Sir,

Suggestions for Smart City Dehradun are shared herewith.

Regards,

J S Pundir

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**Smart City Dehradun**

1. As climate change impacts the world, Dehradun is likely to be exposed to number of climate change effects. It is but ineluctable that envisaged smart city must limit the cause and effect of the climate change. Dehradun should likely form the smart city model to be adopted across the state for living a life in harmony with nature.

**Understanding the City Layout**

2. Dehradun is bounded by rivers to east-west and by hills to the north and south. As such the boundaries of the city are well defined. The development of the city after becoming interim capital has seen unprecedented growth. The hilly terrain obtained in the valley defined the habitation, markets, movement pattern... As a rough idea the city developed along two roads running over natural draining high ground; in north- south direction along road Rajpur-Saharanpur- Mohand and along east –west direction along road Raipur-Clock tower- Premnagar- Selaquai. The prime locales are occupied by government institutions and the old localities located adjacent to the two aforesaid roads whereas the recent infrastructure has come on generally low lying areas or in fields.

**Challenges**

3. The old Dehradun city is roughly confined between Bindal-Rispana rivers and in this compass from Dilaram Chowk to Railway station. As such most of the government offices, schools, market... are located right in the heart of the city making for limited movement space, congested conventional market spaces ... making for Dehradun to face the usual problem of a growing city.

4. **Infrastructure.** As the city has expanded along the main arteries the erstwhile infrastructure, institutions... located on the outskirts have turned bottlenecks; Sabzi mandi in South, Premnagar market in west, Dila Ram Bazaar in north, Dharmpur market in east act as barriers to the traffic. The railway station in the heart of the city is major movement centre with obvious consequences.
5. **People - Capital Orientation.** Dehradun has primarily been a service class centric city and a preferred retired life destination. The market capacity and function has thus been disposed and has serviced and evolved accordingly. The recent growth has been confined to real estate, education sector and small scale industry.

**Smart City Objectives**

6. Following parameters may be adopted towards the end of realization of Dehradun as smart city:

   (a) **Movement.** (i) From entering into Dehradun from Mohund (likewise from other points) to exit points towards either towards Mussoorie (North), Doiwala (east), Sahaspur (west) time taken be not in excess of 45 min to exit city limits. For aforesaid may consider to plan: Rail based movement along the two roads and constructing a ring road circling the city along Chandrabani, Premnagar, Jaitanwala, Kothalgate, Sahasdhara, Tunwala. (ii) Bridge Pathways- From parking places to dispersal areas nears public utility, markets… (iii) Cycle lanes. As a policy earmark one 1m of lanes astride each road for cycle lanes.

   (b) **Eco- Friendly Disposition.** May consider - (i) No use of forest for any purposes except in exceptional purpose for passage only. (ii) Augment tree cover. (iii) For every tree cut planting 10 trees. (iv) No waste disposal into rivers- nallahas. (v) No habitation in low lying areas thus allowing natural water drainage. (vi) Carbon emission norms for individual, families as per latest international emission standards - charges on additional amenities usage than commonly acceptable. (vii) Policy for all new infrastructure, businesses, institutions, utilities…on waste management, pollution norms, development parameters as arrived for in smart city, compliance, audit…(viii) Imposition on litter, spitting…(ix) Cheap public transport system. (x) No road-track construction for other than linking of villages….

   (c) **e-Governance.** (i) Earmark time bound e- work, procedures for bare essential and for physical interaction replicate the ‘e’ model. (ii) Government offices to have a desk at different offices (PTC near ISBT in south, RTO in north…) collocated capable to act as e- bridges doing away with necessity to move to main offices….

   (d) **Water Availability.** Develop integrated water policy to provide minimum 100 liters of water to every resident free of cost by recycling, rain water harvesting…

   (e) **Electricity.** To have unconventional energy source base of 10 % in first five year and 25% over next 10 years.

   (f) **Security.** May consider - (i) Establish CCTV network at key locations (entry-exit points of city, railway station, ISBT, Paltan Bazaar, main road-road junctions
Helicopter Patrolling. On special days – Independence days, Festivals, IMA passing out parade... (iii) Mobile Check Post Grid. On occasion as per para (f) (ii) to be able to intercept, detain, pursuit, neutralize vehicle, a group of men. Aforesaid grid be made known on net, print, electronic media. (iv) Training of Citizens. On various contingency related procedures for intrinsic populace of vulnerable locations for precautionary measures, response, assistance...

(g) Citizen Duty Roaster. Among many may consider - (i) To be accounted and be counted for all mentioned suggestions by presence and actions. (ii) To cast vote when required. (ii) Bear cost for smart living - besides other things also being compliant, e-enabled, multiple skill set..... (iii) Maintain threshold e-literacy. (iv) Adherences to traffic rules. (v) Practice sanitation all types. (vi) Adaptation for work from home or other suitable platform. (vii) Effective partner in e-governance....

(h) Adopt Alternate Maxim. Embrace alternate fuels, innovation driven technology, alternate practices in governance, alternative medicine...

(i) Recreation. City to have a covered multi utility indoor facility for athletics, gymnasium...

(j) e-Health. To have an e-empanelled based medical delivery at charge and free of cost to all residents within three years.

(k) Broadcast. City based TV, FM Station, smart city aspect broadcast..., in 2 years time...

(l) Innovation in Life. Hosting a yearly seminar on innovation and future vision of technology and its impact on life and similar topical issues. All education universities to holds one innovation theme based workshop with different participation biannually as also adoption of neighboring villages for e-enablement.

(m) Zero-Minimum Loss-Wastage Regime. Owing to human factors (want of planning, inefficiency..), material make, procedures, operation (holding- transit..)....

(n) Smart Transfer. Graduated transfer across the aspects from present city to smart city over an established parameter maintaining threshold stability in ecosystem over 5 year period.

(o) Minimum Disruption. Minimum or no distress, disturbance, disruption to the environment at any time during smart city realization. Same made possible by study of
other smart city evolvement, adopted smart city parameters, environment factors....resources availability audit...

(p) **Self Sufficiency.** For essential food items (for pulses, grains, vegetables, dairy, poultry...), intellectual- economic capital, workforce.... as far as possible achieved over five year period.

(r) **Sense of Élan in Being Doonite.** Towards the end may consider - (i) Tracking for school-college children to Rajaji National Park, Bhadraj Temple, Sir George Everest Observatory... (ii) Excerpts of Doon Gazetteer be printed in school diary, college brochure, government-institutions pamphlets...(iii) Create Doon Heritage Canvass by including history and landmarks of Sir George Everest Observatory, Kalinga Fort, Joint Services Wing Parade Ground at Clement Town, CNI school as jail in pre independent India...

(s) **Agape.** The smart city dispensation to percolate outside of the city in passage of its outcome in all means for larger broader benefit of the entire environment. Same may be realized over channels established to serve such ends and by regular exchange, interaction...

**Smart Engines of Human Growth**

7. Smart cities while arrogate the pride of being called so have the onus come to it along with as being at the van of human progress, enabling a certain vein of life. And for the risks and challenges that smart city inhabitants are likely to be exposed and endure they shall be right to stake and take credit for it but equally vital is support from outside and deserved. For surely the challenges are become of individual choices and to be borne in self while the accruing benefit is widespread wealth likely to embrace all.