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SMART VILLAGES & SOCIO-ECONOMIC DEVELOPMENT OF THE NATION

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ABSTRACT- ***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. 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. 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. The Smart Village concept will be based on the local conditions, infrastructure, available resources in rural area and local demand as well as potential of export of good to urban areas. The present paper examine motivation behind the concept on 'Smart Village' is that the technology should acts as a catalyst for development, enabling education and local business opportunities, improving health and welfare, enhancing democratic engagement and overall enhancement of rural village dwellers. In the Indian context, villages are the heart of the nation. So we can achieve socio economic development of the Nation by enlarging the concept of smart villages on improving pattern.***

KEYWORDS: Smart Village, Information Technology, socio-economic development, Components of Smart village, Strategies in Smart Village, Sustainable Development.

INTRODUCTION:

Villages are the heart of the nation. Hence, for the development to percolate to the grass root level, focus must be devoted to the progress of villages and to smarten the rural population using ICT solutions to achieve self sustainability. A rural area is a geographic area that is located outside cities and towns, while rural areas are also known as 'village' in India. In these villages, agriculture is the chief source of livelihood along with fishing, cottage industries, pottery, etc. According to the Erstwhile Planning Commission of India, a settlement with a maximum population of 15,000 is considered as 'Village'. Much of India's rural population lives in nucleated villages, which most commonly have a settlement form described as shapeless agglomerate. India being a rural dominated country, the smartness concept is not even thought about the rural areas. All areas which are not categorized as urban area are considered as rural area. Number of rural units or villages in India has increased from 6, 38,588 to 6, and 40,867. According to 2011 census, rural area has population of 68.84%, whereas urban area has population of 31.16% only. Hence, for the development to percolate to the grass root level, focus must be devoted to the progress of villages and to smarten the rural population using ICT solutions to achieve self sustainability. Imbalanced growth between rural and urban landscapes leads to the challenge of rapid urbanization in already crowded Indian urban masses. One of the main consequences of uncontrolled urbanization is lack of livelihoods, good standard of living and amenities in the villages of India. Smart village concept may play crucial role in maintaining the balance between the development of rural and urban areas and help to reduce migration of rural population in urban areas. The 'Smart Village' concept aims to realize its goal through providing policymakers with insightful, bottom–up analyses of the challenges of village development. A 'Smart Village' will encompass a sustainable and inclusive development of all sections of the village community, so as they enjoy a high standard of living.

THE CONCEPT OF SMART VILLAGE:

The concept of 'Smart Village' will also address the multiple challenges such as unplanned urbanization, under-development of villages, migration for economic pursuits, better standard of living etc. Based on various programs undertaken taken by Central and state governments along with further technological initiatives, the Smart Village can

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achieve SMART infrastructure, SMART service delivery, SMART technology and innovation, SMART institutions along with optimal mobilization and utilization of available resources, leading to faster and more inclusive growth.
The concept of SMART Village is as defined below;

S	Social, Skilled and Simple	Zero Tolerance for Caste and Creed or better no caste & creed and no discrimination on Gender and Religion Everyone is Literate and skilled Simple living and high thinking
M	Moral, Methodical and Modern	Moral values of Gandhiji, Swami Vivekananda etc Methodical using Total Literacy and latest techniques Modern like cities
A	Aware, Adaptive and Adjusting	Highest level of awareness on global social & economic issues Adaptive and adjusting to fast changing environments
R	Responsive and Ready	Responsive to collective wisdom, cooperative movement & larger social issues Ready to generate own resources for self-sufficiency and self-reliance
T	Techno-Savvy and Transparent	Techno-savvy for IT and Mobile usage Transparent in harmonic relations and delivery of services

OBJECTIVES:

To achieve the 'Smart Village/Ward' status, the community, individually and collectively, will be empowered to take smart decisions using smart technologies and with the support of smart manpower and by managing to be self-sufficient. Partner(s) will be encouraged to bring in innovative ideas, technology and resources and disseminate information on best practices to facilitate and accelerate the process. The following are some of the main objectives of Smart village;

- *To provide global means to local needs*
- *To use the potential of IT to maximize the benefits for the rural community*
- *Analysis of the villages on various socio-economic parameters at a micro as well as macro level;*
- *Improving the literacy rate of the villages by reducing the dropout rate;*
- *Maximizing the Employment Potential by providing the profiles of rural youth to the potential employers in India and abroad;*
- *Improving the economic conditions of the Semi-skilled and Un-skilled labor by publishing their availability status on the Internet;*
- *Providing updated information and databanks to the Government for better analysis and individual profiling;*
- *Disseminating the information about various Agro-based Schemes and connectivity to the initiatives like AGRIS-NET, AGMARK-NET etc;*
- *Web-based Career Counseling for the rural community by providing information on various courses;*
- *Providing databases on demand to the manufacturing organizations dealing in Agro-based products and implements like Tractors, Manures, and Fertilizers etc.*
- *To set up a Global Rural Development Grid (GRDG) by sharing information, ideas and solutions*

SOCIO-ECONOMIC DEVELOPMENT: Socio-economic development is a process that seeks to identify both the social and the economic needs within a community, and seek to create strategies that will address those needs in ways that are practical and in the best interests of the community over the long run. The general idea is to find ways to improve the standard of living within the area while also making sure the local economy is healthy and capable of sustaining the population present in the area. Socio-economic development occurs in neighborhoods in metropolitan areas, sections of smaller cities and towns, and even in rural settings. There are a number of factors that must be considered as part of any socio-economic development effort. Understanding the current circumstances that prevail in the area is the first step toward regional development.

NEED FOR SMART VILLAGES: The village communities are little republics, having nearly everything that they want within themselves, and almost independent of any foreign relations. In the development process, there will be many changes in the demand and supply of various needs, as rural population will pass through the process of change. At present, one of the major challenges in India is growing population and rapid urbanization. This urban growth to certain extent is unavoidable as the economic pursuits and aspirations of the population do change and evolve. This needs to be reversed and suitably managed through a balance between rural and urban quality of life. The concept of 'Smart Village' will address the multiple challenges faced for sustainable development of rural India.

The 'Smart Village - Smart Ward' program would adopt the following approach in achieving its objectives:
1. Engaging with and mobilizing the community for participatory local level development
2. Converging government schemes and private and voluntary initiatives with people's aspirations and local potential to achieve comprehensive development
3. Leveraging the leadership, capacity, commitment and energy of the Partner, who volunteer to join in this task

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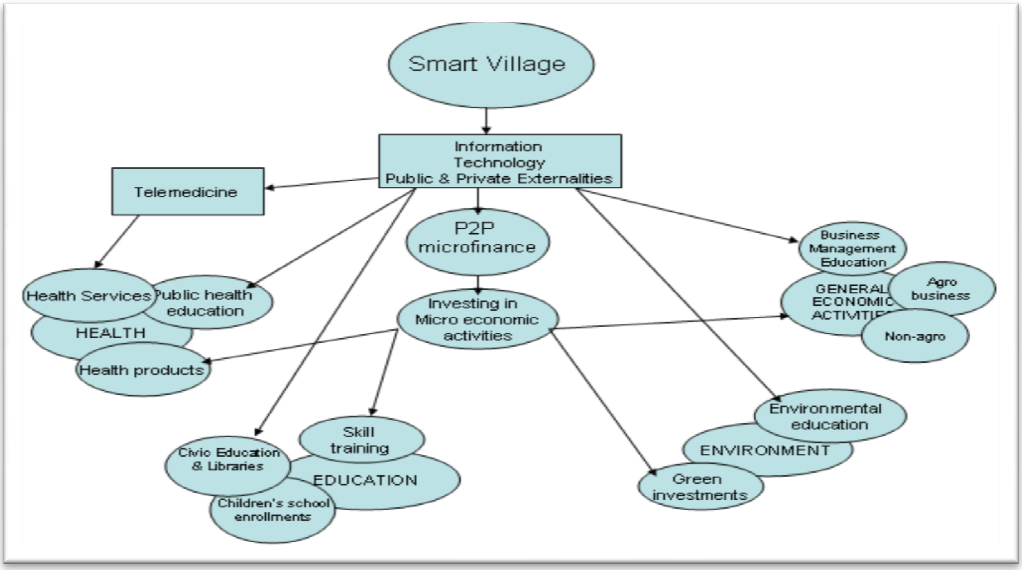
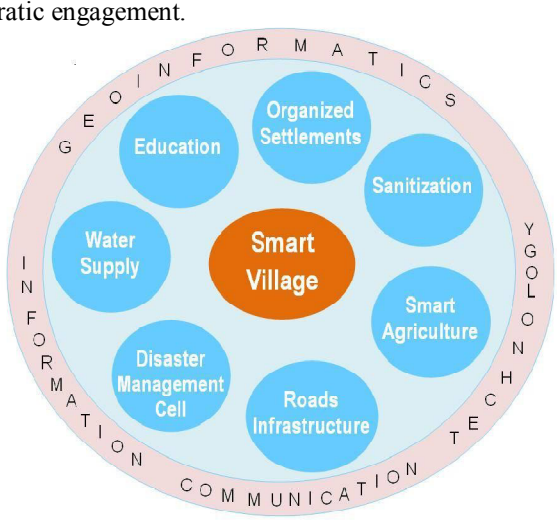
4. Building partnerships with voluntary organizations, co-operatives, academic and research institutions
5. Attention to a life cycle approach
6. Focusing on outcomes and sustainability
7. Above all a participative approach of the GP/Ward with partners to develop and manage for self reliant development



In Smart Villages access to sustainable energy services acts as a catalyst for development – enabling the provision of good education and healthcare, access to clean water, sanitation and nutrition, the growth of productive enterprises to boost incomes, and enhanced security, gender equality and democratic engagement.



GOVERNMENT'S VISION FOR SMART VILLAGE: t is growing fact that the rural population is suffering more consequences for livelihood as compared to urban areas. The difficulties of livelihood may be forcing rural population to migrate to the urban areas. The government has already recognized this issue and has put serious efforts through various schemes for enhancing livelihood of rural masses. Presently, rural development mainly focuses on poverty alleviation, better livelihood opportunities, provision of basic amenities and infrastructure facilities through innovative programmes of self employment. The population residing in the rural area also needs the same quality of life as enjoyed by people living in sub urban and urban areas. Better livelihood in rural area may reduce disturbing effects of poverty, unemployment and inadequate infrastructure on urban centers causing slums and consequential social and economic tensions. Hence, rural development is concerned with economic growth and social justice, improvement in the living standard of the rural people by providing adequate and quality social services and minimum basic needs becomes essential. Such rural development not only improve livelihood in rural area, but also may reduce the migration of rural population in urban areas for employment and reduce pressure on urban infrastructure.

GROWTH STRATEGY FOR SMART VILLAGE:

1. *Formulate Growth Strategies for the village to make it self-sufficient taking into account the investment climate and protecting native occupation and heritage of the village*

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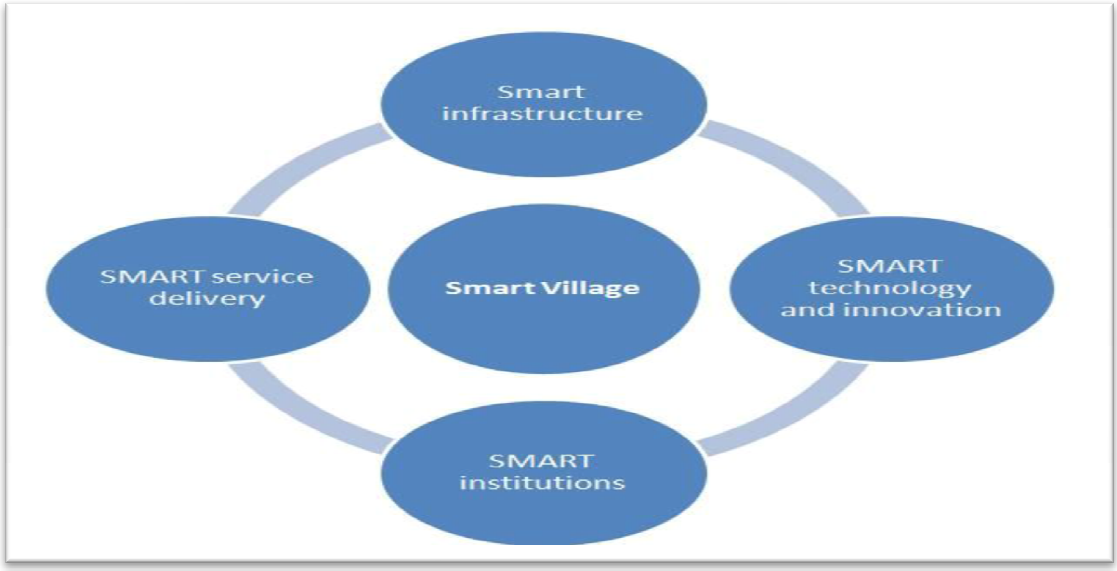
2. *If a village is a tourist location, then the growth strategies should be aligned towards restaurants and hotels, transportation services like cabs or buses, vocational training to act as guides, security, working as chefs in restaurants or kirana shops selling the unique products made in the village, pharmacies and hospital services in a mobile van etc.*
3. *The residents can be trained in providing these services and the funding agencies, Micro finance Institutions or NGOs can be approached.*

Following are some generalized guidelines for the development of Smart Villages

1. **Economic Component:** This component will include local administration and economic factors. It will cover governance models, bandwidth, mobility, cloud computing, entrepreneurship etc.
2. **Environmental Component:** This component will address the issues related to resources and infrastructures available at local level. It may covers cleaner technologies, public and alternative transportation, green spaces, smart growth, climate change etc.
3. **Social Component:** This component may address issues related to community life, participatory democracy, social innovation, proximity services etc.



COMPONENTS OF SMART VILLAGE

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 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.

GOVERNMENT PROGRAMS FOR THE VILLAGES;

Major Programs in Agriculture

- *National Agricultural Development Program*
- *Accelerated Irrigation Benefit Program*
- *Fertilizer Subsidy*
- *Bank loans, Free Electricity!*

Major Programs to Improve Employment

- Public Distribution System
- Mahatma Gandhi National Rural Employment Guarantee Scheme
- National Food Security Bill!

Major Programs & Partnerships to Improve Nutrition Security

- Mid Day Meal Scheme
- Integrated Child Development Scheme (ICDS)
- Annapurna Scheme (Ministry of Rural Development) for senior citizens
- The Nutritional Program for Adolescent Girls – Emergency feeding program (in eight districts in Orissa)

Smart City-Smart Village program;

The Smart Village program in turn, will realize functional needs for self-sustained energy, clean water and waste management, in off-grid areas.

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For villages with ready basic infrastructure, ICT solutions will serve as enablers for connectivity between communities and provide remote access for E-Learning, E-Health and E-Business, which will further catalyze socio-economic growth. This 'Smart Cities and Smart Village Status' program will provide opportunities through inducing new focused market for technopreneurs/SMEs in ICT and green technology development by providing strategic enablers such as incentives, etc.

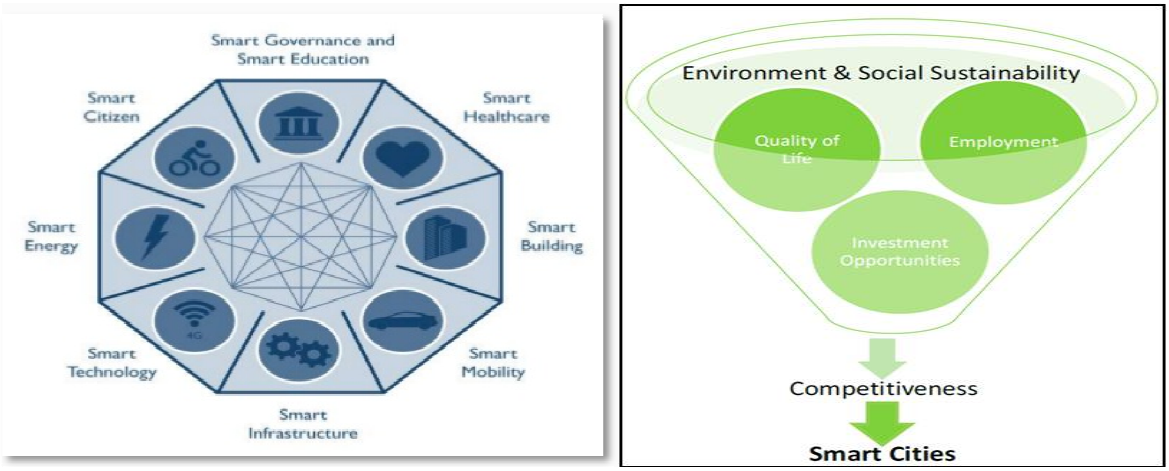
The key objectives of the Smart City-Smart Village program are as follows:

- To accelerate economic growth by providing connectivity and information/knowledge sharing towards increased productivity,
- To significantly enhance quality of life for the Rakyat in a safe and secure environment to live, work, learn & play,
- To support a greener environment for social & economic sustainability through improved resource planning.

Future generations will contribute immensely in development process and enjoy the traditional agriculture activity with the use of modern technology. Following are some potential areas, where Smart Village may create measurable and significant impact;-

- **Organized Settlements:** The village population is distributed in a staggered manner and they are not well-connected to the village roads. These may be re-distributed preserving proper zones for habitation, play ground, agriculture land & areas to develop various infrastructures like bio- fuel generation centre, overhead water tanked.
- **Smart Agriculture:** In order to increase the quality and quantity of agricultural production is using 'Sensor' technology to make farms more 'intelligent' and more connected through the so-called "Precision agriculture" also known as 'smart farming'.
- **Road Infrastructure:** GIS analysis ensures all the houses in rural areas are well connected through rural road.
- **Smart water supply:** There should be provision for water supply for agricultural, household use and drinking. This may facilitate effective and judicial utilization of the surface and ground water resources.
- **Smart sanitization:** Smart equipments may be adopted in rural areas to facilitate disease free villages.
- **Education:** GIS analysis may be carried out to find suitable locations to establish state-of-the art education hubs for the villages. Virtual classroom facility may be provided to use the benefit of available experts at other locations.
- **Disaster management (DM):** Villagers are easily affected by disasters due to lack of preparedness. DM cells may be set up at the panchayat level to address all the disaster related issues. DM cell will connect to the National Disaster Management Authority (NDMA) through the central server for monitoring the future scenarios.

SMART CITY CONCEPT



India's central government launched their Smart Cities Mission last year, a huge urban renewal and retrofitting program with a mission to develop 100 cities all over the country making them citizen friendly and sustainable. Under Prime Minister Narendra Modi, the government's vision is the development of 100 smart cities as satellite towns of larger cities and modernization of existing mid-sized cities. From the following figure we can understand easily ten things that make cities smart in the Nation.

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10 THINGS THAT MAKE CITIES SMART

SMART VILLAGE - SUSTAINABLE DEVELOPMENT;

A developed urban area that create sustainable economic development and high quality of life by excelling in multiple key areas; Economic, Mobility, environment tournament, people, living & living and Govt. excelling in these key areas can be done so through strong human capital, social capital and/or ICTs infrastructure(Information and communications technologies).Imbalanced growth between rural and urban landscapes leads to the challenge of rapid urbanization in already crowded Indian urban masses. One of the main consequences of uncontrolled urbanization is lack of livelihoods, good standard of living and amenities in the villages of India.

CONCLUSION:

On basis of above information we can say that the government will focus on climate change, smart energy, agriculture, and water in the development of smart villages. Smart village development will come about in the state in coordination with Environment Planning and Coordinating Agency (EPCO). Taking education, skill for vocations etc to villages can well channelize the energies of the youth as a powerful tool for the nation. An educated rural youth will be an asset to the country and even if he shifts to a city he shall prove to be an asset rather than a burden as is happening now. India needs educated population and not literate but uneducated otherwise all the smartness of cities or villages will result in failure. The idea of 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 km of land is way above the desired norms. To take baby steps initially would lead to a campaign at National level once the fruits of this effort start bearing fruits, which surely would be visible for all to see sooner than expected. And it promotes socio economic development of the Nation.

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