

# A CASE STUDY ON SMART VILLAGE AND LOCAL VILLAGE

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**Abstract:** This project report deals with study and development of village as a smart village. We define smart village as bundle of services of which are delivered to its residence and businesses in an effective and efficient manner. “Smart Village” is that modern energy access acts as a catalyst for development in education, health, security, productive enterprise, environment that in turns support further improvement in energy access. In this report we focuses on improved resource use efficiency, local self-governance, access to assure basic amenities and responsible individual and community behavior to build happy society. We making smart village by taking smart decisions using smart technologies and services

## I INTRODUCTION

The basic concept of smart village is to collect community efforts and strength of people from various streams and integrate it with information technology to provide benefits to the rural community. According to Mahatma Gandhi’s philosophy and thoughts smart village project provides, “Global means to the local needs.” Smart village is a concept adopted by national state and local governments of Indian as an initiative focused on holistic rural development derived from Mahatma Gandhi’s vision of AdarshGram and Sara. Prime Minister Narendra Modi launched sansad Adarsh Gramyोजना (SAGY) on 2 nd October 2014. Gandhi’s birthday on addition to smart cities and digital India as a development programmed for India.

In villages, people store their staple food for long in large containers or drums for a year. Many times due to bacteria or inappropriate moisture the wheat or rice get damage if not checked on time. On a larger view, many traders keep wheat or rice in sacks for long and sell all the yearround.

The loss of lives due to weak walls and roofs in villages, due to excessive moisture in buildings is very common. The sensors need to sense the life of the building that how long it is safe. Sensors need to be installed in homes which can detect smoke in case of fire breaks. During such emergency automated water sprinklers should work effectively to avoid the loss.

Managing energy consumption is the key need in villages where the electricity power is not 24x7. Automated sensors are required to turn off electrical appliances, lights, fans, motors when not in use. As there are multiple homes which are standalone in villages, automated locks and security alert system can be developed in villages for their safety.

### 1.1Crop Sefety:-

Consider the case of the rice crop which is golden and ready to harvest, a small spark can set the large field on fire, in such case environmental sensors can detect smoke and start the water sprinklers and avoid huge losses. Wastage of vegetable is the common problem to all farmers. Sensors can detect the ripening of the vegetables and fruits. Alerts can be sent to farmers in case there are excessive birds in their fruit, vegetable or cereal farms. The low cost automated moving robot like structures in fields are required to keep animals and birds away.

### 1.2 Irrigation :-

Sensors in the fields can ensure the optimal use of available water resources. If there is going to be extreme hot temperature the next day the refight be need of more water to field sand hence necessary arrangements of workers, diesel, has to be made prior to saving the crop from extreme hot climate. The level of water and time of flowor water from the dams to canals also needs sensors so that farmers get alerts on

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time.

### 1.3 Objective

1. The main object of the smart village not constructed on the image of a city or a very developed village of some state or nation. But on a venue to show inherent smartness of the villages.

2. India lives in its village. Villages are the food basket of the nation. The concept of “Smart Village” will address the multiple challenges faced for sustainable development of rural India

3. A “Smart Village” will provide long-term social, economic, and environmental welfare activity for village community, which will enable and empower enhanced participation in local governance processes, promote entrepreneurship and build more resilient communities.

4. At the same time, a “Smart Village” will ensure proper sanitation facility, good education, better infrastructure, clean drinking water, health facilities, environment protection, resource use efficiency, waste management, renewable energy etc.

5. There is an urgent need for designing and developing “Smart Village”, which are independent in providing the services and employment and yet well connected to the rest of the world. Based on various programs undertaken taken by Central and state governments along with further technological Initiatives, the Smart Village can achieve SMART infrastructure, SMART service delivery, SMART technology and innovation.

6. A “Smart Village” will Encompass a sustainable and inclusive developmen to fall sections of the village community, so as they enjoya high Standard of living.

### 1.4 Scope

2 Scope Today India is going digital and there has been an increase in the use of technology over the last three years. This is a positive sign of India’s development and progress to cope with the world. Prime Minister Narendra Modi has started a mission to make a new India of the 21st century by 2022 as it is the year in which India will complete 75 years of independence. All of us have seen on how a small country like Israel has successfully made a barren desert into a rich cultivable land using technology called drip irrigation. It also purifies the sea water and supplies it across the country as Israel does not have

any river. This is not it the sea on which Israel independent on for water is called the Dead Sea and its drying up fast. Israelis constantly trying to save this sea from drying up with the help of technology.

## II LITERATURE REVIEW:-

### [1]Shri.AnnaHazare:

In1975,when Anna permanently came back to settle in the village, he took different initiatives to improve social and economic condition of the village. All his initiatives were experiment based and well supported by villagers of Ralegansiddhi. Again 300 from the profit generated through the work done by community participation, the villager swe reasked to contribute 25% of the money in to village fund,so as to utilize it for future community projects.

### 2 ]DavidFreshwater[2000]:

This paper introduced related to sustainable development is generally discussed in terms of environmental considerations, but from a rural community perspective, Sustainable development must address how the people of the community generate the income to maintain their rural lifestyle. Those instances where employments considered as part of Sustainability discussions, it is too often thought of in static terms jobs that will last. But the reality of both modern rural and urban life is that economic conditions rapidly change, and so a discussion of sustainable employment has to be conducted in a dynamic context Where different types of employment evolve as economic conditions change. While market signals alone can, in principle, provide the information and the conditions for this type of dynamic process, the argument of the paperisthat the nature of rural areas makes item likely for markets alone to allow Sustainable employment.

### 3] Zhao Zhifeng [2009]:

This invention represent the fast urbanization has become already a main characteristic of socio-economic transitioning China. This paper points out the characteristics and problems of villages in Beijing metro Politian region. The paper also explores the role of villages in the metropolitan region in the process of urbanization. According to the classification guidelines the Village System Planning intends to deal with the future of villages’ development under

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urbanization so as to realize the sustainable development of rural areas.

### **4] Dr.Milind Kulkarni [2010]:**

This research paper represent the India majority of the population still lives in villages. A lot of work needs to be done in making the villages clean. There are different aspects of clean village such as: water supply, sanitation, indoor air quality, solid waste lation still lives in villages. A lot of work needs to be done in making the villages clean. There are different aspects of clean village such as: water supply, sanitation, indoor air quality, solid waste management and renewable energy etc. All these aspects have different alternatives with the associated merits and demerits. In some aspects such as water supply, considerable work is done whereas in some areas like sanitation lot of work is required to be done. We can learn lot of lessons based on success and failure in adopting different alternatives. Keeping in touch with technology clean village projects should integrate technology and digital design, which will make the village not only clean but alsosmart.

### **5 PallaviTakRai[2012]:**

This invention related to townships for sustainable Cities of emerging economies are their engines of growth, because if village scatter agriculture and allied activities, then cities to the industry and service sector. The influx of FDI, expansion of markets, international assistance and aid, globalization ,etc. all contribute to the rapid urbanization and simultaneously to the problems associated there .With the premature expansion of cities, in the absence of proper planning and preparedness, the challenges and repercussions of this hazard growth be come more evident and serious. The paper deal with the analysis of the problems associated with rapid urbanization, and seeks a possible and practical solution in the form of townships ,for such ballooning cities.

### **6] Haslenda Hashim[1] et al.[2013]:**

This invention related to Integrated biomass solar town concept is a concept which encourages local community to utilize biomass waste comprehensively with strong ties between community and local stakeholders. This paper discusses about an Integrated Biomass Solar Town for eco village with and without load shifting (LS). On the other hand, the energy

storage (ES) is also incorporated which could help cut electricity demand during peak periods and smoothing variations in power generation by variable solar power.

### **7] Norizen Abdul Razak[1] et.al. [2013]:**

This research introduced a development of smart village implementation plan for agriculture and the current study mainly aimed to investigate the Malaysian Smart Village project in a rural community which is labeled as Kg Besting in Malaysia. Specifically, the study intended to address the major issues faced by the community of farmers, identify the Smart Village indicators and put forward a strategic plan for the Smart Village implementation. It was carried out among Malaysian farmers in Kg Besting community in Malaysia. Data was collected through a survey, focus group interviews and documents. The quantitative and qualitative analyses of the data revealed that the major issues faced by the farmers in this community in agriculture are limited involvement of human capital in agricultural activities, the small size of land and limited knowledge of using technologies and innovative techniques to enhance the agricultural processing and production.

### **8] Pinak Ranade[1],Sunil Londhe [2] et.al. [2015]:**

This invention related to information and technology related to smart village. Human society is developing with rapid momentum and achieved various successes for making its livelihood better. The civilization is witness for various changes related to it's the development through different catalysts like industrial development, green revaluation, science and technology, etc. The present era is augmented on Information and Communication Technology. This technology has proved its potential in various sectors of development in urban and rural landscapes. Urban areas are seems to more inclined to accept and adopt Information and Communication Technology due to advantages of literacy and better infrastructure as compared to rural areas.

### **9]JadhavAditya[1],DhavanGaurav[2]et.al.[2016]:**

This article examines community- driven multiple use water services (MUS) as pioneered by the Rural Village Water Resources Management Project (RVWRMP)in the Far and Mid-Western development regions of Nepal. These regions are characterized by

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poverty, remoteness, rugged terrain, foodie security, water scarcity, and post-conflict legacy. Ate provisions for domestic and productive uses provides opportunities to address poverty and livelihoods in environments with highly decentralized governance. This study explores the first-hand lessons learned in the RVWRMP in Nepal since 2006. This project is embedded within the local government.

### **10] Rutuja Somwanshi, Utkarsha Shinde et.al. [2016]:**

This project report deals with study and development of village as a smart village. We define smart village as bundle of services of which are delivered to its residence and businesses in an effective and efficient manner. “Smart Village” is that modern energy access acts as a catalyst for development in education, health, security, productive enterprise, environment that in turns support further improvement in energy access. In this report we focuses on improved resource use efficiency, local self-governance, access to assure basic amenities and responsible individual and community behavior to build happy society. We making smart village by taking smart decisions using smart technologies and services.

### **III METHODOLOGY**

#### **3.1 Methods For Making SmartVillage.**

##### **1 Assessment of Investment Climate of the village:-**

Investment climate of a region is defined as policy, institutional, and behavioral Environment, both present and expected, that influences the returns, and risks, associated with an investment. We perceive these as location specific factors like infrastructure, primary occupation of majority of people, nature of industries/business (SMEs) and finance inflow/outflow that impacts the investment and growth of the region. The investment climate of villages differs depending upon the significant occupation of the village and its natural resources. The primary occupation of the villagers can be farming, aqua culture, working for industries such as apparel or leather goods or doll making. The village can be a tourist location, pilgrimage center, or a place of historical importance etc. Mines, Forests, Oceans hores or River bank scan be partof the natural environs of the village.

##### **2 Formulate the growth strategies for the village:-**

Providing quality utility services like power, water, sanitation, and essential services such as education, healthcare, transportation, infrastructure (roads, railways, buildings, equipment ) etc. must be the primary strategy for the development of every village. Some of the utility services can be managed at a district level and others such as health care, schooling etc. need to be managed at village level for proximity and accessibility reasons.

Investment climate of the village is also impacted to a very large extent on the availability of the above mentioned utility and other services in the villages. The next step is to formulate Growth Strategies for the village to make it self-sufficient taking into account the investment climate and other factors discussed above. Strategic questions such as what the kind of SMEs needs to be developed in the village, the kind of vocational training to be given to the residents of the village and how to attract investment as well as entrepreneurs must be formulated and answered. For example: If village is a tourist location, then the growth strategies would be aligned towards construction of restaurants and hotels, development of transportation services like cabs or buses, vocational training to act as guides, security, working as chefs in restaurants or kirana shops selling the unique products made in the village, pharmacies and hospital services through mobile van etc.

##### **3 Community Involvement:-**

Community involvement is the power to bring positive, measurable change to both the communities in which you operate and to your business. Community involvement examples include in-kind and financial donations, employee volunteer days, enduring nonprofit partnerships, and more. To makes the water resource management system with help of village peoples. Increasing the lake of awareness to rising the community involvement.

##### **4 Connectivity:-**

Prior to making Smart Village, It should become SIMPLE village first with basic facilities, It has been 70 years since our independence, great minds have been working in Indian Politics to progress India in forward direction. But villages, towns and cities lack basic amenities. I have simple solution for Political leaders who can develop India just like this snap, if

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they have determination to fulfill their duties as we do in our roles. Each village should have following 5 basic amenities in 5 years,

- Road,
- Hospital,
- School,
- Water,
- Electricity

### 5 Technology:-

Use of Advance technology in developing smart villages. Human society is developing with rapid momentum and achieved various successes. The technology that we use here can be availed to the people living in rural areas to help in improving their lifestyle.

### IV FUTURE SCOPE

From above observation the infrastructure facility is not so bad condition. But the improvement needed so villager life more comfortable and village economic profile increases. For village economic profile increases we should planning for design beautiful so small business increase and economic profile increases. For health purpose there should provide the primary health center. There should provide public library for reading purpose.

After applying all this services and technique the overall problems of Kolavada village are reduced. Due this the cultural, social of economical (due to various businesses economical status and standard of living increases), environmental (use of natural resources reduce the pollution and plantation brings the friendly environment), educational (e-learning and other modern techniques increases the level of thinking and personal development) , living standard and overall status of village increases. Because of that village become self-dependent and contributes towards the development of nation.

### V. RESULT

After applying all this services and technique the overall problems of Mhaskewadi village are reduced. Due to this the cultural, social(Improving the well-being of every individual in society, increase self-sufficiency, reduce the poverty), economical (due to various businesses economical status and standard of

living increases), environmental (use of natural resources reduce the pollution of environment and plantation brings the friendly environment), educational (e- learning and other modern techniques increases the village level of thinking and personal development skill) , living standard and overall status of village increases. Because of that village become self-dependent and contributes & helps to ward shed development of nation.

### VI. CONCLUSION

The idea of making smart village in the present day context seems more plausible as there is a limit of growth of cities which is leading to creation of urban jungles, where the population ratio per kilometer of land is way above the desired norms. To take baby steps initially would lead to a campaigns at National level once the fruits of this effort start bearing fruits, which surely would be visible for all to see sooner than expected.

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