

SMART VISION OF MUMBAI

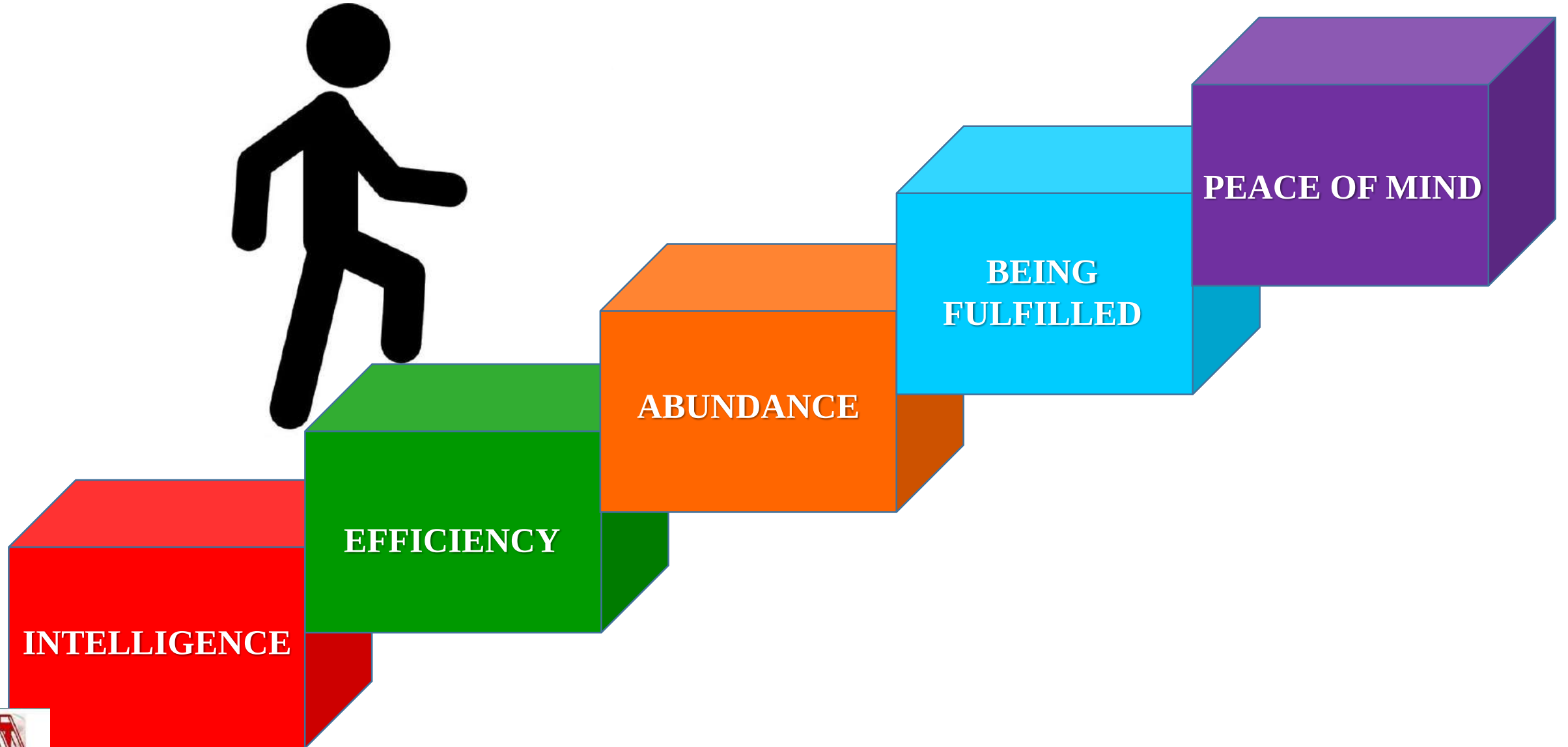


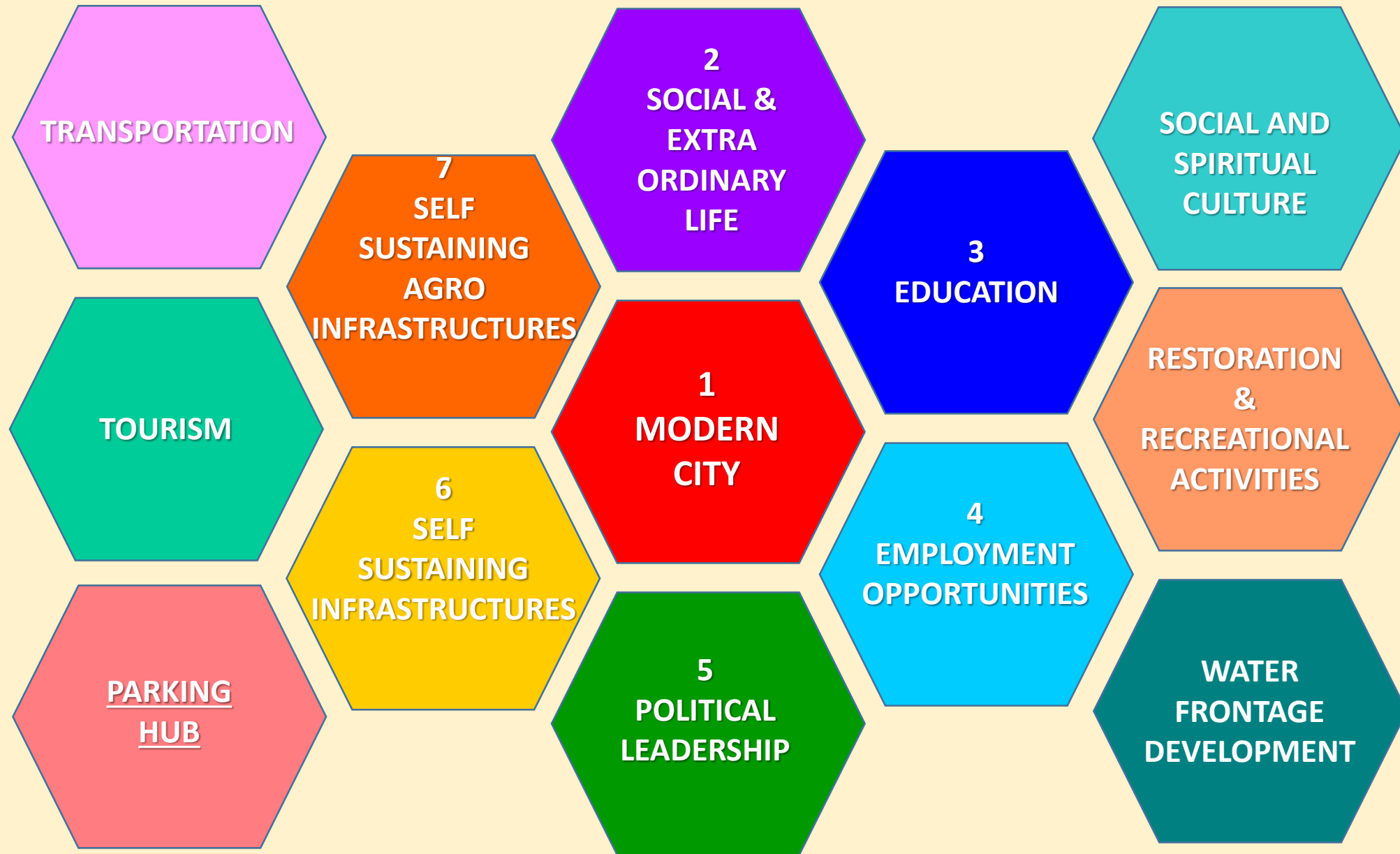
TURNING THE TIDE: AIMING FOR A SMARTER MUMBAI CITY

- With its large population and an infrastructure system that's bursting at the seams, Mumbai might seem like a lost cause.
- CAN A SMARTER, SCIENTIFIC APPROACH BE ADOPTED TO FURTHER DEVELOP A METRO CITY LIKE MUMBAI?



CONTEXT OF FUTURE OF MUMBAI





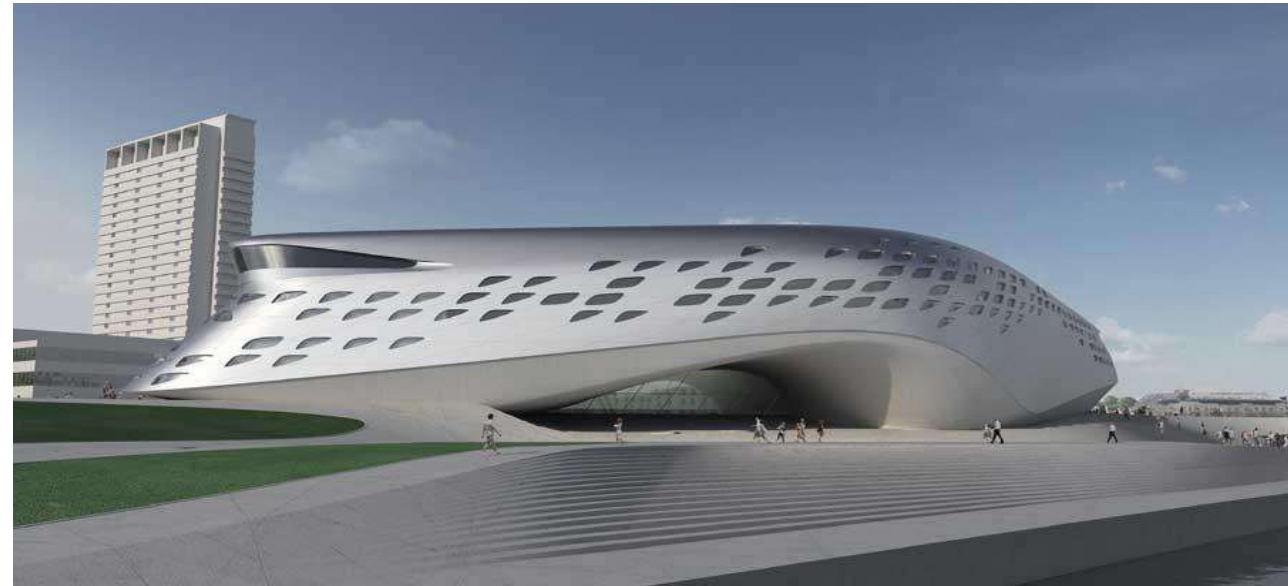
MODERN CITY

- A smart city is one which uses information communication Technology (ICT) to engage citizens, to deliver city services, and an improved urban experience.
- Intelligent city refers to the knowledge network to advance economic development; the smart city emphasizes the integration of technological networks and in-built environment.
- Smart cities are often described as both urban systems and the human/ social component.
- Development of all types of infrastructures, civic facilities and means of all types of communication



MODERN CITY

- It also has dynamics and flexibility to change from time to time as per the needs based on the factors suitable to betterment of society.
- The smart cities are economic drivers of the country and excellent contributors to the growth of the country in terms of culture and developments in all areas of life.



SOCIAL & EXTRAORDINARY LIFE

- Urbanization has led to a paradigm shift in lives of residing in cities. In cities, all walks of people are seen earning for their family.
- Therefore, there has been a social aspect to each category of people living in urban areas.
- For example, labour, skilled labour, service-oriented and professionals and business people have different kind of lifestyle and modes of entertainment.
- It is further divided into caste-wise population.
- However, everybody wants to live an extraordinary lifestyle pertaining to their earnings and wants to enhance on both the fronts.



SOCIAL & EXTRAORDINARY LIFE

- It is time to adopt best life practices according to culture of the country at large.
- The government should come up with a white paper on the best practices of life so as to guide people of all walks of life to lead it in decent ways.
- It's essential that various NGOs and spiritual organizations to come out with a nationwide debate on this particular subject and come to the conclusion as to how to live a life in the best possible manner in order to make it a big success.
- It is not caste, creed or discrimination that will bring happiness to self but the lifestyle inspired by best practices that are sustainable to fight odds in life.



EDUCATION

- Education is the second most important pillar, which is essential in sustainable social and leading an extraordinary life.
- Education is not just gathering information to earn bread and butter but to evaluate the past and the present and move to a brighter future.
- The more you are educated, the more you will have peace of mind. The more you have peace of mind, more you will have homogeneous social life.
- Education is to gain knowledge from the past to get you inspiration, make or create from the future and live an extraordinary life in the present.



EDUCATION

- We can derive such education where we can invent best technologies in order to make our life in peace of mind.
- I invite educationists to hold global conferences and invent an education technology, which is cutting-edge in this field.
- A curriculum should be devised to accommodate all classes of life who can start earning at the early age.
- Following age-groups and their standards given are only for the representational purposes. In each age-group a student must learn value for country, life and fellowship.

education



EMPLOYMENT OPPORTUNITIES

- Without employment, it is needless to think of a smart city.
- Each and every city, not just a smart city alone, shall have an in-built mechanism to offer employment opportunities for its citizens.
- There can be some percentage to each category as narrated below.
- It is not difficult to have a job if we are determined.
- Let our experts in this field work out some formula to evaluate a job-for-all opportunity in a smart city.



EMPLOYMENT OPPORTUNITIES

- a) Labours – Unskilled
- b) Labours – Skilled
- c) Undergraduates – Service industry
- d) Graduates – Intellectual/ but specialized service
- e) Professionals – Highly specialized
- f) Any other



POLITICAL LEADERSHIP

- A socially-empowered community demands more transparency and accountability from the government, corporations and political leaders. Nowadays, a political stability is sustainable on these parameters, more transparency, freedom and self-expression. He/she who will exercise will be ruling the hearts of people. Dynamic, action-oriented and decision-making leadership will have scope to expand in the 21st century.
- A popular government and dynamic leadership is directly proportionate to power.
- A smart city has direct potential to increase the quality of governance by utilizing applications and data to provide the most cost-effective services. It also helps the government to share information.



SELF SUSTAINING INFRASTRUCTURES

- A smart city must have power produced from natural, conventional and non-conventional resources.
- Our country is having abundance of solar energy and hence must adopt or invent possibilities to produce energies for all the future activities.
- Smart transport is another way to fulfill the gap in a smart city. It shall provide low fares and efficient services throughout the city as a proud partner in business.

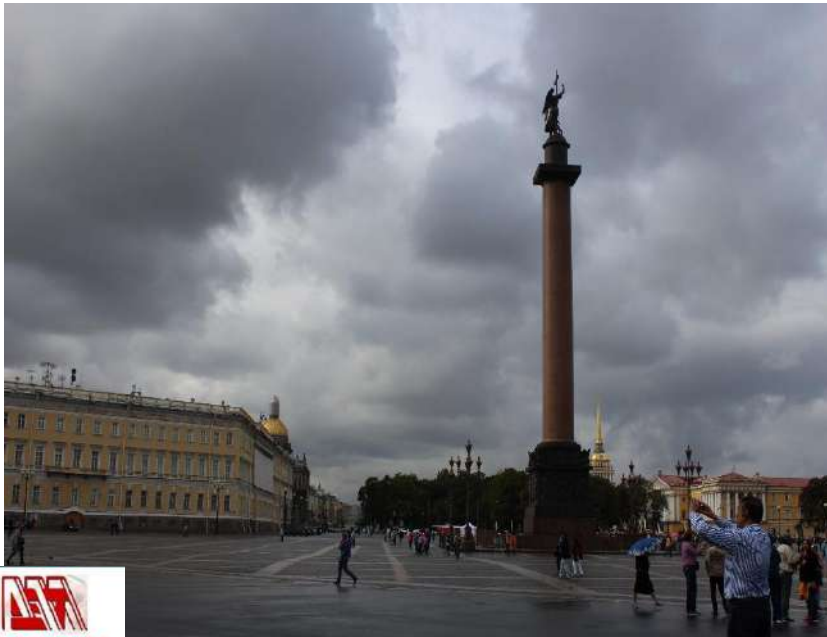


SELF SUSTAINING INFRASTRUCTURES

- **Green buildings concept is a special ingredient in making the idea of a smart city a 100 per cent success.**
- **It not only reduces use of material, but it also uses recycling of building material thus helping in saving natural resources and preserving it for future generations.**
- **Zero-garbage is essential aspect of any smart city.**
- **Recycling of all types of wastages and putting them to re-use is quite important.**
- **The serious issue of disposing chemical and bio-medical wastes is suitably required to be tackled.**
- **A scientific approach adopted in disposing it of will give positive returns in the future.**



SELF SUSTAINING INFRASTRUCTURES



SELF SUSTAINING INFRASTRUCTURES

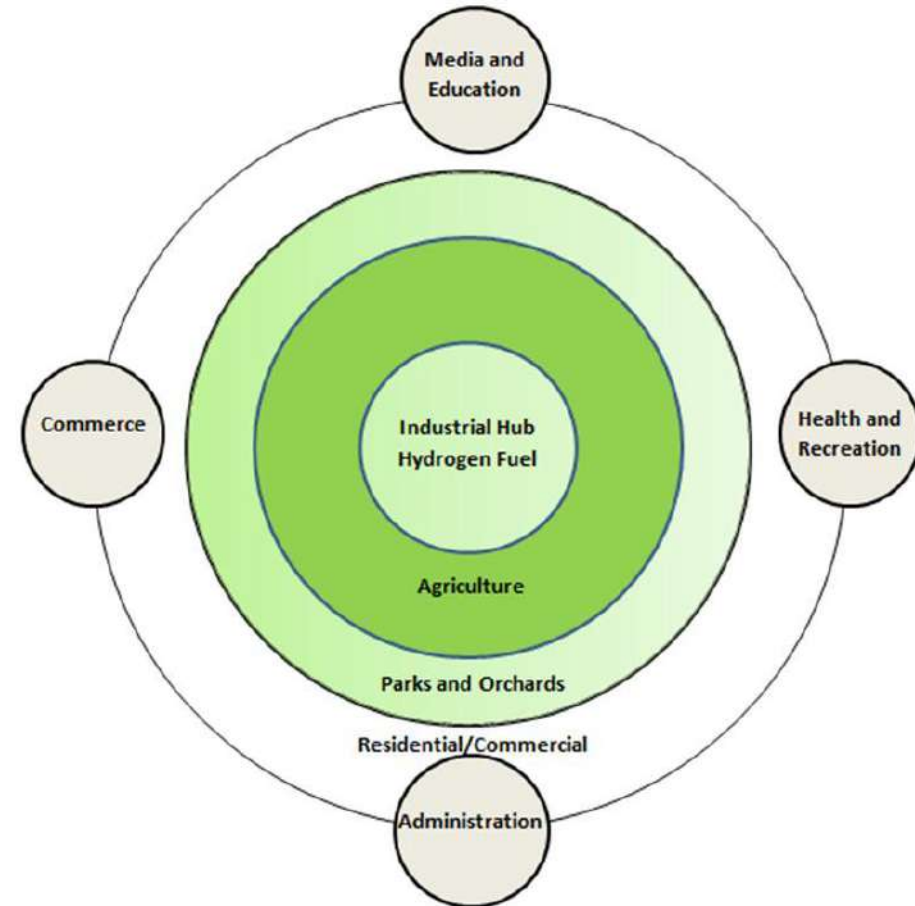


SELF SUSTAINING INFRASTRUCTURES



SELF SUSTAINING AGRO INFRASTRUCTURES

- Right from milk to vegetable produce, in my opinion vegetables must be produced in the same district of neighborhood.
- It will not only save the transportation cost but will also enhance ozone in the nearby vicinity directly.
- Fresh vegetables can be available easily that too at a reasonable cost.
- There will be increase in the quality of soil as well.



SELF SUSTAINING AGRO INFRASTRUCTURES



TRANSPORTATION

- In Mumbai approximately has 7182 hectares area under roads, either proposed or existing, that means as per estimated population of 2034 i.e. 1.37 crores works out to 5.24 sq.mt. per person.
- Availability of road which is sheer meager.
 - Further, the bus transport i.e. BEST undertaking is main transport between the 2 destinations where railways cannot reach & it is emitting CO₂ in large manner & therefore it is polluting the environment. A comprehensive transport system which gives CO₂ free emission in the air shall be proposed as in most of the European countries all the buses and public transport is run on electricity.



TRANSPORTATION

- In addition, they have trams which runs on the streets with due respect. Most of the common transport is being used by 80% of the people which includes Metros, Monos & most of the European countries people prefer cycling from one destination to other.
- We therefore propose transport in Mumbai with CO₂ emission & most reasonable or cost effective transport system such buses running on electricity & we would also suggest transport in some of the regions wherever it is feasible.



TRANSPORTATION

- For long distance we have railways, however we need to modernize those systems in order to reduce the travel time to the commuters.
- We have RAILWAYS but are flooded hence metros & monorail are essential tools in the city so as to minimize the load on railways especially proposal from Borivali to Navi Mumbai, Borivali to Ghatkopar, Versova to thane, i.e. a Criss-cross travel system has to be developed so people will tend to travel from Metros.



TRANSPORTATION

- We propose to run two tier or multitier road system over the railway line so that additional transport communication can be facilitated. Minimum 15 to 18 Mt. road width in Mumbai shall be proposed & wherever it is not feasible at that point lot of restrictions on developer shall be imposed.
- Any city is known for its extraordinary Road - Rail transport. For eg. Chandigarh city is known for its arterial road, & wide road network of Course gigantic gardens are also known & have become the speciality of Chandigarh.
- In order to make Mumbai city congestion free, we must plan additional road network & wider roads with High Rise multi-storeyed Building with ample open space around.

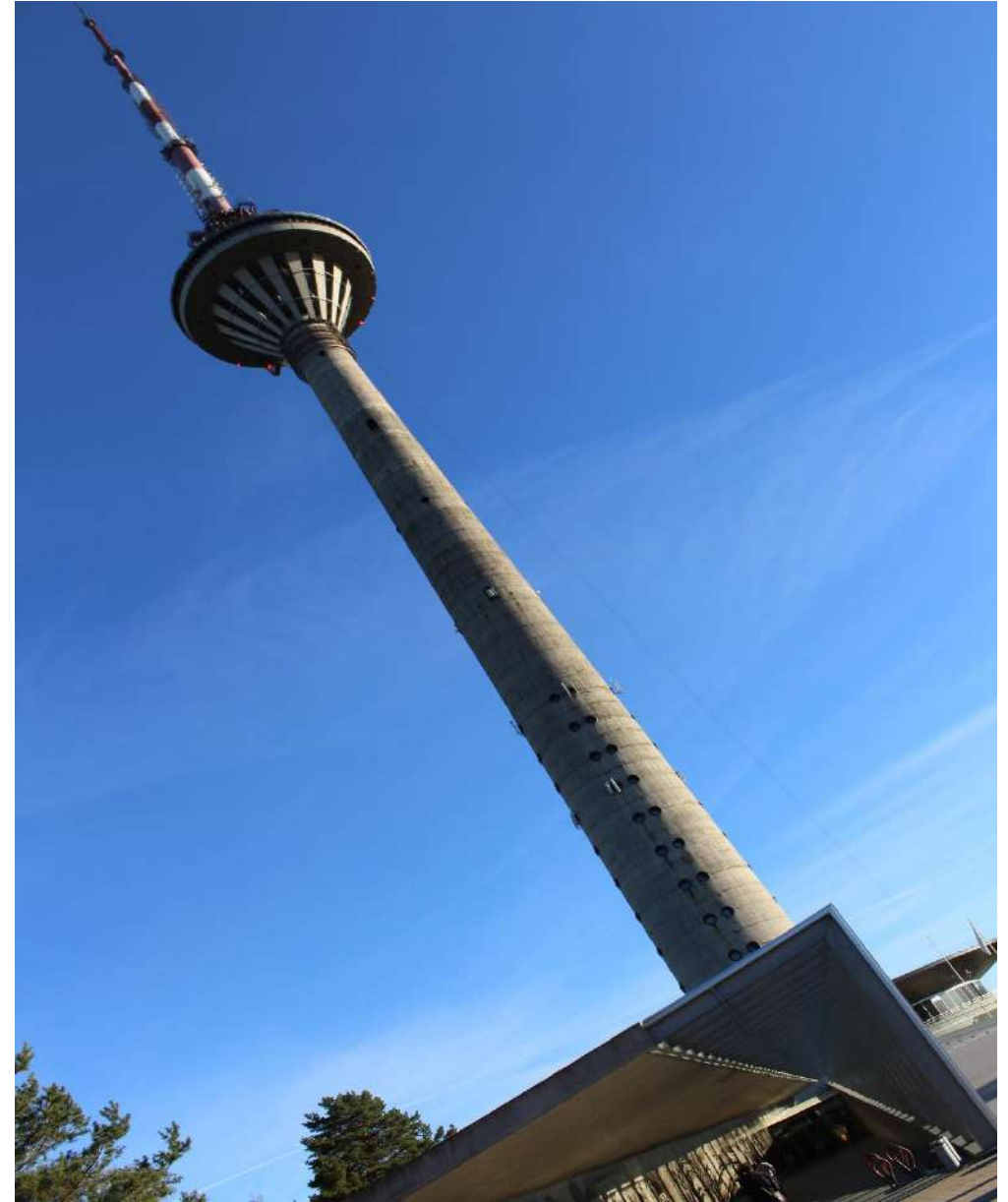


TRANSPORTATION



TOURISM

Mumbai has a long sea beaches, bay & sea-front on practically 3 sides which is not yet developed the way it should have been. We have immense potential to develop Mumbai as International Tourist destination. We must explore the development of sea fronts, development & Sanjay Gandhi National Park as international wildlife sanctuary & we should plan for Iconic towers, T.V. Towers, museums, amusement parks & cruise services, 5 star-hotels & a free market just like Dubai. This will bring business in Mumbai in crores & crores in

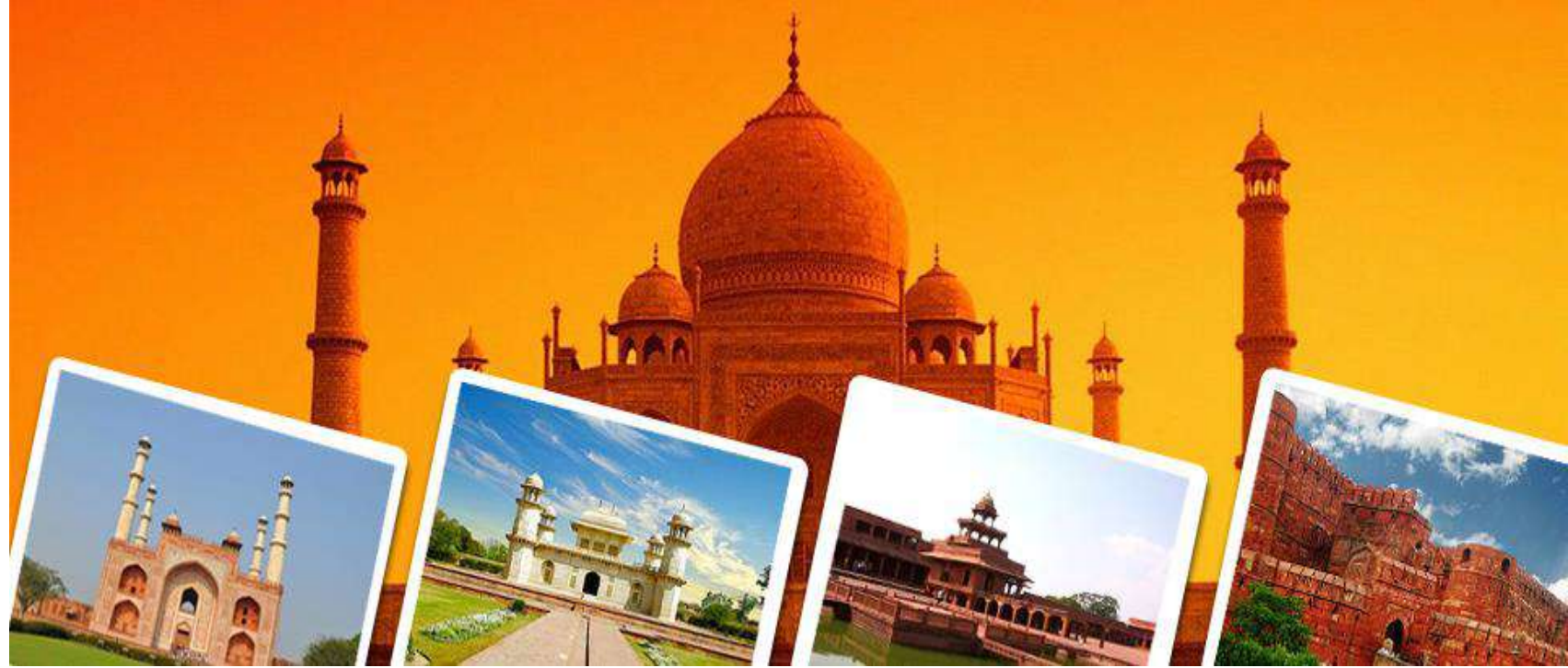


TOURISM

- In order to reduce CO₂ emission in the city we need to run public transport on electricity.
- Further, Mumbai airport if lifted to 60m high the skyline of Mumbai will be raised to 60 m & shall be benefited whole of Mumbai & ultimately to near by Suburbs, Andheri, Santacruz, Kurla, Mahim, Bandra Etc.
- Maharashtra can earn with this project a whooping Estimated 130 lakh crores of Rupees just by proposing airport at 60 Mt. high.
- This is the out of the box thinking, in order to make our vision Smart Mumbai successful.
- This plan today seems impossible to the planners but we must workout hard to make it possible &



TOURISM



PARKING HUB

- In Mumbai if we are projecting Mumbai as an international Business hub & industrial service sector then We must plan for business districts through sectorial plan.
- Roads are important, there is need to cater parking requirements of Mumbai at large. Today there is about 50% parking deficiency in Mumbai & therefore We must plan public parking hub every 1km wherever there is public reservation & this is the most important aspect that if the parking places are available people will not tend to park their cars on roads & therefore 100% of width of road shall be available for public transport.



PARKING HUB

- In European countries, cars are not parked on roads, but they are parked in the parking hub, similarly there shall be two wheeler parking easily available in the parking hub.
- In order to have discipline in road transportation we must plan sufficient parking hub for public parking system in Mumbai.



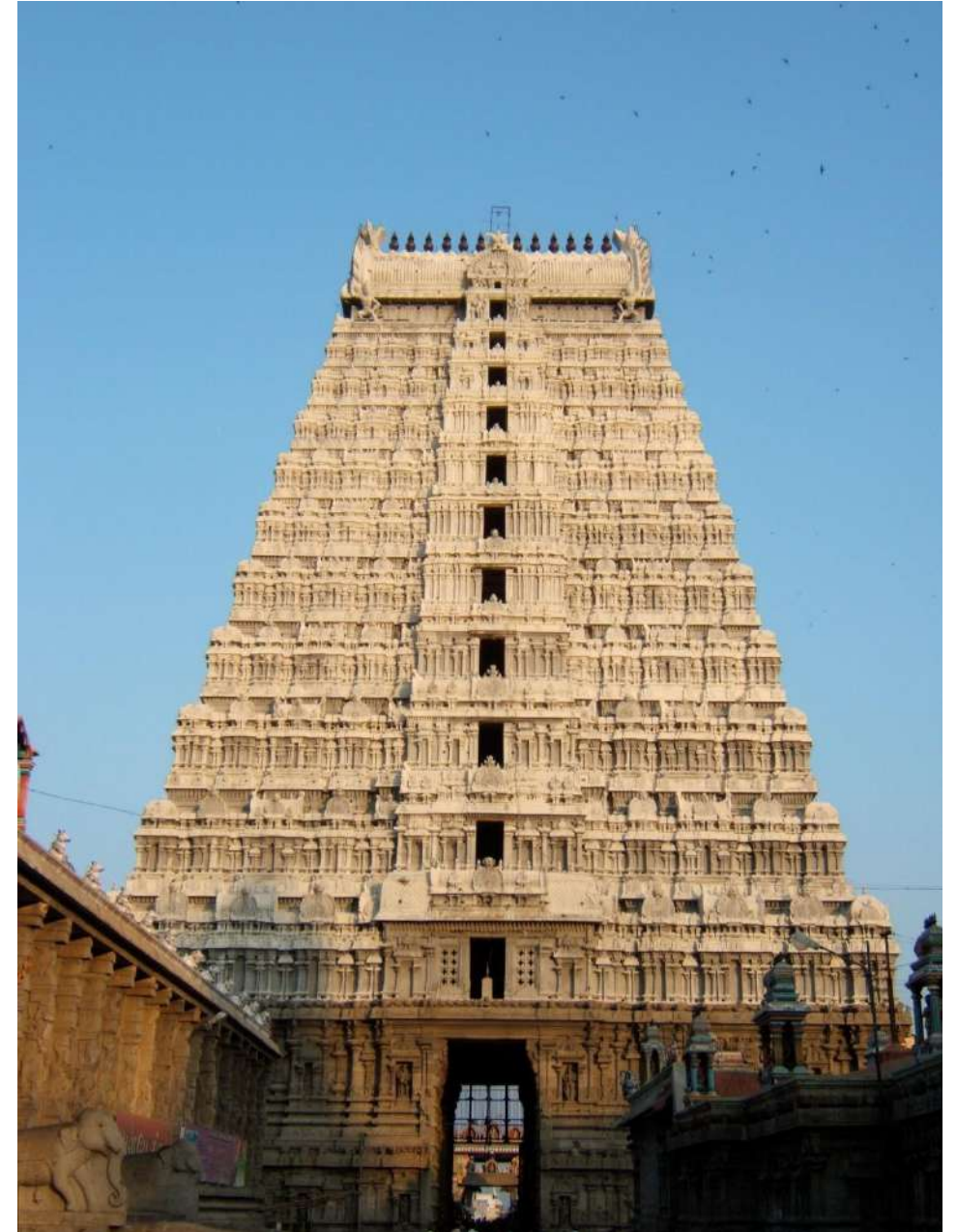
SOCIAL AND SPIRITUAL CULTURE

- **We have a traditional spiritual culture in Mumbai where you have Ganesh festival, Govinda festivals. Now it is converted to sport activity. Diwali festival & to create Iconic Spiritual centres to attract tourist from all over the world. This is the inheritance we have got from our ancestors & we should explore our spiritual teaching to the world.**
- **We must strive to develop the centres & in order to do attract tourist, we must make maintain our temples, churches & mosques.**



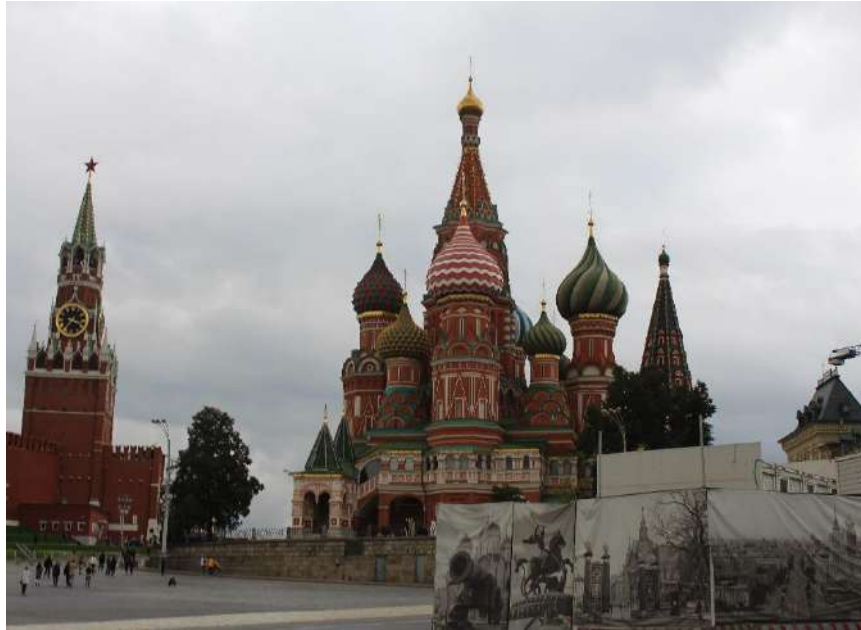
SOCIAL AND SPIRITUAL CULTURE

- **Further we must develop the Mithi river & engage it in sports activities, cruise activities & the whole River front of Mithi River shall be developed as garden up to 25m at least & roads parallel to it if required. The bridges over it shall be made higher so cruise activity can easily be planned.**
- **In St. Petersburg they have a NIVA River passing right through heart of the city & they have developed the riverfront in extraordinary way & all the bridges under it are open for big vessels at Night. I think we should also explore the sea transportation for Mumbaikars.**



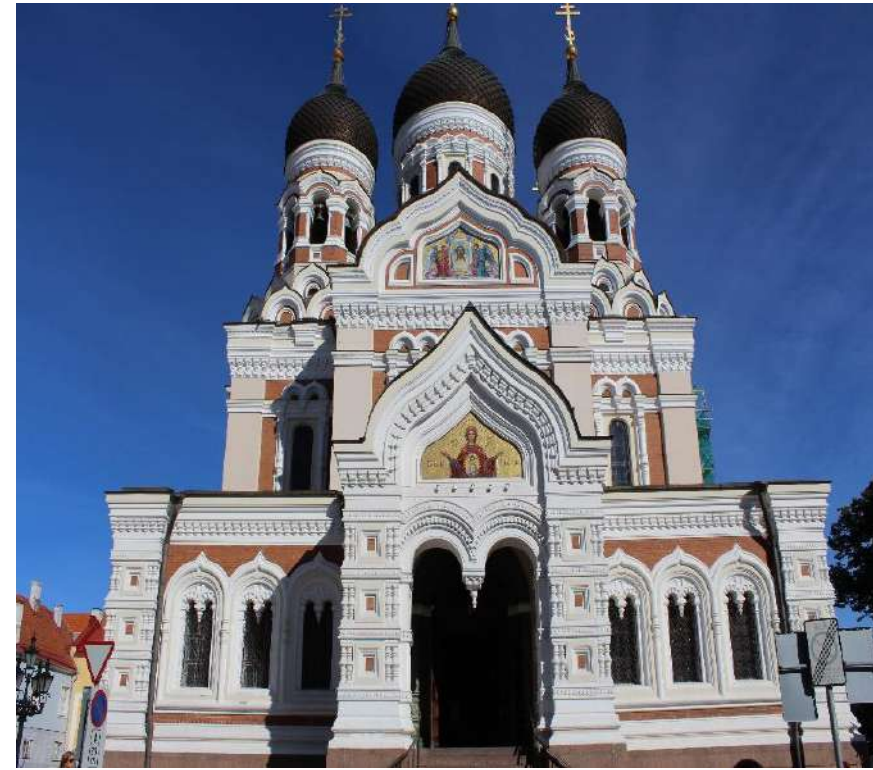
RESTORATION & RECREATIONAL ACTIVITIES

- City life has become stressful life.
- Those who are travelling from one end to other end.
- In order to reduce the burden of travelling we must create job opportunities within 3kms from the residents of the citizen.



RESTORATION & RECREATIONAL ACTIVITIES

- So we can concentrate upon new avenues in international sports activity, training centres skilled & unskilled jobs, creating Olympic size stadiums & sport centres, jumbo gardens & food plazas & list can be exhaustive on sea fronts.
- I hope we will start adding our choice of job activities & make it happen. The recreation activities shall release stress and grant peace of mind good health. We want citizen to lead quality life through modern city. Therefore it is the onus on part of architects to plan taking into consideration the context of life.

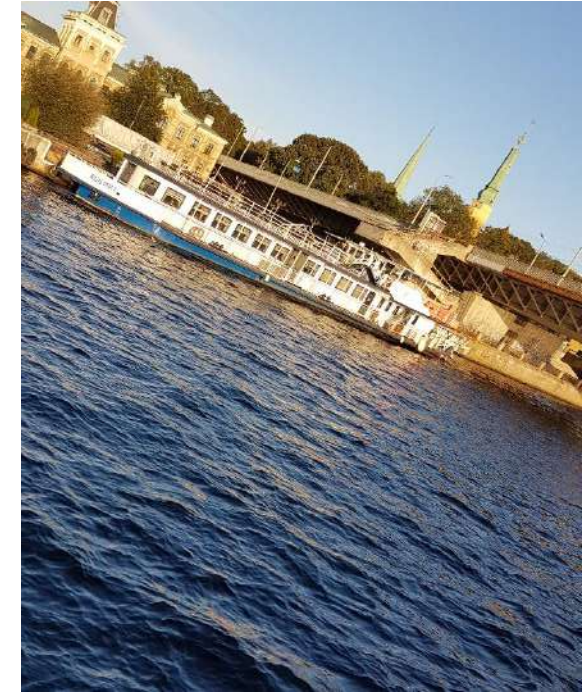


WATER FRONTAGE DEVELOPMENT

Mumbai has water frontage on three sides and east side of the front and west side of Marve, Madh island is yet to be developed. Further, there are bays such as Worli, Mahim, Mankhurd, Shivdi, Mulund, Airoli. Arabian sea which can be developed aesthetically and add beauty and revenue to Mumbai. It is to be further mentioned that water fronts in front of Mithi river on both the banks at least 25 m must be left open for green bay and wider roads and the properties adjoining to the roads can be developed as commercial gathering points, food plazas, recreational activities, museums. The least can be exhaustive, I appeal to the august gathering to add as many activities as you can. It is the challenge to the planners to develop these sea fronts and make Mumbai clean, green and pollution free.



WATER FRONTAGE DEVELOPMENT



BALLARD ESTATE

I am visualising Mumbai as international service centre, where software inventions & development may prove cheaper & popular, further I am also visualising Mumbai as free port for the international market therefore 50% of the properties can be converted to commercial district centres & the existing ones such as Ballard estate can be easily converted to a commercial hub & may prove the befitting example for such commercial hubs.



BALLARD ESTATE

As JNPT & area near Uran can be developed as sea port transportation & can also be developed as international market & manufacturing activities to the neighbouring areas of Uran which will bring tonnes of business to Maharashtra & ultimately to Mumbai.



PRESENT HOUSING SITUATION

Fifty Two Lakh people are living in slums in Mumbai, 90% Population is under Lower Middle Class and Middle Class whose monthly average income is between Rs. 20,000/- and Rs. 50,000/- P.M. People in Mumbai cannot afford to buy flats in Mumbai.



PRESENT HOUSING SITUATION

- **Important statistics about housing situation**
- **Mumbai Population: 1.25 Crore and 2034 – 1.37 Crore**
- **Present housing stock (occupied, unoccupied, Size wise),**
- **Slum population: 52 lakhs**
- **Slum units (independent units): 11 lakhs to be rehabilitated**
- **Area occupied by slums: ONLY 12.5% estimated**
- **Slum land ownership classification area wise, a1**
- **Slums rehabilitated in the past: 1.5 lakh persons by SRA in 20 years in 1,473 projects**
- **It is to be stated that combined report published by MCGM in GDCR 34 has not disclosed or studied the land occupied by existing slums and density in each ward, it is the duty of Town Planners and experts to state the statistics on Slum who has prepared the report. Comprehensive solution to overcrowded / thick population density in each ward needs to be tabled.**

PRESENT HOUSING SITUATION

WHY SRA HAS FAILED TO PRODUCE 11 LAKH DWELLING UNITS IN PAST 21 YEARS?

- 1. It is probably due to 1) Finance 2) Disputes between slum dwellers 3) change in regulation 4) red Tapism 5) Vested interest of aggrieved parties 6) Lack of Political will due to various reasons 7) Housing is granted free to the slum dwellers. Lack of alternate Temporary transit sites for speedy construction of project.**
- 2. In my opinion slums shall not be projected as free bonus to them. At least cost of construction shall be recovered from slum dwellers.**
- 3. Permanent accommodation shall be given on lease not transferable to any third party at any given point.**



PRESENT HOUSING SITUATION

- 4. Disputes and redressals shall be subject to tribunal and fast track courts.**
- 5. There shall not frequent change in regulation or even a legislation should passed that court can not intervene to change the structure of Regulation. Now a days Builders and so called RTI activist are making tool to the courts to stall the projects.**
- 6. Approvals shall be given with in 60 days and standardization of planning shall be insisted for rehab and sale buildings to avoid delays in approvals further at least 1 Hec. of plot shall be developed as 1 chunk of slum project in order to get maximum open spaces around the building. If the plot is less than 1 Hec. then reservation shall be put to reaccomodate slums dwellers elsewhere in the same ward. A predictable system of approvals shall be encouraged.**



PRESENT HOUSING SITUATION

- 7. Project shall be uploaded for public hearing and once the notice period is over No complaints shall be entertained Political will power shall be exercised for successful implementation of regulation**
- 8. There shall be at least 1 Hecter land made available for Multi Storied High Rise Transit Camps**
- 9. Slum Project be treated as National Honor project in India.**
- 10. A decent dwelling unit of 300 sq. Ft. Can be made available just by paying rs. 15.75 lakh and today you can get rid of scarcity of funds for slum project. It is the time to think of levying cost of construction while allotting the permanent alternate accommodation.**

REDEVELOPMENT OF OLD BUILDINGS

- 90 % of development in Mumbai is redevelopment and DC Regulation is predominately focuses on fresh developments as if planners are unaware of ground reality. While redeveloping tenanted buildings or buildings registered under housing society cannot be developed for lack of encouragement in terms of FSI and incentive FSI. Government has conveniently forgot that there is a land cost and rehabilitation cost and landlord needs to be compensated 15% of the cost of land because it is a tenanted property and virtually he has lost the value of entire land if it was vacant. Further due to change in trend in parking all the tenants are required to be allotted at least 1 parking per tenement in my opinion it should be 1.5 per tenement. Further practically all the buildings are high rise which attract additional regulations such as fire, environment, MPCB, etc. and it add additional cost to the construction and hence over and above the developer needs to be compensated for providing additional amenities which are required as per regulations.**
- Otherwise the cost of sale component will get costlier and costlier day by day to finance the entire project hence some incentive FSI needs to be provided at par with premium FSI .**

CRZ – COASTAL REGULATION ZONE

- **Mumbai is affected by CRZ - I, II, III.**
- **Island city 6480 hectares**
- **Western suburbs 18736 Hec.**
- **Eastern suburbs 16228 Hec.**
- **In all 26.32% area is affected by CRZ**
- **Developable land in greater Mumbai is only 37% left. That means we need to come up with all together new set of CRZ for Mumbai and Navi Mumbai region and some part of thane region along coastal area. As future of Mumbai is free port and international business hub. Lot of relaxations while development of lands within CRZ is predicted by citizens of Mumbai and governments in states and centre is also thinking for relaxing and come up with in building DC Regulations 2034.**
- **While dealing with lands in CRZ and environment friendly and ecologically balanced development have not been projected in CRZ norms published on 6th Jan 2011.**

CRZ – COASTAL REGULATION ZONE

- It will not be proper to with held development along seashore just because there is a danger of tsunami and global warming. We must protect our flora and fauna under the sea and coastal road shall be proposed by elevating it on landward side completely filled up land upto 10-20 ft. And then we can allow buildings within 500 mt. Of high tide line. And building shall be allowed with tilted portion of at least 25 ft. So that while invasion of global warming and tsunami the structure can withstand its tremendous lateral pressure.**
- I think we need to think rationally while restricting development on CRZ lands. A comprehensive plan shall be prepared and set of regulation shall allow the development without any restriction of FSI.**
- Due to present restriction of development in CRZ prizes of real estate in city and suburbs along the sea shore has touched sky high and affordability is far from the reality. There are existing buildings in CRZ which needs immediate redevelopment are also stuck in tangle of regulation. A time will come if this issue is not addressed they get dilapidated and fall one by one. And there will be huge loss of life which should be avoided because life is precious than the regulation.**

CRZ – COASTAL REGULATION ZONE

- A politics is being played to restrict the development to make huge profits in real estate because now-a-days even beaurocrats, officers in plum post are investing in real estate along with politicos. It is also seen that dhudhwala, chaiwala, rekdiwala are also partner in builders business which is a pathetic situation and a person with qualification such as architects, engineers are treated as servants to these communities. And developers are dictating their terms.**
- Money power has became secret password in this business because of the situation created in past.**
- Let us start a new future a national building by all of us.**
- Be a change you want to see in others.**
- Please join hands together.**

THANK YOU