



## Study Of Improving rural infrastructure to transform village in to Smart Village - A case study of Kolavada Village Dist-Gandhinagar

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**Abstract** — Gujarat State has been marching from “Swarajya to Surajya” through implementation of various community and welfare schemes of rural development. It is necessary that Gram Panchayats perform their duties and responsibilities by more programmes and self-governance, work as per their expectations with certain goal and with foresight for social, human, economic and personal development and become committed to increase citizen services, create atmosphere of healthy competition. As a result, the villages would become prosperous and smart, migration from villages toward cities would decrease. In this project to providing This facilities to funded by government for his various scheme Planning for the new village to existing village. The Gujarat Government to various program and scheme for smart Village. Our integrated design is a way forward to be deal with the Demographic deficit & also achieve the goals of inclusive growth. In this project providing facilities for Sanitation, Solid waste management, Sawchhta.

**Key Words:** - Smart village, Sanitation, Soid waste Management

### 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.

About 70% of India's population, or 750 million, live in its 600,000 villages. The average village has 200-250 households, and occupies an area of 5 sq. km. Most of this is farmland, and it is typical to find all the houses in one or two clusters. Villages are thus spaced 2-3 km apart, and spread out in all directions from the market towns. The market centers are typically spaced 30-40 km apart. Each such Centre serves a catchment of around 250-300 villages in a radius of about 20 km. As the population and the economy grow, several large villages are continually morphing into towns and market centers. Around 65% of the State's population is living in rural areas. People in rural areas should have the same quality of life as is enjoyed by people living in sub urban and urban areas. Further there are cascading effects of poverty, unemployment, poor and inadequate infrastructure in rural areas on urban centers causing slums and consequential social and economic tensions manifesting in economic deprivation and urban poverty.

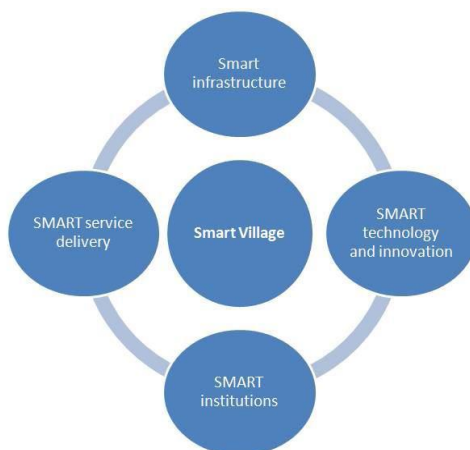
### II. NEED OF STUDY

The need of the study is to provide the basic requirements of people in the village and for Rurban Development of the village. For this purpose the information of the village is collected based on different categories such as Education, Water Facilities, Drainage Facilities, Transportation Facilities, Primary Health Care, Bank Facilities, Public Toilets, Community hall and other amenities.

1. Very poor facilities in villages compare to their population so the Gujarat government lunching the scheme for smart village.
2. Evaluation taken up so far for these schemes has been more or less in a piecemeal form, i.e. generally for each scheme separately.
3. Need for smart village for poor condition of village and some facilities are not proper and not available facilities so this facilities are provide and improve and make a smart village.
- 4.

### III. SCOPE OF STUDY

Scope of this project proper dividing for to Normal village to smart village for providing or improving facilities solid waste management, sanitation, Swachta to Development of village and Increase living of standers and employment. Trying to providing or improving this solid west management, sanitation facilities, cleanness implement facility between Village development & upliment. Above facilities is to be improved or provided through government scheme and fund and under campaign for smart village.



**Fig 1 Components of Smart Village**

### IV. LITERATURAE REVIEW

1. ‘*Smart Growth: A Catalyst for public intrestment*’<sup>1</sup>

In this paper have written by a former mayor of Seattle, this Article describes the “smart growth” movement as a way to sustain the livability of large urban centers in the twenty-first strategy. It describes some of the problems facing urban areas experiencing population growth, namely traffic, rising housing prices and a scarcity of open space. The “smart growth” movement seeks to address these problems in a cost efficient and environmentally friendly manner. Specifically, it seeks to do so through increased citizen participation in development decisions an constructive dialogue regarding development on individual neighborhoods. Ultimately, the goal of the movement is to make urban areas more attractive to live and work in, creating both investment and jobs. The Article also describes some of the community sacrifices required by the movement, including low-density residential neighborhoods, dependence on the automobile, and the separation of the middle and upper income households from the urban poor.

2. “*Report on village facilities Directorate of Economics and Statistics Government of Gujarat*”<sup>2</sup>

Most of our population, nearly 62.64% of the total population in Gujarat state and 72.18 % at all India level resides in rural areas. Therefore, to know the quality of life of the people in the villages, one has to look into infrastructure facilities available in the villages and also the benefits of various schemes availed by the population living in rural sector. Thus, it becomes necessary to identify the quality of life of the people in villages, which ultimately depends on amenities available to the villagers. For betterment of life in rural areas data pertaining to village amenities available to village people become an essential tools for policy decisions. National sample survey Organization conducts the different nationwide survey to collect the information on various subject tendered by Governing Council and State follows the same for state sample. In the 58th round the countrywide information on facilities in villages together with information on availability of facilities to the disabled persons were collected.

3. “*E-Gram Yojana Government Sheame*”<sup>3</sup>

Mission E Gram – Viswagram provides for electronic issues of certificates which include certificates of birth, death, income, caste, domicile, property, residence proof, agriculture, tax collection, marriage, family information and land ownership. A digitalized databank is in operation for issuance of the abovementioned certificates at the village level, which is the lowest administrative unit of Indian Governance. In the phase wise manner of the e- Gram Mission all 13693 village panchayats are in a position to provide basic and very important services to their citizens in Gujarati vernacular

language with the availability of VSAT connectivity. To leverage IT resources at the village level, E-Grams are being operated through Village Computer Entrepreneur (VCE) on a revenue sharing basis under Public Private Partnership model. This innovative mechanism is ensuring prompt services to the citizens; providing opportunity of an additional income to the village panchayats and generating self-employment opportunities for the rural youth. VCE also provide commercial services through computer, internet and telephones. In nutshell the e-Gram along with Internet connectivity operated through a VCE - the e- governance business model of Gujarat has started functioning as a Village Knowledge Centre or Common Service Centre as conceived by the Government of India.

Effectiveness Some important perspective shifts in delivering the services are the backbone of this Office of Development Commissioner's initiative. "Every rural citizen matters agenda" brought the universal coverage of the initiative and the timely execution to ensure responsiveness of the government guided the implementation of the E Gram.

#### 4. "Nirmal Gujarat Mission 2012"<sup>4</sup>

The purpose of this exercise is to assess the success rate of the Nirmal Gujarat programme, a statewide campaign focused on sanitation and cleanliness, launched in 2007 by the Government of Gujarat. Given the wide span of the drive, the present study focused on certain initiatives as directed by the Nirmal Gujarat Mission; accordingly, this study sets out to identify:

- The impact of Nirmal Gujarat on sanitation standards in slums, including the effects of the drive on eradicating open defecation
  - The campaign's impact on the level of cleanliness in urban areas from the point of view of citizens
  - The impact of IEC ( Information education communication) and EE ( Environmental Education) Programmes
- On:-
- Citizens' awareness of the importance of cleanliness
  - Citizens' rate of participation in Nirmal Gujarat schemes

#### 5. "Saansad Adarsh Gram Yojana (SAGY)"<sup>5</sup>

On 11th October, the birth anniversary of Lok Nayak Jyoti Prakash Narayan ji, following the footsteps of Gandhiji, we intend to translate the concept of Gram Swaraj into reality through the Saansad Adarsh Gram Yojana. Under the visionary guidance of Shri Atal Bihari Vajpayee, the NDA had vowed to bring economic opportunities closer to India's villages, through building roads and providing amenities at city standards. I had been closely associated in the conceptualization of the Pradhan Mantri Gram Sadak Yojana (PMGSY) which has contributed to better road connectivity in rural areas. Today, under the able leadership of the Hon'ble Prime Minister Shri Narendra Modi Ji, we carry on the commitment and pledge to bring development right to the doorstep of our villages through the Saansad Adarsh Gram Yojana (SAGY). The SAGY will keep the soul of rural India alive while providing its people with the physical amenities to enable freedom of choice to shape their own destiny. The Scheme is unique and transformative as it has a holistic approach towards development.

It envisages integrated development of the village across multiple areas such as agriculture, health, education, sanitation, environment, livelihoods etc. It seeks to not only provide physical infrastructure and access to basic amenities but also improve the standard of living, enrich social capital and build community spirit. These are the ingredients that will ensure long term positive change and sustainability of this change.

## V. LOCATION

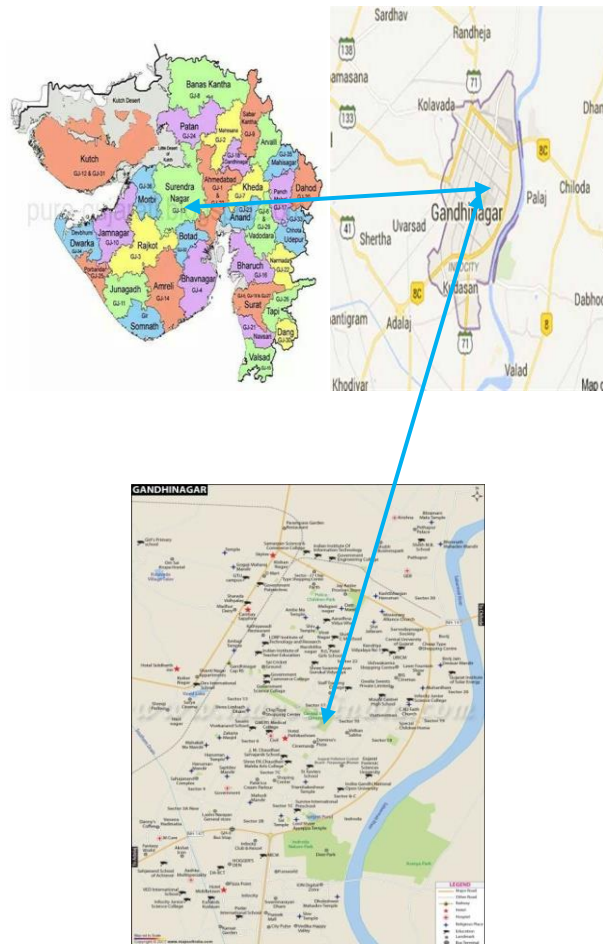
Kolavada is a Village in Gandhinagar Taluka in Gandhinagar District of Gujarat State, India. It is located 3.7 KM towards East from District headquarters Gandhinagar. Urban areas around Kolavada village are Sonipur, Sardhav and Rupal, Moti Adaraj. Nearest town from Kolavda village is Sonipur and it is 2.4 km away from Kolavada. The village is known for its communal harmony.

Kolavada village is situated on 23.2711934 latitude and 72.6121294 longitudes. Nearest town from Kolavada village is Sonipur and it is 2.4 km away from Kolavada. Kolavada Village is situated at Gandhinagar Taluka in Gandhinagar District of Gujarat State, India. Kolavada is the village of the Gandhinagar and near to be connected Sonipur, It is located 2.4 km west of the city Gandhinagar, Sardhav, and Rupal are the neighbour villages of Kolavada

**PIN:-** 382021

**District:-** Gandhinagar

**State:-** Gujarat



**Fig 2:- Location And Layout Study Area**

## **VI. DATA COLLECTION**

### **1. Primary survey details:-**

Primary survey is done in order to collect the basic information about various facilities available in the village. In this survey data is collected by various means like survey, by interviewing people, school teachers, shop keepers, and other public. Accuracy of this data is not sufficient means that data based on primary survey is not reliable or very accurate. Variances in the data happened due to different views of people. We checked the infrastructure condition of different buildings like school, gram-panchyat, p, banks, etc. And also check the condition of various basic amenities like water supply, drainage, electricity, solid waste management, railway station, bus station, hospitals, PHC, etc.

### **2. Secondary survey details:-**

Secondary survey includes data collection from various government offices like gram panchyat. We collect the data related total population of the Kolavada village , male female ratio literacy rate of village , growth rate , number of

schools, various government schemes running for village development, area of Village, Lighting facilities Sawchitta, Sanitation Facilities water supply source for drinking etc.

➤ **Drinking water:-**

Pure drinking water is supplied through underground pipes in easy way from Narmda River to the elevated storage tanks (fig 2) and from tank it is supplied to the village. As per standard data of NBC code, 100 liters of water is required for per person per day in village area. Total 1712200 liters of water is needed for whole village per day. This is sufficient for the whole village.



**Fig 3:- Elevated storage Tank (1 lakh Litres)**

➤ **Road Network:-**

A good approach road to reach Kolavada village is available in bed condition. Streets are in Not acceptable condition in village .Internal streets are in fair weather condition and not suitable in all weathers like monsoon. Quality of internal streets is needed to be improving.



**Fig 4:- Approach Road**



➤ **Bus Station:-**

A Bus-station is available in Kolavada village near bazar area. Infrastructural condition of bus-stand is very poor accordingly to the village population and it need to be improve.



**Fig 5:- Bus Station**

## **VII. FUTURE OUTCOME**

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.

## **VIII. CONCLUSION**

1. The visual observation for Facilities Not Available to provide good facilities in the village. .
2. The poor condition in the village to providing facilities and become a smart village.

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