PLANNING ASPECTS FOR BETTERMENT OF SMART INDIAN VILLAGE

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Abstract – *This paper defines various requirement characteristics, different programs for villages in context of Indian scenario, strategic development formulations, and various core aspects of development of smart village. 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 by various technological means. This attempt for developing village is for welfare of society and environment as well.*

***Key Words*: Smart village, Ideal Modern technology, Rural Development, Integrated Measures, Rurban Development, Rejuvenation, Sustainability**

1. INTRODUCTION

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 income along with fishing, cottage industries, pottery, etc. According to the Indian Planning Commission, 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 unplanned 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 are approx 6, 38,588. According to 2011 census, rural area has population of 68.84%, whereas urban area has population of 31.16% only.

In the Indian context, villages are the heart of the nation. Hence, for the overall development of the country the focused must be given to the grass root level, and that means the focus areas should be the Indian village. There is a large scale migration of the people from rural areas to urban areas, which has its own risk parameters on the urban areas, and still there are many villages in India with heavy population. So the main aim to smarten the villages by offering basic facilities, education, employment generation activities, technology etc. The vision of Mahatma Gandhi – "The best, quickest and most efficient way is to build up from the bottom. Every village has to become a self-sufficient republic. This does not require brave resolutions. It requires brave, corporate, intelligent work which is to make it smart.

2. AIMS OF SMART VILLAGE

To provide global means to local needs to make village Rurban consisting of Rural Soul and Urban Facilities.

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 drop out 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 labour 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

To share integrated development process with urbanization trends.

To set up a Global Rural Development Grid (GRDG) by sharing information, ideas and solutions.

3. CONCEPT OF SMART VILLAGE

There is no universally accepted definition of a smart village. It means different things to different people. The conceptualization of Smart Village, therefore, varies from country to country, depending on the level of development, willingness to change and reform, resources and aspirations of the village residents. A smart village would have a different connotation in India than, say, Europe. Even in India, there is no one way of defining a smart village.

Smart village is an "Ideal Village With Technology". Ideal village deals with the proper availability of service to people to their means regardless of achieving their means while in smart village conceptualization it is needed to properly define

role of technology for sustainable development for various achievement of goals for village development.

Fig -1 : S.M.A.R.T. Village

Figure above shows various aspects in terms of S.M.A.R.T. village should follow in its planning and delivering of service.

4. ATTRIBUTES OF SMART VILLAGE

Promoting mixed land use in area based developments– planning for 'unplanned areas' containing a range of compatible activities and land uses close to one another in order to make land use more efficient. The States will enable some flexibility in land use and building bye-laws to adapt to change;

Housing and inclusiveness - expand housing opportunities for all;

Creating walkable localities –reduce congestion, air pollution and resource depletion, boost local economy, promote interactions and ensure security. The road network is created or refurbished not only for vehicles and public transport, but also for pedestrians and cyclists, and necessary administrative services are offered within walking or cycling distance;

Preserving and developing open spaces - parks, playgrounds, and recreational spaces in order to enhance the quality of life of citizens, reduce the urban heat effects in Areas and generally promote eco-balance;

Promoting a variety of transport options - Transit Oriented Development (TOD), public transport and last mile para-transport connectivity;

Making governance citizen-friendly and cost effective - increasingly rely on online services to bring about accountability and transparency, especially using mobiles to reduce cost of services and providing services without having to go to municipal offices. Forming e-groups to listen to people and obtain feedback and use online monitoring of programs and activities with the aid of cyber tour of worksites;

Giving an identity to the main locality - based on its main economic activity, such as local cuisine, health, education, arts and craft, culture, sports goods, furniture, hosiery, textile, dairy, etc;

Applying Smart Solutions to infrastructure and services in area-based development in order to make them better . For example, making areas less vulnerable to disasters, using fewer resources, and providing cheaper services.

5. STRATEGIC ECOSYSTEM FOR SMART VILLAGE

Smart Village as a bundle of services like Smart Education, Smart Infrastructure, Smart Environment, Smart Agriculture, Smart Health , Smart Connectivity and Smart Security which are delivered to its residents and businesses in an effective and efficient manner. integrated planning with monitoring and execution of the activities using appropriate governance models.

The smart village is a formation resulting from co-evolution of four distinct forces and innovations these four sectors.

They include

- Modular services and Modular service chains

- Service delivery technologies such as logistics and IT and their mechanisms

- Institutions that influence the governance and regulations

- Resources and their management

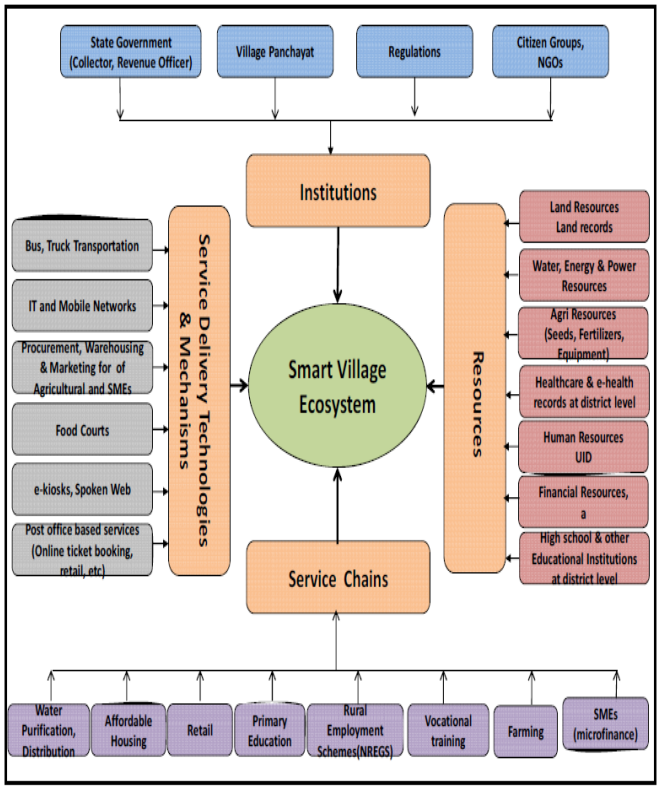

Fig -2 : Smart Village Ecosystem

The basic services offered to the rural residents are supply of purified water, affordable housing, primary education, vocational training, help in farming techniques, procurement of seeds and fertilizers, training and employment opportunities in SMEs like leather, crafts, food processing units, retail / kirana shops. The services delivery technologies and mechanisms like road transportation by bus/truck ; IT and mobile networks; procurement, warehousing and marketing for agricultural and SME produce; Food Courts; e-kiosks for bill payment; applications like Spoken web for commodity price broadcast, social networking, etc; post office based services like ticket booking, e-purchase, etc need to be developed.

Existing infrastructures like post offices can be used as village information centers that provide all the information from market prices of various commodities, advice related to agricultural, animal husbandry or health related issues, educational information for students of class X and XII, employment opportunities, career guidance for young people, to online applications for pan card, driving licenses, tax and bill payments etc. They can also have a call centre based regular monitoring and grievance system so that their complaints are attended to. This calls for a lot of awareness and training in the initial phases to educate and make people acquainted with the new systems. Vocational training has to be provided on a large scale to make them familiar with IT, maintenance of records, operation of the equipment and managing their finances.

Proven initiates such as micro finance need to be nurtured more strategically in rural areas. Insurance schemes like crop insurance, livestock/cattle insurance, health insurance, life insurance, insurance in case of natural disasters etc should be provided.

There is a huge gap between the skills needed to work in the agriculture sector for low wages and those needed for working in services such as health care, plumbing, brick making, or other more skilled occupations where the wages are higher. The governments have identified about 400 needed skills including in maintenance, operation and repair of various systems so that the village can be self sufficient. We must fundamentally innovate, develop new pedagogical tools, and apply technologies in ways that it has not been applied anywhere else in the world.

7. GOVERNANCE OF SMART VILLAGE

Information and Communication Technologies (ICT) play an instrumental role in the governance of a Smart Village. ICT can help in streamlining the existing processes and interaction and communication across all levels of people involved in Governance of the Smart Village.

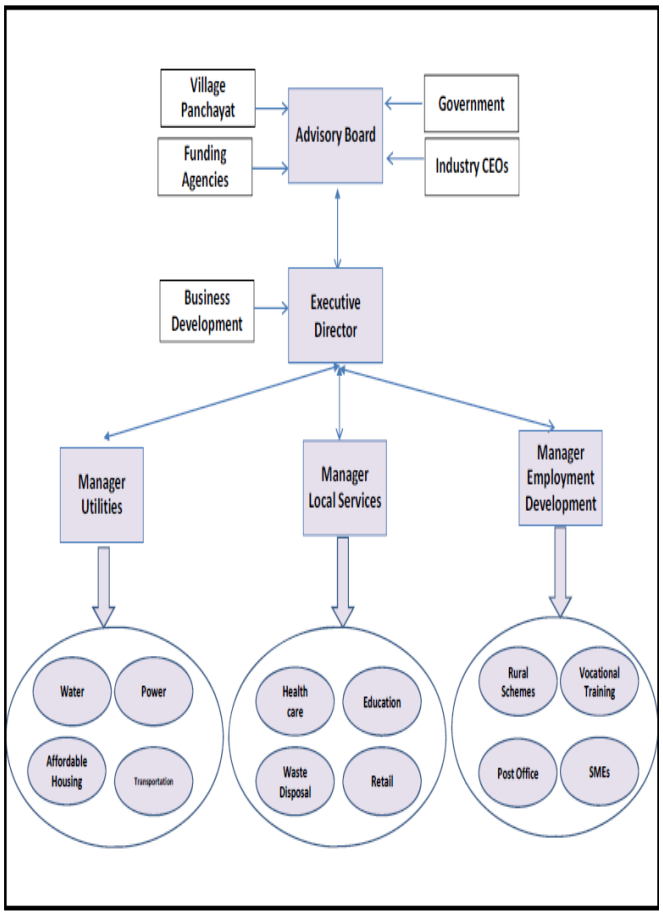

Fig -3: Governance Of Smart Village

New technologies like Cloud Computing in Smart Data Center can be adopted to maintain huge amounts of data at village level or by groups of villages at district level.

This can avoid Operation and Maintenance (O&M) overheads of huge servers at the village level where not much talent would be acquainted with the rigorous server operations. This can ease the work involved in governance, giving the opportunity to focus on the core governance of the village. The execution of various services can be monitored and controlled using remote call centers with trained employees. However ,once the governance models are used to orchestrate various services, performance must be measured and monitored in their overall impact..

8.PROGRAMS FOR VILLAGE DEVELOPMENT IN INDIA

Ministry after a lot of brainstorming under the leadership of Honorable Prime Minister came up with a program named as Shyama Prasad Mukherji Rurban Mission (SPMRM). The main objective of the program was to make the villages smart and as growth centres of the nation. Through this program, government intended to breathe life into the statement "The soul of India lives in its villages" given by father of the Nation.

In maiden independence day speech, Prime Minister Modi took the opportunity to announce the Saansad Adarsh Gram Yojna (Parliamentarian's Model Village Scheme), under the new scheme, each parliamentarian is mandated to adopt three rural villages and ensure that these village are transformed in to "Smart Villages" by 2019.

Villages will be backed up by the provision of basic amenities that are often only available in urban areas and a social security system. This new drive will provide more opportunities to report on exciting developments undertake fruitful collaboration with other partners and disseminate impactful findings that can benefit off-grid communities far beyond India.

Major Programs in Agriculture

National Agricultural Development Program

Fertilizer Subsidy

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)

Swatchh Bharat Abhiyan : Total Sanitation Initiative

Integrated Rural Development Program is the main project under which above all and many more scheme falls.

9. CONCLUSIONS

" India Lives In Its Village" stated by Gandhiji himself tell us that if you want to develop the nation , you must start from village level development in which major agriculture part of India contributes to. Main concern for us is agricultural land , education , employment and technology and research.

Smart Villages are the need of the hour as development not just for rural areas but for integrated urban growth including smart cities as well for better livelihood. Technology will offer effective solution to do so. As we are already facing so many climate change related problems , smartness in technology , ecofriendly environment is must and various framework also needed for governance of various bodies There is a tremendous pressure on urban lands 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 as well .These villages must be designed with rural soul intact with "Design to Delivery".

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. And at most the overall development of the country can be possible with the development of the villages only.

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