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A REVIEW PAPER ON SOLAR THERMAL ENERGY STORAGE SYSTEM

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ABSTRACT

Every city has the bang on the cost-effective growth of the company. It provides the platform through which services to be provided to the citizen. The main objective of making city smart is to improve the lifestyle of citizen and to maximize the services to them. Companies and governing authorities that are the part of the city are making more emphasis to make smart city so that entire applications and services enabled to citizen. As due to changes in the communication systems and on the other hand variety of development have been made on the improvement of the cities. The older communication systems are now replaced by latest through which we can achieve interpretability and compatibility. To make smart city will not only emphasis on the communication or information exchanging medium but it also includes the transportation and traffic, quality of lifestyle of citizen, government, economics, housing and land used, human resources, population of city, municipal system. In this paper, we will state the issues and challenges to make smart city.

KEYWORD: Smart City, citizen, municipal, traffic, transportation, economic.

INTRODUCTION

We can define smart city by any means. It cannot have the proper definition. We can define smart city in terms of technological, developmental, or administrative terms. A Smart City is nothing but a city which is digitally equipped. With the help of we can able to link physical capital with social one, and to develop effective services and infrastructures. It is intelligent to convey mutually technology, information, knowledge and political vision, into a logical and coherent programme of urban and service improvements. The most important issue mystifying efforts to make cities smarter is not the development of appropriate technologies purse, but to tackle the difficulties in changing organisations and existing ways of working to use these new technologies to deliver smarter cities. The concept of Smart Cities has also been used in different ways: develop business parks; improve the existing education level of the city; the use of modern technologies in an urban context; technological means that increase government efficiency and effectiveness; etc. A clear definition for smart city remains indefinable. There are many advantages in promoting smart cities in terms of national/ country benefits: creating competitiveness, promoting the business sector, improvement of living standards, proper utilization of resources.

Smart Cities, define a Smart City by using six characteristics in which such a city "performs in a forward-looking way": Smart Economy, Smart People, Smart Governance, Smart Mobility, Smart Environment and Smart Living. They use these six concepts to describe specific factors that can be important when describing a Smart City that we have presented in Figure 1.

SMART ECONOMY (Competitiveness)	SMART PEOPLE (Social and Human Capital)	SMART GOVERNANCE (Participation)
▪ Innovative spirit ▪ Entrepreneurship ▪ Economic image & trademarks ▪ Productivity ▪ Flexibility of labour market ▪ International embeddedness ▪ *Ability to transform*	▪ Level of qualification ▪ Affinity to life long learning ▪ Social and ethnic plurality ▪ Flexibility ▪ Creativity ▪ Cosmopolitanism/Open-mindedness ▪ Participation in public life	▪ Participation in decision-making ▪ Public and social services ▪ Transparent governance ▪ *Political strategies & perspectives*
SMART MOBILITY (Transport and ICT)	SMART ENVIRONMENT (Natural resources)	SMART LIVING (Quality of life)
▪ Local accessibility ▪ (Inter-)national accessibility ▪ Availability of ICT-infrastructure ▪ Sustainable, innovative and safe transport systems	▪ Attractivity of natural conditions ▪ Pollution ▪ Environmental protection ▪ Sustainable resource management	▪ Cultural facilities ▪ Health conditions ▪ Individual safety ▪ Housing quality ▪ Education facilities ▪ Touristic attractivity ▪ Social cohesion

Figure 1: Characteristics of Smart City

In its most basic and general interpretation, the idea behind a Smart City should be to improve the lifestyle of citizens and travelers. We can achieve this objective this goal can be reached by increasing efficiency and effectiveness of government, developing user-friendly applications, increasing mobility, providing better health services, motivating economic competence, etc. In order to reach these and many other goals, it is crucial that a city intending to become smart clearly outlines them in policy making, then defines a policy that is founded in research to reach them, and which role(s) the city should play, e.g., as a service facilitator/incubator, service provider, network provider, etc.

ISSUES AND CHALLENGES
The challenges can be summarized into three different categories: Social, Market and Business, and Technical. The grand social challenges include: The communication between the community, the living standard of the peoples, safety of the peoples, awareness in the people, public and private services, healthcare assistance, policy and ethics. As we know that different community peoples are actually living in the city. To make the city as smart city will actually require making the policy for the peoples, to make them aware regarding the same. Market and business opportunities address: new business to be open in the city to the private companies and service providers. We need to also consider the economical growth, pricing strategy, product life cycle, how to scaling up the capital and many more. Finally, the grand technical challenges encompass: geographical localization and positioning; interoperability and maintenance of connectivity context, we will travelling to the multiple networks with mobile devices (e.g., cellular and WLAN, among others); pervasive borderless middleware platforms; configurable, adaptable, secure frameworks, and decision support systems. Technologies for the cities will be upgraded in such a manner through which we can able to control the traffic of the city. Rules and regulations of the traffic will be strictly followed by the peoples of the city. Government needs to arrange more police guards at different signals. Give them a proper facility so that they can reach the destination on time. A broader view can also be taken. The society always demands for new changes. Such changes include an ageing society and ageing workforce, increasing life expectancy, changing family forms with an increase in people living alone. New challenges relevant to these changes have to be faced, such as chronic and degenerative diseases, addictions, obesity, depression, etc. The use of pervasive healthcare systems raises several challenges regarding energy, size, cost, mobility, connectivity, and coverage.

Every city criteria is different and it may follow the different path to become smarter. For an example one police station of Dewas has taken a small change in their police station and all the surroundings will be covered by the latest cameras so that the entire surroundings will be taking care by the police mans. However, there are a number of technologies that will be required for the underlying infrastructure that is needed to help support this process. The technologies that we are actually using in the malls and surroundings will require the privacy and authentication in

the digital market. Smart Cities will integrate wireless technologies and operators, making provision seamless and transparent. Many cities already have fragmented, partial coverage of wireless networks: the next step will be to find ways to help these public and private networks to converge or integrate into citywide networks, which will require both technical developments and regulatory changes. Cities will increasingly move from being service providers to platform ones. This will cover both the development and integration of wireless networks that bridge multiple providers and multiple communication technologies, and the development of infrastructures to facilitate more active and smarter urban networks and applications. By creating these platforms and applications, Smart Cities will provide an infrastructure that enables the development of a broad range of public and private applications and services. Cities and urban networks will need to become increasingly active, aware, and smart, compared to current passive and intelligent networks. We required upgrading the technologies and infrastructures for providing personal and location based services to the peoples. This includes solving the technical challenges of developing new wireless system, knowledge infrastructure, content needed by the citizen, traveler and business oriented people.

AN APPROACH TO SMART CITY
Cities are very important through which we can improve the economy of the government and make the e-government more effective. The development of efficient and effective e-government is a prerequisite for the development of Smart Cities. E-government requires changing the application domain and technological domain. It also addresses the fundamental questions of how city work, how it may be organized and how they can be able to run the business in the efficient manner. More emphasis will be given on the pollution control strategy. The schools and colleges required to organize such events that educate the people about the smart city (in terms of cleanness, traffic rules, the use of latest technologies, new government policies, ethics and many more). The transportation will need to be upgraded in such a manner so that the peoples will not get frustrate. Smart city does also involve the meaning of green city and for that more and more trees have to be planted so that it also reduces the pollution problem. Mainly sewage system should also get rectify. More and more emphasis must be on power saving and generation and for that purpose we can use the alternate source of energy generation like installing the solar panels across the city not only that but saving the fuel is also a big concern. People should also be educated about the healthy life style so they can live a healthy life which is also a smart city basic factor. Point to point connectivity is also essential part of the smart city establishment this generally includes the transportation system. An intelligent transportation system is highly recommended. A city does also need instance healthcare service which can be made available to any part of the city to every citizen for this to achieve we need to fulfill the requirement of smart and improved hospitals equipped with the modern and latest technologies and with enough capacity so that they can even deal with high emergency conditions. Broadband connectivity is must and should be available to each and every part of the city so it can not only support but play a vital part in successful E- Government and management. E-economy is also part of this in which citizen can pay their bills or submit any application or query to the government officials directly and for this purpose they must educated firstly about using all these services efficiently. Basically we must also concern that this whole thing should be partial with the citizens and they must be the key factor of this whole process. Their opinion about each and every policy or service must taken into account before applying it.

CONCLUSION
Smart city is actually couple of decade old concept basically applied in developed countries but for India it is still a new one. From past few years lots of government policies are being created and executed towards this mission. The concept not only focuses on the cities but also the life style of each and every person living in. Authorities and companies involve in this regards are not only making the various services and application available to the citizens but also imparting the rules and regulations as well. This particular vision requires a prominent city infrastructure map with all its diversities so that a final action plan can be developed. Main concern in this regard is citizen's security and privacy. Before applying any of the rules and regulation we must first take this into consideration that it should not violate any of it. The citizens need to feel secure while the smart city ethics are being applied. Every aspect of this also includes social and political impact of government. Smart city means Smart Economy, Smart People, Smart Governance, Smart Mobility, Smart Environment and Smart Living. These are the six basic qualities that every city should contain. Main focus should be on economical balance, healthcare services, E- Government, policies and decision, smart transportation facility basically connecting each and every point of the city, Green and healthy environment and way of living. Each of these points are not the straight forward approach to achieve the final goal or aim but procedure must be planned for achieving them. New and new challenges arises while developing a smart city some of them are conditionally generated and others are citizen related problems. All these challenges are meant to

be dealt soon enough so that the major focus require to apply the various policies and establishment of the new infrastructure onto the old one can be done without disturbing the basic foundation of the ethical values of the society.

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