of Egypt and UNESCO [6].

Since our project will be funded by Soprintendenza Del Mare Regione Sicilia, so we have funds to carry out innovative research that results in creation of underwater virtual museum. Also, Scuba diving association will helps our customers to visit the underwater virtual museum.

Some risks are also involved in our innovation activity from the point of view of stakeholders. Since our goal is to create a underwater virtual museum and may be it will effect the underwater ecosystem. So, the environment equilibrium can be affected. So, our stake holders which also include environmental associations like Legambiente and WWF⁵, can be against us for affecting the environmental equilibrium.

3. "NEW TECHNOLOGY" CAUSES WEALTH AND BENEFIT FOR SOCIETY

"New Technology" causes wealth and benefit for society or not, it depends on some of the important factors below [7]:

3.1- Type of Society:

The first important factor is that what is the type of people are there in the society, what is their education, income and age etc. Number of people in the society and the total amount of money spent by the people on the new and relevant technology can also effect the nourishment of new technology in the society.

3.2- Location of Society:

The second important factor is the location of customers geographically, because every society has some differences to other societies depending on their location [8].

3.3- Behaviour of People:

The third important factor is the behaviour and the response of the people towards the new technology, e.g. Amflora Potato, which is basically a genetically modified potato, became very controversial when it was developed [1]. So, the new technology is affected by the way it is being used for the society.

There is also a need to predict or forecast that either the new technology has long lasting benefits to the society or not. The forecasting of success rate of new technology can be very important because it will give us an indication that the new technology will open the door for the new research and development that will benefit the society or will become obsolete in the near future [9].

Behaviour of people also depends on whether the new technology offer clear, obliging, better and superior, as compare to already existing technologies, benefits to the people or not.

If we go through Michael porter "how competitive forces shape strategy" [10], we also come to know about some

⁴ Information Technology

⁵ World Wildlife Fund

important factors like Threat of substitutes and Competitive rivalry. Threat of substitute means that whether our new technology can be substituted easily by other technologies or not. Competitive rivalry means that the competition is so intense that may be our new technology cannot survive. So, that the new technology must be such that it can last for long time, so that society will get maximum benefit from that new technology.

Now, we will discuss how “new technology” play a role in our ASP Project “TETI”. In our project, we will not develop some new technology but we will use already existing technologies like underwater sensor network, underwater Intrusion detection system for security, underwater data transmission, underwater power system etc and find an innovative way to use these technologies to create the underwater virtual museum. As, some of our stake holders are Soprintendenza del Mare Regione Sicilia, Comune di Pantelleria, UNESCO and also, we know that in 2001 UNESCO has elaborated a Convention [2] which sets out basic principles, and practice for the research and protection of underwater cultural heritage. This Convention aims to ascertain and strengthen the protection of underwater cultural heritage. In our project, our main purpose is to conserve and protect the underwater heritage and to create a virtual museum so that it can be assessible to the common people. So, the benefit to the society from our project is first of all the conservation and protection of underwater heritage, secondly, the people can visit the underwater museum and can see the underwater cultural, historical or archeological heritage. Our project also causes wealth, for example our stake holders like Scuba diving associations and Tourism companies can generate economic return because they will assist people to visit the virtual museum.

4. CONCLUSION

The main aim was to discuss the importance of innovation and to analyze that “new technology” causes wealth and benefits to the society. The TETI project is analyzed from the point of view of importance of innovation and also from the prospective of “new technology”.

In TETI project, the innovation is important because in order to achieve the main goal, which is preservation and conservation of underwater cultural, historical or archeological heritage, an innovative solution is required. In our project, there is no development of new technology rather already existing technologies will be used to find some innovative idea for conservation and preservation of underwater cultural, historical or archeological heritage.

“New technology” brings wealth and benefits for the society and it depends on type and location of society, behaviour of the people and also on the intensity of

competition in market. Our TETI project causes benefit to the society because of conservation and preservation of underwater heritage and also give people the opportunity to visit the underwater museum. Our project also causes wealth because of economic return for Scuba diving associations and tourism companies.

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