

CASE STUDY ON SMART VILLAGE

Shreedhar Patil¹, Dipak P. Lahane², Dnyaneshwar R. Mane², Umesh R. Mule², Vishal B. Nawale², Balaji K. Shinde²,

Department-of-Civil-Engineering

¹Assistant Professor, Dept. of Civil Engineering, Dr.D.Y. Patil School Of Engineering & Technology

²UG Student , Dept. of Civil Engineering, Dr.D.Y. Patil School Of Engineering & Technology
Pune, India

Abstract— In this project we describe the ecosystem for a village and then map out an integrated design procedure for building a smart village. We define a Smart Village as a bundle of services which are delivered to its residents and businesses in an effective and efficient manner. Dozens of services including construction, farming, electricity, health care, water, retail, manufacturing and logistics are needed in building a smart village. Computing, communication and information technologies play a major role in design, delivery and monitoring of the services. All the techniques and technologies needed to build a smart village are available now and some of them are being used in villages in India but these are disparate, fragmented and piecemeal efforts. We recognize that the need of the hour is strategy, integrated planning and above all monitoring and execution of the activities using appropriate governance models. Our integrated design is a way forward to deal with the demographic deficit and also achieve the goals of inclusive growth. It is replicable and can be used to design and build smart villages in other parts of the World.

Index Terms— STERM, Smart Village, Ecosystem, II. Motivation, Utility.

I. INTRODUCTION

Smart villages will serve as complementary engines of economic growth to smart cities producing goods and services for local rural markets as well as high-value-added agricultural and rural industry products for both national and international markets. And they will act as stewards for the environment as well as, in some cases, functioning as ecotourism hubs. Key enablers of these development benefits in smart villages are sustainable electricity supplies and the availability of clean and efficient appliances for cooking. Productive enterprises and facilities with higher energy demands will tend to be located in hub villages supplied by the national grid if sufficiently close or – for the many remoter communities – by local mini-grids driven by renewable energy sources, possibly in hybrid form with diesel generators in some cases. The more dispersed communities around the hub villages will typically use Pico-power and stand-alone home systems to provide more basic levels.

The Socio- economic dualism in Indian economy is tackled by the Government by taking responsibility for uplifting the rural and the economically poorer sections. The Government does this by giving subsidies, loan waivers, and quota systems

in educational institutions, jobs and offering several other schemes based on caste and profession. All these efforts are disparate, fragmented and piecemeal efforts and not much improvement has been achieved in most of the villages.

The concept of smart village rests on the utilization of state of the art working facilities and services for supporting the advancement of technology based business.

The construction area will constitute only 10% of site ,90% of it will be allocated to green areas, landscaping ,parking lots and recreation activity centres. **What is the Smart Village?**

A **Smart Village** is an urban environment able to actively improve life quality. Smart Village can facilitate life and satisfy the needs of people, companies and organizations, the widespread and innovative use of technology, especially concerning communications, mobility, environment and energetic efficiency. Smart Villages brings together leading scientists, thinkers and doers across the globe to help lift people out of rural poverty from the bottom up, using access to modern energy services as a catalyst for rural development.. We define smart village as a bundle of services delivered to its residents and businesses in an effective and efficient manner.

Smart village is

- 1) Smart irrigation
- 2) Smart energy
- 3) Smart education
- 4) Smart utility
- 5) Smart infrastructure
- 6) Smart environment
- 7) Smart business
- 8) Smart healthcare

II. MOTIVATION

In India's 610 districts, the national rural employment guarantee act has a list of 200 backward districts. Similarly, out of India's 600,000 villages, around 125,000 are truly backward. There are 78 regions in the country, as per the NSS (National Sample Survey) classification. Based on these regions, the World Bank (2004) identifies 18 regions where human development is low. Nearly 4 billion people around the world today live without reliable access to electricity – including 1.1 billion who live without any access.



III. SCOPE OF PROJECT

- 1) The STERM (Science, Technology, Engineering, Regulations and Management) framework can be used to design and build these villages.
- 2) Due to more population lives in village, the flow towards city is more for any work but by making village smart the increase in load towards city may be reduced.
- 3) This concept of smart village must be applied in all over the parts of India.
- 4) And important scope towards smart village is that, The PM Mr.Narendra Modi developed a new plan for Smart City and Smart Village in our country for development in nation so this concept gives good results in future.
- 5) Also the scope for, new bachelors from engineering for employes, various production of materials, which is very useful in development of nation.
- 6) The working load may distributed from city towards village and economic condition will be good.

IV. CONCLUSION

Smart Villages are the need of the hour as development is needed for both rural and urban areas for better livelihood and Information technology will offer effective solution. There are successful technologies available, which have been implemented in urban areas. There is tremendous pressure on urban landscapes due to migration of rural people for livelihood. Smart Villages will not only reduce this migration but also irrigate the population flow from urban to rural area. ICT/IT and GIS are the unbreakable pillars to support the whole process of village development. Smart village concept will have potential to uplift the grassroot level of the country,

hence adding feather in the overall development of India. Failure to utilize Information Technology tools for rural development is because of lack strategy, unfocused planning and above all monitoring and execution of the activities. All these activities need to be addressed based on the varying rural situations. A specially designed suitable framework for rural areas on the grounds of Science, Technology, Engineering, Regulations and Management will play important role to build next generation smart village.

Benefit of the smart village efforts are foreseen to be tremendous. Smart village concept is having high replication potential in other countries of developing world. The concept of smart village may also be extended to small towns and also townships surrounding the big cities.

ACKNOWLEDGMENT

We would like to thank our principal of institute Dr. Ashok Kasanale, Head of Civil Department Dr.Sanjay Kulkarni and project guide Prof. Shreedhar patil for Co-operative guidance all faculty members and all our dear friend for their support.

REFERENCES

- [1] Smart Village Project, National Informatics Centre. <http://smartvillage.nic.in/>
- [2] Banks, K. (2011, November 30). From smart phones to smart farming: Indigenous knowledge sharing in Tanzania. <http://newswatch.nationalgeographic.com>
- [3] Coe, A., Paquet, G. & Roy, J. (2001).E-Governance and Smart Communities: A Social Learning Challenge. Social Science Computer Review, 19(1), 80-93.
- [4] Coe, A., Paquet, G. & Roy, J. (2001).E-Governance and Smart Communities: A Social Learning Challenge. Social Science Computer Review, 19(1), 80-93.
- [5] Lindskog, H. (2005). Smart Communities Initiatives. The Information Institute, 83-101. Retrieved from www.heldag.com
- [6] S. Harishankar¹, R. Sathish Kumar², Sudharsan K.P, U. Vignesh and T.Viveknath : Solar Powered Smart Irrigation System
- [7] Advance in Electronic and Electric Engineering. ISSN 22311297, Volume 4, Number 4 (2014), pp. 341-346 © Research India Publications <http://www.ripublication.com/aeee.htm>
- [8] S. Darshna, T.Sangavi, Sheena Mohan, A.Soundharya, Sukanya Desikan: Smart Irrigation System
- [9] IOSR Journal of Electronics and Communication Engineering (IOSR-JECE) e-ISSN: 2278-2834,p- ISSN: 22788735.Volume 10, Issue 3, Ver. II (May - Jun.2015), PP 32-36 www.iosrjournals.org DOI: 8] Prof. Dr. K. P. Satheyamoorthy Dean, Dept. of EEE, Dr. M.G.R Educational and Research Institute – University, Chennai, India SMART ENERGY METER LOAD CONTROL
- [10] International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering (ISO 3297: 2007 Certified Organization) Vol. 2, Issue 8, August 2013 Copyright to IJAREEIE www.ijareeie.com 3845.