

**PROPOSAL FROM INTERNATIONAL HINDU SCHOOL,  
NAGWA, VARANASI** 

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## 1. Smart Cities:<sup>L</sup><sub>SEP</sub>

Cities enable cohabitation of their residents and foster them to interact with each other. From the time of early civilization to modern times, the infrastructure that cities provide distinguishes them from one another. Technology has progressed from fire, agriculture, and communication to modern times where it will continue to progress even further. With the advent of each technological revolution, it was those cities that embraced it and provided access to its residents that flourished.<sup>L</sup><sub>SEP</sub> Currently, the technology that most people are embracing is the flow of information and knowledge of the environment. We have the ability to exchange information instantly between residents and thereby see what is happening on the other side of the city, country and world. From the perspective of government, a smart city will take advantage of modern technology to improve: law enforcement, emergency management, building resource management, city planning & operations and general administration. From an infrastructure perspective, cities need to improve energy usage, clean water management and efficient

transportation for its residents. From a society prospective, smart cities need to improve social programs, health care and education of its residents. Just as we all strive as individuals to improve ourselves each day, we need to hold our cities to the same standards. Is the Varanasi better today than it was yesterday, last year, last decade? How can we really say there is improvement unless we measure our cities and ourselves? What is the standard for improvement? We can to look at a measures: Life expectancy at birth, education level, poverty headcount, % of population with access to clean water, Gross Income per capita and most recently CO2 emissions. A smart city should attempt to improve as many of these measures a possible and expend resources where the most improvement can be measured.

2. It is wonderful news that Varanasi is going to take steps to become a Smart City. The number of Smart cities is going to increase four fold by 2025 in the world. Varanasi has to be developed as a "City as a System". There will have to be a Public and International-Private partnership to fund Varanasi

Smart City projects. The services have to be within reach of the common man. 

3. Definition of Smart City: Frost & Sullivan noted experts say: “We identified eight key aspects that define a Smart City: 1- smart governance, 2- smart energy, 3- smart building, 4- smart mobility, 5- smart infrastructure, 6- smart technology, 7- smart healthcare and 8- smart citizen. This will reduce corruption and inefficiency and improve the quality of life for Varanasi Citizens and visitors.

We can't change overnight, that we need to take practical steps to being a smarter city with low-cost, practical projects.

Varanasi has to maintain its character of being the oldest living city of the planet.

It is the capital of Hinduism and a knowledge center. It is the temple city with Ganga as its lifeline.

Assi River has to be restored into a river from a Nala to maintain the identity of Varanasi.

We have major problems of crowding, filth on the streets, pollution of air and water, electricity and water shortage, corruption and inefficiency.

Citizens should be in the driving seat and discuss how

4. Varanasi residents can have control of the city
5. There should be one **Varanasi website**. It should have all information about Varanasi at one place. **Kiosks** could be put in many places and tourists could have access to the website.
6. **Tourist police** has to be set up that will quickly respond to tourists.
7. **Development of Riverfront:** It should be clean, pedestrian only please. Pedestrians should be able to walk from one end of Varanasi to the other end. It should be lighted and safe from criminals, dogs and beggars. No animals should be allowed in the river. It should be user friendly for bathers, pilgrims and tourists. It should have toilet facility on each Ghat and changing rooms for men and women. Bathers should take a shower before getting into Ganga. No soap bathing should be allowed in the river. Tourist Police or Citizens-Police should be present on each Ghat. Only religious music should be allowed there. No plastic should be allowed on the Ghats. No urination in the river should be allowed.

8. **Smart Governance:** All Municipal Corporation, Uttar Pradesh government and Central government services should be user friendly. No body should have to go to any office to get anything done.
9. **Smart Energy:** Construction of the **city-power-grid** is needed for Varanasi. The efficient consumers could be rewarded. Every citizen will be able to help everybody else. City should uninterrupted power supply. No Smart City Varanasi is possible without uninterrupted electric supply.
10. Solar power; we need to have a **manufacturing facility for making Solar panels** near Varanasi. We have a lot of sand available in Eastern UP with so many rivers. Sand is needed for Silica-wafers. Solar power is cheap in the long run and it will reduce pollution of air causing lung and sinus problems in Varanasi citizens. All solar panels should be connected to the grid. It will prevent blackouts and brownouts in parts of the city. Technology is being developed at MIT Boston to use each used lead batteries to produce electricity for 30 to 40 households.
11. Smart meters that are tamper-proof and that can

- transmit power usage wirelessly to the billing department.
12. Streetlight could be powered by solar panels.
  13. The power lines have to go underground to reduce theft and give a better look to the city.
  14. In San Diego, USA Smart grid consumers were able to save 10% on power bills and cut power use 15% during peak hours with access to time-of-use pricing information like.
  15. Smart thermostats that can be programmed from anywhere or anytime by computer or smart mobile device to reduce cooling bill.
  16. Solar panels could heat the water in winter months, cool air in summer months and help in cooking.
  17. We need every home roof top solar panel for domestic consumption and to be connected to the Varanasi-grid.
  18. All multistory complexes should have solar panels for their residents
  19. Solar Panels should be widely installed on the Farmland and public buildings. Varanasi Stadium should be covered by Solar Panels, Municipal buildings and schools should have solar panels. On

their roofs

20. **Wind Power** has been found uneconomical in Sonbhadra district but wind power units could be installed on Vindhya Mountains and connected to the power grid.
21. **Biomass gas power unit:** The Biogas plant project has been stuck and no progress has been made. **City Garbage** is not been collected efficiently. Biogas plant should be privatized and the plant should collect garbage door to door and pay the citizens some nominal amount for it. It will be like citizens getting paid for old newspapers now. It will prevent citizens from throwing garbage on the street. The electricity produced should be connected to the power grid Varanasi.
22. Plastic bags should be banned from entering Varanasi unless it is biodegradable.
23. **Smart Buildings:** They should be powered by Solar power and use smart electric bulbs that consume lower energy with insulated walls and roofs to keep them cooler in summer months.
24. **Transportation: Smart Mobility:** Lakhs of pilgrims come to the city daily that do not know or follow



- traffic rules. The street is crowded with people, rickshaws, and cars. The streets are narrow. Cows, buffalos and stray dogs crowd that. The dogs have to neutered and they will gradually reduce in number. The milkmen have to given a place out side the city and all their milk has to be bought by the Amul Dairy or other dairy in town.
25. Public transport like monorail will help reduce congestion on the roads.
  26. Varanasi should have electric cars running on battery and petrol combination introduced in a gradual and step wise, time bound frame. It will reduce pollution of air and noise. Electric car at Dasha-ashwamedh is a good beginning.
  27. When we get electric cars, we will need car battery charging stations. The planned parking tower in the Chauk could be powered by solar panels and can be fitted with charging stations. The residential towers should be able to charge the cars of their tenant by solar power.
  28. Immediate attention is required to improve pedestrian paths and safety of pedestrians. Millions of pilgrims and tourists coming to Varanasi face very

- hostile and unpleasant environment as pedestrians. Some areas can be designated as pedestrian only areas restricting vehicular traffic. City can prepare a master plan and yearly targets of how to make all roads pedestrian friendly in next five years.
29. Rickshaws and three-wheeler provides mobility option to many people along with livelihoods to many families. Their movement can be improved by improving infrastructure (designated stops) introducing passenger information system for them (calling on mobile like radio taxis) and GPS tracking for improving operations.
  30. Plan for integrated public transport system that includes buses, rickshaws and bicycles. Integration to be done at infrastructure level, institutional level and operational level. Information and communication technologies can be used to provide information about different modes of transport, routes, and incident management on roads.
  31. Battery operated Rickshaws will help replaces archaic human energy driven Rickshaws
  32. Underground public transport systems or Monorail alone do not solve mobility problems of majority of

the citizens, but it will reduce road traffic.

33. **Sensor networks**, including Wireless sensor networks and in the Internet of Things technologies are used to monitor many aspects of a city in real time, including traffic, power networks, street lighting and water/sewage systems
34. **Smart Infrastructure**: Varanasi needs to complete its Fibro-optics system completed to give high-speed Internet connection to all parts of the greater Varanasi. We need city wide Yifi.
35. **Ganga Sarover: A 10 square mile man-made lake North of Varanasi near Ganga is needed. It will be deep and fed by aquifers and will store floodwater of Ganga in the rainy season. It will be a source of employment. Water sports complex could be created in this. This will supplement the water supply to Varanasi City.**
36. Varanasi will have smart faucets and smart toilets reducing water wastage.
37. **Asi River has to restored. Asi River has religious history. The Lake from where it originates has to be deepened and river dredged. Many 'Panch-Koshi' pilgrimage places are on the path of the Asi**

River. The rejuvenation of the Asi river will re-energize Panchkoshi pilgrimage. All Sewage should be diverted to the sewage plant. All encroachments have to be removed. It should be made fit to take a bath.

38. All Sarovars in the city have to be dredged and cleaned. They have to be connected to Ganga by underground pipes. They have to be made fit for bathing and festival sites.
39. Sewage system should be upgraded with sensors that will alert the central station of blockage and breakage. Sewage treatment plant can treat the sewage to make water potable or fit for irrigation. Solid waste system could be sterilized to make organic manure for crops. No sewage should fall in the Ganga.
40. Smart Banks: All citizens will have an account in the bank. Their salary will be deposited directly in the account and they will be able to pay the bills wirelessly. It will help reduce road traffic.
41. Smart Technology. The city wide low cost Wifi will help promote greater use of Internet for shopping, learning On-Line-courses. It will help in creating

Phone directory that has become non-existent.

42. **Smart Pilgrimage**: The Temple website could give information about temples for the pilgrims about history, timings, directions and places for free food. Temple garlands etc could be sold to Biogas plant to generate electricity.
43. **Education**: All the four Universities at Varanasi could give their links for details about courses including online courses, fees, home work exams any many other details.
44. **Travel**; Travel information about trains, buses and planes including online booking etc.
45. **Shopping**: Business could advertise on the web and encourage e-commerce.
46. **Recreation**: 'What can you do today' could be posted on the web for citizens. Cultural shows including Kathak dance shows should happen daily. Ayurvedic spas should be organized.
47. **Parks**: We need upgrading of all parks and new parks to fitness centers and playgrounds. There should be increased access to all citizens.
48. **International Cricket Stadium: International, National, State and district level Cricket matches**

could be held here. This will create business, jobs and recreation for Varanasi citizens. be held here.

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49. **Smart Health Care**: All Hospitals and Health Clinics can be listed on the web giving their details. Annual screenings and health check-ups could be announced on the web. They could give preventive information about different diseases. It will be easy to call an Ambulance.


50. **Smart Citizens**; there will be greater number of citizens using smart phones. They will be able to pay bills, learn and earn by smart devices.

51. **Smart phone directory**: Varanasi needs a phone directory.

52. **Citizen Forum** to interact with PMO will be very useful.

53. Foot over-bridge for Kashi Viswanath temple from Ram Nager side will ease pedestrian traffic in the city.

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58. **Foot over-bridge for Kashi Viswanath temple from the east bank on Ram Nager side will ease pedestrian traffic in the city. Buses and cars could be parked on the east side of this bridge and people can walk into the heart of the city.**
59. **Conclusions:**  Varanasi is the capital of Hinduism. It is the home to a large number of very wise and smart people. It has been the Center of learning and culture from time immemorial. It is a unique city. No city is like Varanasi. It is the gateway to Nirvana according to Hindu scriptures. The technology will allow the city to develop better living conditions for the people living and visiting there. Varanasi has the potential to

**become the Guru of world. Smart City Varanasi will become a joy to visit and live.**

**Tags:**

Varanasi

Kashi

smart city

international Hindu School

Suman

solar power

kashi Vishwanath

tourism

Hindu

