



ICT Based Innovation Limited Resources Maximum Output

¹Abhinav Saikhedkar*, ²Priti Maheshwary

¹Computer Science, Hawabagh Women's College, Jabalpur (M.P.) India

²Computer Science, AISECT University, Village Mendua Post Bhojpur, District Raisen, Bhopal (M.P.) India

Abstract— *The present system is facing rapid developments in information and communication technology, which make a further type of village called smart village. This type of village uses technology in all its economic, social, environmental, institutional components to achieve better performance of villages and make villages more competitive in the regional and international level. The Indian economy is not very rich so this paper provides a smart solution for this problem. The solution is a grouping system. In this solution village activities were identified first, then provided solutions for every activity. Smart people are the first activity of paper. In this study group of smart people is created for every smart village. Each head of the group should be responsible for the development of that village. Smart village related other issues like teaching, learning, human resources, a smart financial system, ICT in agriculture, economic support, "hold, attracting talent and promoting creativity", Progress of Industry and Internationalization is also included. When a grouping system is applied here, the problems of the different activities are easily solved. Smart authority means smart governance how e-government or "e-democracy should be implemented to apply smart governance in villages. There are some factors like local community spending on ICT policy to encourage e-Government and ICT, transparent governance and e-democracy must be taken in consideration. Smart villagers use new technologies in all means of transportation and communication to make links between cities and within city components.*

Keywords— *Smart city, smart village, information and communication technology (ICT), smart economy, smart people, smart governance, smart mobility.*

I. INTRODUCTION

A large number of Indians are living in rural areas, so it is necessary to include their point of view to make India, a digital India. Now this is the time to change the views of rural people as they are using smart phones with many useful applications. Modern information technology is a very convenient mean to change their views and understand the concept of smart village. A smart village means where a person can feel free to speak, to work to respect each other. Large no of people of means required a huge amount of resources, our country is not very rich to provide digital equipments to every village people. This paper is developed after a study of the life of the village people and how ICT has improved the life of our people by using limited resources.

II. ICT AND SMART PEOPLE

Smart people are a necessary part of Smart village, because they plan the social look at the village through their personality, skills, creativity and social relations with others that help the village to be open to the outside world. It is very hard to find a large number of smart people in Indian villages so a group of some smart people can be made for each village. Every group has a group leader. This group is responsible to create other smart people. To judge that people related activities are smart or not, as shown in the following points [1]:

1) Teaching and Learning

The Indian education system is not perfect at this time. Primary & Middle Education system in village totally failed. In a smart village group of smart people develops smart education system. Smart people indicate healthy, educated and trained people to deal with new technology. It is possible to open virtual schools & colleges into the village with the help of ICT, to improve digital skills of students and teachers. All village people are divided into groups. Each head of the group should provide the table with maximum resource. Timely training should be given to the group leaders to equip them with the most innovative and fastest technology. To give confidence of women and girls some groups can be made which interact with them to motivate for hard working and to get the knowledge of their future prospects. Men and boys are also needed and suggestions according to their problems. Counseling groups can be made for each sector like Boys/Girls/Men/Women/Senior citizens.

2) Human resources

Present and future development of human resources, participates a main role in achieving smart people in villages. In this paper village people are living in a group so it is very easy to make groups in villages and select one person from each group as a group leader. This kind of progress creates knowledge centers, which train and help village people to be useful

for their society. These information centers try to make collaboration with different companies to progress their courses and ways of education to be suitable for the different needs of the market. So collaboration between companies and knowledge centers is the main indicator of this factor [2].

3) Smart financial system

Smart financial system depends on technology for crop management and production process to achieve maximum profit as possible. Village people do not have all technical equipment this time, but they want them. Last year sale of electronic equipment was increased in villages as compared to cities.

4) ICT in agriculture

Farming and selling and storage are the highest parts of the economic structure of the village. In a smart village, all fields are to be equipped with ICT equipments. Farmers will be use many ICT equipments in smart city like seed germination machine, crop monitoring system (CCTV), electronic alarm system, Weather forecast system, electronic cold storage system, etc.... All equipments are guided by electronically and easily controlled by computer systems or tablets [3].

5) Economic support

Economic development in any place needs financial resources for supporting economic sectors, especially industries, which are based on technology, innovation and creativity. Villages are financially not very strong, if agriculture based industries are established, then they play a main role in putting strategic plans for economic development in the villages. In India, it is also possible in future to declare a new fiscal policy by the government for creating smart villages. So Indian villages are not financially capable to develop itself for smart village.

6) Hold, attracting talent and promoting creativity

The core factor of smart economy is attracting talent and promoting creativity. Village people are very talented but they don't have proper education. In the smart village in a virtual classroom is available which is useful for providing proper training to people. First government provides training for group leaders of smart people, then they provide training for whole group members and then group members provide training to all people of the villages.

7) Progress of Industry

The smart village must provide infrastructure and services for Agro business because the village has sufficient spaces, and workers are easily obtainable in the village at a minimum cost. Group leaders are responsible for the supply of labors.

8) Internationalization

Research is an important part of development. Nevertheless, in INDIA, this field is not very effective. The smart village provides a direct communication link between villages and other foreign countries. It is possible to provide overseas tours for village people to learn their technology and establish commercial links between village and foreign countries. At this time, the government provides educational tour for research persons, but their tour is not helpful for our economy.

III. ICT AND SMART AUTHORITY

Smart authority contains active public participation, existence of citizenship services, using ICT in the management of the village and using new communication channels between government and citizens that called e-government or "e-democracy". To apply smart governance in villages, there is some factor that must be taken into consideration such as [4], [5].

1) Local community spending on ICT:

Smart village requires ICT, so cost of establishment of ICT is also playing a major role. Therefore, it is essential to allocate part of the local public spending for investment in the field of technology and information to achieve the intelligent management of the village.

2) A policy to encourage e-Government and ICT:

Smart villages want to extend strategic plans related to the rapid development of information and technology, such as an e - government action plan instead of following traditional plans in municipal administration [6].

3) Transparent governance:

Utilizing new technologies in public administration help to provide information and data which achieve transparency, governance, for example the availability of Panchyat plans, regulations and budgets for individuals and village.

4) E-Democracy:

New technologies play a core role in increasing opportunities for people and communities to interact with government. Also, it enables citizens to participate in some decisions at any time from any place and achievement of a new form of democracy called electronic democracy. [7]

5) Promoting ICT and modernization:

Smart villages must raise awareness of the importance of ICT and innovation among the public and businesses through open dialogue between experts, entrepreneurs, academics, institutions and investors to discuss how villages can improve their using of ICT and face their challenges.

IV. ICT AND SMART MOBILITY

Smart villagers will be using new technologies in all means of transportation and communication to ensure that links between cities and within city components. This character is a function of some factors and indicators as showed in the following points [8].

1) Connectivity and ICT communications:

Smart communities are dependent on modern communication networks like the Internet network in homes, business, service institutions and different means of transport. To measure this factor we can use the following indicators: Penetration of ICT use in homes. Internet usage, Broadband coverage, Broadband usage, Mobile Phone Usage.

2) Public Internet Access:

Smart villages must provide numerous points of connection to the Internet in all parts of the village and in public squares to facilitate citizens to connect to the Internet and to get altered government services instead of getting to them. This internet access show in the following points: Wi-Fi hotspots in cities. • Public Internet access centers. Promotion deals with ISPs.

V. ICT AND SMART ENVIRONMENT

Smart environment refers to use of new technologies for the protection and preservation village's environment. There are some factors that must be taken into consideration to achieve smart environment such as [9]:

1) Safety and faith:

Using the new technology of information and communication systems is necessary to achieve safety and security through the invention of new ways to protect citizens in public and private areas as well as in the management of incidents and crises.

2) Culture and identity:

Smart villagers use new technology in promoting their culture and in transferring it to other countries to publicize their cultural identity. Also new technology is used to record their cultural heritage

3) Ecological Security:

In smart village, new ICT tools are used in environmental protection from Pollution and natural disasters, and they are used in managing natural resources to meet the needs of current and future generations.[10]

VI. ICT AND SMART LIVING

Smart living in a village means improving the value of life for people through consideration to culture, health, safety, housing, tourism, etc as shown in the factors [11] like Cultural facilities, Health conditions, Individual safety, Housing quality, Education facilities, Touristic attractively and Social cohesion

VII. CONCLUSIONS

Villages are the backbone of our country. When we compare cities and villages, villages are not infected by pollution, they produce fresh air, people to communicate the system, and we can learn our culture in villages only. This paper provides a solution for this problem "How easily we convert the village into the smart village". Not only villages, but cities will be benefitted if the village gets "Smart". The migration will stop. A migration which is the main reason for which the extra pressure is put on urban resources. All problems of the city related to the high influence of people in the city. If villages are provided with similar opportunities as of the people will not migrate. Hence it is beneficial for both cities and villages to implement "smart village" The future of the technology is also related to developing all villages of India as a "smart village and group system is only one solution for this.

REFERENCES

- [1] Baron, (S; Field, J. and Schuller, T .,2000):- Social Capital: Critical perspective. Oxford University Press.
- [2] (Berry, C. R.; Glaeser, E.L., 2005):- Berry, C. R.; Glaeser, E.L. (2005). "The divergence of human capital levels across cities". *Papers in Regional Science* 84 (3): 407–444. doi:10.1111/j.1435-5957.2005.00047.x.
- [3] (Glaeser, E.L; Berry, C. R.,2006): "Why are smart places getting smarter?". *Taubman Cente Policy Brief* Cambridge MA: Taubman Centre). 2006-2.
- [4] (A, Coe; Paquet, G. and Roy, J., 2001):- "E-governance and smart communities: a social learning challenge". *Social ScienceComputer Review* 19 (1): 80–93.
- [5] (Paskaleva, K .,25 January 2009): "Enabling the smart city: The progress of e-city governance in Europe". *International Journal of Innovation and Regional Development* 1 (4): 405–422(18). doi:10.1504/ijird.2009.022730.
- [6] (Torres, L; Pina, V. and Sonia, R., 2005):- "Enabling the smart city: The progress of e-city governance in Europe". *International Journal of Innovation and Regional Development* 1 (4): 405–422(18). doi:10.1504/ijird.2009.022730.

- [7] (Deakin, M., 2010): Deakin, M (2010). "Review of City Portals: The Transformation of Service Provision under the Democratization of the Fourth Phase". In Reddick, C. Politics, Democracy and E-Government: Participation and Service Delivery (Hershey: IGI Publishing).
- [8] (Del Bo, C.; Florio,M.,2008): "Infrastructure and growth in the European Union: an empirical analysis at the regional level in a spatial framework". Departmental Working Papers 2008-37 (Milan: University of Milan, Department of Economics).
- [9] (Deakin, M; Allwinkle, S.,2007): "Urban regeneration and sustainable communities: the role networks, innovation and creativity in building successful partnerships". Journal of Urban Technology 14 (1): 77–91. doi:10.1080/10630730701260118.
- [10] (Komninos, Nicos .,2009): "Intelligent cities: towards interactive and global innovation environments". International Journal of Innovation and Regional Development 1 (4): 337–355(19). doi:10.1504/ijird.2009.022726.
- [11] (Baron, S; Field, J. and Schuller, T .,2000): Baron, S; Field, J. and Schuller, T (2000). Social capital: Critical perspective. Oxford University Press.