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India Needs Smart Villages More Than Smart Cities for Better Tomorrow

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ABSTRACT

A total of 70% population of India lives in villages and the youth belongs to this segment are passing through a dramatic psychological turmoil. The invasion of bedroom from the skies in the form of television and the advancement in telephony through internet has given them minded the dreams that were not thinkable few years ago. However, the ground realities around them by the way of minimum educational avenues, minimum basic needs of life and same age old shabby surroundings are deterrent for their talent and the dreams to take shape and flourish. The ratio of school dropouts at school or college level is quite high amongst the rural youth which is negatively impacting the education policy and targets of the Govt. Added to this is the non-availability of vocational avenues in rural environs which is further adversely affecting the aspirations of the youth from the rural areas. All such youth with little education, no vocational skills and passing through utter poverty, find their way to nearest urban cities or large cities where they migrate to find some source of livelihood. This has two major negative impacts (education and vocational skill) on the country and also on the youth of rural background. The concept of 100 smart cities is definitely an eye catcher and welcome move by the Prime Minister and should be pursued in the right earnest. Smart villages' concept is engaged in efforts to combat the real barriers to energy access in villages, particularly in developing countries with technological, financial and educational methodology. Villages are the small parts of this chain (country) and for the strengths of chain we have to work on its weak and small parts. Now we can say India needs Smart villages more than Smart Cities for better tomorrow.

Keywords: challenges, smart villages, services, solutions, visions, ways forward

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INTRODUCTION

After the launch of 100 Smart Cities Mission, it is time to make Smart Villages. The main objective of this study is to carry out the main challenges for the better tomorrow and towards a vision of the smart village. We will also discuss about how a village play important role in the development of the country. A better understanding of rural realities requires the development of more appropriate and multifaceted indicators capable of measuring more qualitative aspects of urban economic and social life – the environment, economic development potential, cultural assets, etc.

"If the facilities available in the cities are not made available to rural population, the Governments will not have done their duties"
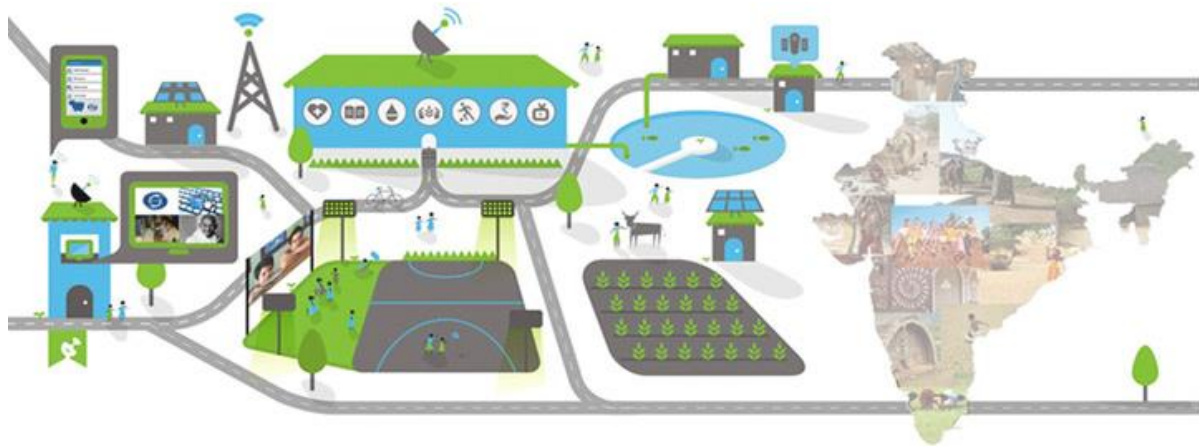
Dr. A.P.J. Abdul Kalam, Former President of India.

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.[1,2]

The concept of smart village is as defined below:

S	Social, Skilled and Simple
M	Moral, Methodical and Modern
A	Aware, Adaptive and Adjusting
R	Responsive and Ready
T	Techno-Savvy and Transparent

Smart village is a small but effective step in country development process. Awareness is the one big thing which will decrease crime. Education and technology will help to grow up. After these changes we will get our smart country.

CURRENT STATE OF INDIAN VILLAGES

There are more than 600,000 villages in India. Without latest sources, villages called backward area of the country. There is no proper water supply, no sanitation, no electricity and not good connectivity with urban areas. It means villagers are not getting their basic needs in our country after 70 years of freedom when technologies are very smart.[3]

On the other hand, the villagers themselves are a powerhouse of large pool of man power. But without sources they cannot do anything. About 600 million people of India live in villages and at least half of them are below 25 years of age. They will become future of India, without education and health.

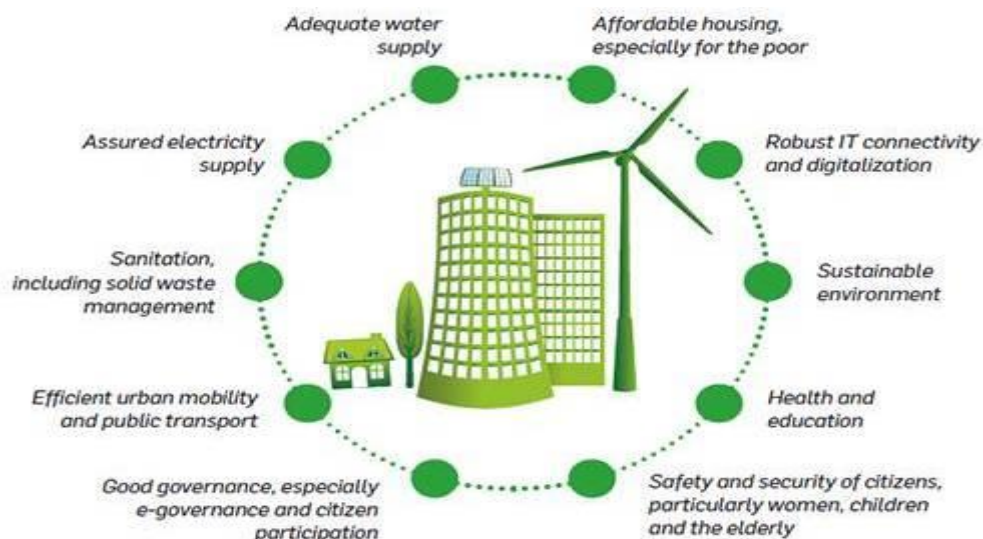It is very necessary to make country developed that
- The new generation of workers should be healthy and educated
- The government move to build social infrastructure (housing, healthcare, schools, colleges and universities)
- In villages, there should be proper water supply, electricity supply with good sanitation
- Villages should be connected to urban areas with good road network

THINGS THAT WILL MAKE VILLAGES SMART

Now here are the some points which are important for smart villages. These are the main features that will make villages smart.
- Health and education
- Assured electricity supply
- Adequate water supply

- Sustainable environment
- Good governance
- Safety and security
- Affordable housing, especially for the poor

- Sanitation, including solid waste management
- Efficient urban mobility and public transport
- Robust IT connectivity and digitalization

HEALTH and EDUCATION

The concept of smart villages should begin with the idea of education of every person is necessary, especially for girls in rural areas. Women play a big role in society. They are responsible for nearly all household duties, from food production to processing to child bearing and family upbringing.

In villages, women are illiterate or semi-literate that means it's a lake of knowledge. Mother is the first teacher and if women will literate then they will also care about health from childhood. That is why we should provide safe environment for schools and colleges.[4]

In villages, there should be good health clinic which have all type of facilities, especially for women with babies. They have to regular visitors to these clinics to get particular benefits.

WHO and central government shall be providing all type of facilities and latest technologies in these clinics.

ASSURED ELECTRICITY SUPPLY

There is a Kerosene lamp (known as LALTAIN in rural areas) mostly used in villages for lighting during night. It burns like candle and it gives off thick dark smoke with semi-defused light. This is very old technique which is used in villages because Kerosene is easily available and very cheap.

The use of these lamps for lighting can be dangerous to human health and life. First reason is air-pollution and second is that Kerosene catches fire easily and it also makes a person difficult to breath.

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When we are discussing on smart idea and sources for villages then Electricity is very good option. Electricity dramatically changes lives. With the help of electricity:

- We can get light for our houses during night
- We can cook the food
- We can entertain ourselves with TV, etc.
- We can connect to the world with computer, etc.

Electricity is also very much useful in Health and education sector. That's why electricity is also a basic need now-a-days. Government has to supply proper electricity to villages.

ADEQUATE WATER SUPPLY
Water is our basic need. 'Water is Life'. Everyone drinks water 4-5L every day. Without water life doesn't exist, without water we can't do our basic activities of the day. Water is necessary for crops and for animals. Water has a main role in environment as well as in our life.

It is very common problem for villages not only in southern villages; it is also faced by northern states. Such as many villages of Rajasthan have very low water level and in summers, women go to miles for drinking water.

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Government must work on it and ensures permanent drinking water security in Rural India. Government have to improve existing drinking water sources and conjunctive use of ground water, surface water and rain water harvesting based on village water budgeting and security plan.

SUSTAINABLE ENVIRONMENT
Environment sustainability is the rates of renewable resource harvest, pollution creation and non-renewable resource depletion that can be continued indefinitely. Basically it is sustainable development, which means sustainable economic growth. Economic Development, Social Development and Environmental Protection are the three pillars of sustainability.

Environmental Sustainability as the maintenance of natural capital and as a concept apart from, but connected to both social sustainability and economic sustainability.

Government has to work on primary Goals of Sustainability and these are following

- The end of poverty and hunger
- Better standards of healthcare and education
- To achieve Gender equality
- Sustainable economic growth

- Sustainability to include health of the land, air and sea…

We do not know till now what our sustainable future look like but with emerging technologies and the improvement of older cleaner fuel sources.

SAFETY AND SECURITY WITH ITS CONNECTIVITY AND DIGITALIZATION

Building and maintaining smart villages is not an easy task. Many things need to be taken into account especially when it comes to Safety and Security. Safe and secure village attracts the investment, business and also skilled labor necessary for economic growth and development. We must secure our village from crime.

With the help of IT solutions we can make sure that everything is safe. Its security solutions help to protect villages and cities against crime, terrorism and civil unrest. It helps law enforcement monitor public areas, analyze pattern, track incidents and suspects, enable quicker response. By combining information from video surveillance cameras, social media, citizen reports and other sensors, the solution provides a richer view of Rural safety.

Here are the benefits of cyber security
- Increase attractiveness to business and workers
- Improve planning and resource allocation

- Reduce crime
- Safer streets and neighborhoods
- Ability to report city safety incidents
- Improved communications about incidents

SANITATION, INCLUDING SOLID WASTE MANAGEMENT

Sanitation is a very big problem in our country. Proper sanitation is also an issue which is barrier in development of India. In India every year diseases increase due to poor drinking-water access and bad sanitation.

In Urban areas, urban dwellers have access to piped drinking water and 90% have access to improved drinking water sources but in Villages, there are very few sources and work is under processing. Because of it villagers face many diseases every year and this is the reason of 10% of all deaths.

AFFORDABLE HOUSING

Affordable housing is a big scheme now-a-days and this is very helpful for low income group and lower middle class group families. Affordable housing is housing deemed affordable to those with a median household income as rated by country, state (province), region or municipality by a recognized housing Affordable Index. Affordable housing refers to housing units that are affordable by that section of society whose income is below the median household income.

Indian cities and villages lack low-income housing, which has resulted in the landscape. Whilst this is detrimental to the planned growth of cities and villages, it is also restrictive to slum dwellers that are

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deprived of basic civic amenities and fail to be an equal citizen.

AGRICULTURAL VALUE

India is primarily agriculture based country with 300 million small farmers and an equal number employed on farms. 12 million Kirana shops supply food to the population employing 30 million people. In this section we consider a case of agriculture based village and apply the Ecosystem framework discussed above to elucidate the concepts discussed.

Agriculture is important for providing food security for the country and is a protected part of the economy through various regulations. The scenario that we presented above is very generic. The supply chain is highly inefficient and lots of food is wasted away. The food inflation is another worry. On the other hand, India is well endowed with highly fertile land and live rivers and good climate. 51% of our land is cultivable whereas the global average is 11% and we have good seasons to produce all the fruits and vegetables that can be produced anywhere in the world.[5,6]

EFFICIENT URBAN MOBILITY AND PUBLIC TRANSPORT

Good public transport systems are an important part of safe, clean and affordable transport for development in country. According to a social perspective, public transport is often the only means of transport for the poor.

Without it, they would be able to look at work opportunities only within walking distance of their homes, so this transport improves their livelihood opportunities.

It also gives them greater access to education, health care and recreation. According to an urban mobility perspective, public transport is far more than personal vehicles in terms of the road space it uses up and the energy consumes.

A good public transport must be easy and convenient to use, fast, safe, clean and affordable. A key feature is that they integrate multiple technologies, such as metro rail, light rail, Bus Rapid Transit and basic bus services. A common ticket or fare card serves all the systems will make it easy for passengers to transfer from one mode to other mode. Passenger information systems enable users to understand the routes easily and to know when the next service is due.

GOOD GOVERENCE

Currently the village panchayats are governed by the president and his team. These are elected representatives of the people. But their capabilities are well below those required to build a smart village. The village governance system should have several orchestrators working together along with the people and the businesses. Water, Power and Retail could be orchestrated at the district level for a group of villages, governed by a group of companies. Schools, health care and farming may need local attention. The knowledge based technologies which provide the smartness and the relationship with other stakeholders need to be built by people with entrepreneurial talents. Thus we see building a smart village requires talents available beyond the village or district. We discuss below an organizational structure and assign the responsibilities and that would make a smart village work.

The Governance model we propose is a collaboratory model where in various organizations like Funding agencies, Industries, Business Development units collaborate with Government and local village Panchayts to develop a Smart Village.

AN IDEAL VILLAGE SHOULD HAVE MANY QUALITIES

- An ideal Indian village will be constructed to lend itself to perfect sanitation and drinking water
- It will have houses with sufficient light and ventilation built of local materials
- In which nobody is illiterate, Education will be compulsory up to the final basic course
- Safety and Security should be the key feature
- In which nobody is without work, and which is free from quarrels and thefts
- Where the roads are clean, there is a fixed place for evacuation
- It will have houses of worship for all; also a common meeting place, a village common for grazing its cattle, a co-operative dairy, primary and secondary schools in which industrial education will be the central fact, and it will have panchayats for settling disputes
- There is harmony among the different communities, and untouchability is completely absent

CONCLUSION

This paper has discussed a vision of smart villages, current state of Indian villages and also favors smart villages for better tomorrow. Paper has gone through two steps- Vision of smart villages and things which make village smart. Also discuss about qualities of an ideal village. The conclusion supports the smart villages more than smart cities as well as a solid knowledge base need to development of country. Social, economic and environmental challenges have to be addressed with smart solutions. Now there is no dying fact that we need smart villages that provide welfare to the rural folks.

REFERENCES

[1] Smart Villages New Thinking for Off grid Communities Worldwide.
[2] UN-Habitat, "State of the World's Cities 2008-09", 2008.
[3] Smart-village-model proposed by govt. of India.
[4] en.climate-data.org.
[5] Presentation to High Powered Expert Committee on "Sustainable Urban Development in India".
[6] How to make a city great by McKinsey Cities Special Initiative.

BIOGRAPHY

Ar. Avitesh (B.Arch Gold medalist, Abdul Kalam Technical University, Lucknow) is an Assistant Professor at Centre for Architecture, BGI Bulandshahr, Uttar Pradesh, India, won many prizes in her degree such as best student, merit certificates, model making and also winner of bamboo-tech in IIT Roorkee, also got price in 2nd National Conference as well as participated in other architectural events. The areas of research include new trends in construction details and materials, vernacular architecture, sustainable buildings, low cost housing and urban development, transportation, Rural and Regional Planning Development, etc., published four papers in International Journals.