# ANNEXURE 1

| S. No | Feature | Definition |
|---|---|---|
| 1. | Citizen participation | A smart city constantly adapts its strategies incorporating views of its citizens to bring maximum benefit for all. (Guideline 3.1.6) |
| 2. | Identity and culture | A Smart City has a unique identity, which distinguishes it from all other cities, based on some key aspect: its location or climate; its leading industry, its cultural heritage, its local culture or cuisine, or other factors.  This identity allows an easy answer to the question "Why in this city and not somewhere else?" A Smart City celebrates and promotes its unique identity and culture. (Guideline 3.1.7) |
| 3. | Economy and employment | A smart city has a robust and resilient economic base and growth strategy that creates large-scale employment and increases opportunities for the majority of its citizens. (Guideline 2.6 & 3.1.7 & 6.2) |
| 4. | Health | A Smart City provides access to healthcare for all its citizens. (Guideline 2.5.10) |
| 5. | Education | A Smart City offers schooling and educational opportunities for all children in the city  (Guideline 2.5.10) |
| 6. | Mixed use | A Smart City has different kinds of land uses in the same places; such as offices, housing, and shops, clustered together.  (Guidelines 3.1.2 and 3.1.2) |
| 7. | Compactness | A Smart City encourages development to be compact and dense, where buildings are ideally within a 10-minute walk of public transportation and are located close together to form concentrated neighborhoods and centers of activity around commerce and services.  (Guidelines 2.3 and 5.2) |
| 8. | Open spaces | A Smart City has sufficient and usable public open spaces, many of which are green, that promote exercise and outdoor recreation for all age groups.  Public open spaces of a range of sizes are dispersed throughout the City so all citizens can have access. (Guidelines 3.1.4 & 6.2) |
| 9. | Housing and inclusiveness | A Smart City has sufficient housing for all income groups and promotes integration among social groups. (Guidelines 3.1.2) |
| 10. | Transportation & Mobility | A Smart City does not require an automobile to get around; distances are short, buildings are accessible from the sidewalk, and transit options are plentiful and attractive to people of all income levels. (Guidelines 3.1.5 & 6.2) |
| 11. | Walkable | A Smart City's roads are designed equally for pedestrians, cyclists and vehicles; and road safety and sidewalks are paramount to street design.  Traffic signals are sufficient and traffic rules are enforced. Shops, restaurants, building entrances and trees line the sidewalk to encourage walking and there is ample lighting so the pedestrian feels safe day and night. (Guidelines 3.1.3 & 6.2) |
| 12. | IT connectivity | A Smart City has a robust internet network allowing high-speed connections to all offices and dwellings as desired. (Guideline 6.2) |

## SELF ASSESSMENT CHECKLIST

| S.No | Feature | Definition | Scenario 1 (Base) | Scenario 2 | Scenario 3 | Scenario 4 (Advanced) | Self-Assessment (where we are) | Basis for assessment and/or quantitative indicator (Optional - only if data exists) | Projection of 'where the city wants to be' with regard to the current status to feature/indicator based on the city vision and strategic blueprint | Input/Initiative that would move the city from its current status to Advanced status (Scenario 4: Column G) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Citizen participation | A smart city constantly shapes and changes course of its strategies incorporating views of its citizen to bring maximum benefit for all. (Guideline 3.1.6) | The City begins identifies priorities and projects to pursue without consulting citizens | City undertakes citizen participation with some select stakeholders. The findings are compiled and incorporated in some projects or programs. Very few major decisions are shared with citizens until final projects are unveiled. | City conducts citizen engagement at city level and local area level with most stakeholders and in most areas. The findings are compiled and incorporated in projects or programs. | City constantly conducts citizen engagement with people at each Ward level to incorporate their views, and these shape priorities and development projects in the city. Multiple means of communication and getting feedback such, both face-to-face and online are utilised. The effectiveness of city governance and service delivery is constantly enhanced on the basis of feedback from citizens. | 2 | The city commissioner meets with the citizens on Tuesday in community meet and greets to discuss updates and resolve Grievances. The Average participation in these meetings range from 200- 500 | 4 | Empowering citizen groups to monitor public assets through the creation of open data portals. Strengthening crowd-sourcing platforms to improve feedback on existing services delivered |
| 2 | Identity and culture | A Smart City has a unique identity, which distinguishes it from all other cities, based on some key aspect: its location or climate; its leading industry, its cultural heritage, its local culture or cuisine, or other factors. This identity allows an easy answer to the question "why in this city and not somewhere else?" A Smart City celebrates and promotes its unique identity and culture. (Guideline 3.1.7) | There are few architectural monuments, symbols, and festivals that emphasise the unique character of the city. Built, natural and cultural heritage is not preserved and utilised or enhanced through physical, management and policy structures. | Historic and cultural resources are preserved and utilised to some extent but limited resources exist to manage and maintain the immediate surroundings of the heritage monuments. New buildinds and areas are created without much thought to how they reflect the identity and culture of hte city. | Historic and cultural heritage resources are preserved and utilised and their surroundings are well-maintained. Public spaces, public buildings and amenities reflect the cultural identity of the city; | Built, natural and intangible heritage are preserved and utilised as anchors of the city. Historical and cultural resources are enahnced through various mediums of expression. Public spaces, open spaces, amenities and public buildings reflect local identity and are widely used by the public through festivals, events and activities. | 2 | There is a fair amount of physical Encroachment currently around the Nellai Appar Temple premises.new building have come up which overshadow the heritage structure. Similarly, other heritage structures in the city have also been conserved to leverage their tourism potential | 3 | Creation of clear DCRs to regulate fringe developments around key heritage nodes; Improvement of the Nellai Appar Temple through a portfolio of projects. |
| 3 | Economy and employment | A smart city has a robust and resilient economic base and growth strategy that creates large-scale employment and increases opportunities for the majority of its citizens. (Guideline 2.6 & 3.1.7 & 6.2) | There are some job opportiunities in the city but they do not reach all sections of the population. There are a high number of jobs in the informal sector without sufficient facilities. | There is a range of job opportunities in the city for many sections of the population. The city attemps to integrate informal economic activities with formal parts of the city and its economy. | There are adequate job opportunities for all sections of society. But skill availability among residents can sometimes be a challenge. | There are adequate opportunities for jobs for all sections of income groups and skill levels. Job-oriented skill training supported by the city and by industry. Economic activities are suited to and build on locational and other advantages of the city. | 2 | The percentage of non-workers in the district is 45% among men and as high as 77% among women | 4 | Development of heritage tourism , Market Building and recreational activities in Water front area will boost the local economy by providing job and business opportunities for both formal and informal sector |
| 4 | Education | A Smart City offers schooling and educational opportunities for all children in the city (Guideline 2.5.10) | The city provides very limited educational facilities for its residents. There are some schools but very limited compared to the demand. Many schools are in poor condition. | City provides adequate primary education facilities within easily reachable distance of 15 minutes walking for most residential areas of the city. The city also provides some secondary education facilities. | City provides adequate primary and secondary education facilities within easily reachable distance for most residential areas of the city. Education facilities are regularly assessed through - databases of schools including number of students, attendance, teacher - student ratio, facilities available and other factors | City provides adequate and high-quality education facilities within easily reachable distance of 10 minutes walking for all the residential areas of the city and provides multiple options of connecting with specialised teaching and multi media enabled education. Education facilities are regularly assessed through database of schools including number of students, attendance, teacher-student ratio, facilities available and other factors. | 3 | There are currently over 219 schools and institutions of higher learning in Tirunelveli with an average teacher student ratio of 1:20 | 4 | ICT intervention in education system will enhance the learning ability of the students |
| 5 | Health | A Smart City provides access to healthcare for all its citizens. (Guideline 2.5.10) | Healthcare is difficult for citizens to access - demand for healthcare often exceeds hospitals' ability to meet citizen needs. | The city provides some access to healthcare for its residents but healthcare facilities are overburdened and far from many residents. Access to preventive health care is only easily available for some residents. | City provides adequate health facilities within easily reachable distance for all the residential areas and job centers of the city. It has an emergency response system that connects with ambulance services | City provides adequate health facilities at easily accessible distance and individual health monitoring systems for elderly and vulnerable citizens which are directly connected to hospitals to prevent emergency health risks and to acquire specialised health advice with maximum convenience. The city is able to foresee likely potential disases and develop response systems and preventive care. | 3 | There are adequate hospitals and four 108 ambulance services to cater to medical emergencies | 4 | Creation of a comprehensive database of medical practitioners and telemedicine facility, smart cards for healthcare services, electronic health record, online assistance of medical queries and health portals. |

| S.No | Feature | Definition | Scenario 1 (Base) | Scenario 2 | Scenario 3 | Scenario 4 (Advanced) | Self-Assessment (where we are) | Basis for assessment and/or quantitative indicator (Optional - only if data exists) | Projection of 'where the city wants to be' with regard to the feature/indicator based on the city vision and strategic blueprint | Input/Initiative that would move the city from its current status to Advanced status (Scenario 4: Column G) |
|---|---|---|---|---|---|---|---|---|---|---|
| 6 | Mixed use | A Smart City has different kinds of land uses in the same places; such as offices, housing, and shops, clustered together. (Guidelines 3.1.2 and 3.1.2) | The city has mostly separated uses and areas are focused either on residential, commercial, or industrial, with little co-existance of uses. The average resident cannot walk to the closest market or shops near his or her home. For almost everyone, going to work or going shopping for basic needs requires a journey by automobile or bus of more than 15 minutes. Land use regulations prevent putting commercial or office locations in residential neighborhoods and vice versa | In some parts of the city , there is a mixture of land uses that would allow someone to live, work, and shop in close proximity. However, in most areas, there are only small retail stores with basic supplies near housing. Most residents must drive or use public transportation to access a shop for food and basic daily needs. Land use rules support segretating housing, retail, and office uses, but exceptions are made when requested. | Most parts of the city have housing, retail, and office buildings in close proximity. Some neighborhoods have light industrial uses within them (e.g., auto repair, craft production). Land use rules allow for mixed uses. | Every part of the city has a mix of uses. Everyone lives within a 15-minute trip of office buildings, markets and shops, and even some industrial uses. Land use rules require or encourage developers to incorporate a mixture of uses in their projects. | 2 | 60% of the current land-use is residential with little or no industrial uses in the city | 4 | Revised DCR with dynamic regulations for key land parcels in city, with focus on mixed use typologies along Nainar lake and Tamirabarani river to provide compact and vibrant economic environment |
| 7 | Compact | A Smart City encourages development to be compact and dense, where buildings are located close to one another and are ideally within a 10-minute walk of public transportation, forming concentrated neighborhoods. (Guidelines 2.3 and 5.2) | The city is expanding rapidly at its periphery into undeveloped land, rural or natural areas, or along industrial corridors - both formally and informally. Formal new development is occuring in a way that is "sprawling," meaning that the buildings spread across a wide area and are far from one another. Residents or tenants find it easier or safer to travel by automobile because it takes a long time to walk between destinations and there are busy roads separating buildings. Large pockets of land in the inner-city are vacant. New developments at the periphery tend to be large-scale residential developments, often enclosed with a gate and oriented to the automobile. | The city has one or two high density areas - such as the city center, or historic areas, where buildings are concentrated together and where people can walk easily from building to building and feel as though they are in center of activity. Most of the city consists of areas where buildings are spread out and difficult to walk between, sometimes with low-density per hectare. Regulations tend to favor buildings that are separated from one another, with lots of parking at the base and set-back from the streets. The city likely has some pockets of under-utilized land in the center. New formal developments at the periphery tend to be large-scale residential developments, often enclosed with a gate and oriented to the automobile. | The city has multiple high density clusters that are easy to walk around where buildings are close together. However, the city actively encourages development to occur on under-utilized parcels of land into high-density, walkable areas. When new formal large-scale development projects happen at the periphery, they are encouraged to be dense and compact, with buildings that are close together and line the streets. The city actively encourages or incentivizes re-development of under-utilized parcels in the inner-city, especially those located close to public transportation. | The city is highly compact and dense, making the most of land within the city. Buildings are clustered together, forming walkable and inviting activity centers and neighborhoods. Regulations encourage or incentivize re-development of under-utilized land parcels in the city center. Buildings are oriented to the street - - and parking is kept to a minimum, located below ground or at the back of buildings. Public transport and walking connects residences to most jobs and amenities. Residential density is at an optimal with affordable housing available in most areas. | 2 | 81.22% of the city area is Undeveloped Area (8825.25 Ha) | 3 | Newly proposed DCRs and Adaptive FSI norms for built form.Promotion of high density mixed use development in planned manner.Relaxation in building height for mixed use building |
| 8 | Public open spaces | A Smart City has sufficient and usable public open spaces, many of which are green, that promote exercise and outdoor recreation for all age groups. Public open spaces of a range of sizes are dispersed throughout the City so all citizens can have access. (Guidelines 3.1.4 & 6.2) | The city has very few usable public open spaces and very few usable green spaces. Available recreational areas are located far away and are dispersed at long distances around the city. The few available public open spaces offer a limited variety of experiences for all sections of population and age groups such as places for sport, places for rest, and places for play | A variety of public open spaces are available in some neighborhoods, but are not available in all the areas of the city or are located far away from residential areas Many of the open spaces have access restrictions, or are not well-maintained. A variety of types of public open spaces may be lacking, such as natural areas, green areas, parks, plazas, or recreation areas. | Most areas of the city have some sort of public open space. There is some variety in the types of public spaces in the city. However, public spaces are sometimes not within easy reach or access of more vulnerable populations and are more restricted in poorer neighbourhoods. | Public open spaces are well dispersed throughout the city. Every residential area and work space has access to open space within 10 minutes walking distance. Open spaces are of various types - natural, green, plazas, parks, or recreation areas - which serve various sections of people. Public spaces tend to truly reflect the natural and cultural identity of the city. | 3 | There are over 163 parks in the city and plenty of open spaces | 4 | Upgradation of existing parks through convergence under AMRUT and grants from KfW |
| 9 | Housing and inclusiveness | A Smart City has sufficient housing for all income groups and promotes integration among social groups. (Guidelines 3.1.2 | Housing is very limited and highly segregated across income levels. Population growth far exceeds the creation of new housing. The poor live in informal settlements with limited to no access to basic services, and are concentrated in a few areas. The wealthy live in separate enclaves. Those in the middle have few , if any options. | Housing is available at most income levels but is highly segregated across income levels. Population growth slightly exceeds the creation of new housing. The wealthy and the middle class have housing that meets their needs at costs appropriate to their income. The poor live in informal settlements | Housing is available at all income levels, but is segregated across income levels. The growth of supply of housing almost meets the rate of population growth. Increasingly, lower and middle-income people can find housing in areas that are conveniently located. | A wide range of a housing is available at all cost levels. The supply of housing is growing at pace with population. Afforable, moderate, and luxury housing are found clustered together in many areas of the city | 2 | 679 dwelling units constructed over the past 5 years with 846 units under progress | 3 | template for development of new land parcels to ensure adequate supply of housing for different income classes. Special focus on in-situ development of low costs housing facilities through convergence with RAY and slum clearance board schemes |
| 10 | Transport | A Smart City does not require an automobile to get around; distances are short, buildings are accessible from the sidewalk, and transit options are plentiful and attractive to people of all income levels. (Guidelines 3.1.5 & 6.2) | Personal automobile centric city with very few modal options. Long trip lengths for daily commute to work and education. Accessing various areas by walking or cycling is difficult. Women and vulnerable sections find it very difficult to move independently in the city. There is limited public transport. Vehicles cause high air and noise pollution levels in the city. Vehicles dominate public spaces and affect their effective functioning. | The street network system is elaborate but public transport choices are restricted. Public transport can be too expensive or unaffordable for the poor. Pedestrian infrastructure is only available in select areas. Tha majority of investments focus on reducing traffic congestion through the creation of more roads. | Network of streets are fairly complete. Public transport covers most areas of the city. However last mile connectivity remains incomplete and affects transport options. Foot paths are accessible in most areas, whereas concerns of safe crossings and security throughout the day remain. Parking zones are demarcated but absence of pricing increases over utilization of parking lots. | Street network is complete and follows a clear structure. Public transportation network covers the entire city and intensity of connection relates with the demand. Plenty of options of public transport are available and affordable for all sections of the society. There is multi-modal integration at all mass transit staions and organized-priced on street and off street parking. Walking and cycling is prevalent. | 2 | Higher dependence on public transport with1- 1.5 lakh passengers daily (22% of city population) Pedestrian infrastructure available only in certain areas | 3 | Provision of Skywalk connecting transit hubs,proposed MLCP and Temple precint will promote walking. Promote pedestrianisation through Inclusive street design |

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|---|---|---|---|---|---|---|---|---|---|---|
| 11 | Walkable | A Smart City's roads are designed equally for pedestrians, cyclists and vehicles; and road safety and sidewalks are paramount to street design. Traffic signals are sufficient and traffic rules are enforced. Shops, restaurants, building entrances and trees line the sidewalk to encourage walking and there is ample lighting so the pedestrian feels safe day and night. (Guidelines 3.1.3 & 6.2) | The city is designed mainly for the automobile. Daily life without a car requires long bus rides. Walking is difficult and often dangerous; there are few pavements, existing pavements need repair and lack trees to provide shade for pedestrians. New buildings have their main entrances set-back from the street, sometimes with large driveways or parking lots separating them from the street, and sometimes are enclosed by gates. Traffic signals are often disobeyed | Older areas of the city see a mix of pedestrians, cyclists, and vehicles but newer areas are focused mainly on the automobile. In the new areas, there are few pavements and main entrances to new buildings are not accesible from the front of the street. large driveways or parking lots often separating them from the street, and sometimes are are enclosed by gates. In these areas, traffic signals are disobeyed | The city has a good network of pavements and bike lanes. Buildings in most areas of the city are easily accessible from the pavement. Howver, traffic signals are sometimes disobeyed and it can feel difficult to cross the street. | The city is highly walkable. Pavements exist on every street and are maintained. Trees line many sidewalks to provide shade for pedestrians. Buildings in most areas of the city are easily accessible from the sidewalk. Traffic signals control the flow of automobiles and are enforced. A network of bike lanes exists to promote cycling as a means of transport. Traffic rules are followed and enforced with great seriousness | 1 | Number of accidents have been more or less constant with a slight marginal decrease- 396 in 2013-14 and 393 in 2014-15. Low availability of pedestrian paths and absence of non motorised transport facilities | 3 | Presence of Pedestrian paths and Non-motorised transport paths available in area based development ensuring last mile connectivity |
| 12 | IT connectivity | A Smart City has a robust internet network allowing high-speed connections to all offices and dwellings as desired. (Guideline 6.2) | City has no major plans to bring increased high speed internet connectivity to the public. | The city has made plans to provide high speed internet connectivity through the existing framework. | The city makes has high speed internet connectivity available in most parts of the city. | The city offers free wifi services to provide opportunity for all the citizens to connect with high speed internet across the city. | 2 | City has made some plans of providing better internet connectivity | 3 | Setting up of wi-fi hotspots at major locations and public buildings in area based development |
| 13 | ICT-enabled government services | A Smart City enables easy interaction (including through online and telephone services) with its citizens, eliminating delays and frustrations in interactions with government. (Guidelines 2.4.7 & 3.1.6 & 5.1.4 & 6.2) | Essential Government services are not linked with online platforms. Paper intensive interactions with the local Government continues. Recieving services and response to citizen complaints take a long time. There is limited availability of data to monitor service delivery. | Some of the public services are provided online and offline but infrastructure for total digitalization is not in place. Service delays occur regularly in some sectors. Responses to citizen inquiries or complaints are often delayed. No integration between services and billing | Most of the services are provided online and offline. Data transparency helps monitoring. Systema and processes to better coordinate between various Government agencies are being developed. | All major services are provided through online and offline platforms. Citizens and officials can access information on accounting and monitor status of projects and programs through data available on online system. Robust data infratsructure system shares information and enhances internal governmental coordination. | 2 | Low digitalization of the public services- Presently birth and death registration is available online | 3 | ICT based monitoring system for major utilities including water supply, electricity,e-Governance,Transport system through UOCCC |
| 14 | Energy supply | A Smart City has reliable, 24/7 electricity supply with no delays in requested hookups. (Guildeline 2.4) | There is only intermittent electricity supply with regular power shedding. Many residents have to plan their days around when power is available. | Electricity supply and loads are managed as per demand and priority for various functions with clear scheduling, with electricity being available in many areas for most hours of the day. | Electricity is available in most parts of the city for most hours of the day but some areas are not so well-served. Smart metering exists in some parts of the city but not all. | Electricity is available 24 x 7 in all parts of the city with smart metering linked to online platforms for monitoring and transparency. | 2 | Scheduled and unscheduled outages reduced by 60% over the past 2 years | 3 | Smart electricity meters installed in some households in the city through area based development |
| 15 | Energy source | A Smart City has at least 10% of its electricity generated by renewables. (Guideline 6.2) | The city does not have any renewable sources of energy and there is no commitment to promote this for the forseeable future. | The city is preparing plans for ensuring that it gets more energy from renewable sources and is in the process of making commitments in this regard. | Some energy consumed is the city is produced through renewable sources. There are long term targets for higher renewable energy capacities and the city is making plans to achieve these. | At least 10% of the energy used in the city is generated through renewable sources. The city is undertaking long-term strategic projects to tap renewable sources of energy in its region/beyond to increase the percentage of renewable energy sources. | 1 | City itself doesn't have any renewable energy sources | 3 | Promotion of power generation from solar energy sources upto 3MW through convergence from Jawaharlal Nehru National Solar Mission (JNNSM) in temple precint and institutional buildings |
| 16 | Water supply | A Smart City has a reliable, 24/7 supply of water that meets national and global health standards. (Guidelines 2.4 & 6.2) | The city has a poor water supply system with limited water availability. There are no clear targets to achieve higher quality and optimal quantity standards. Unaccounted water loss is above 40% | The city has intermittent water supply and availability. However it is setting targets and processes in place to try to improve its water supply. Unaccounted water loss is less than 30%. | The city has 24 x 7 water supply in most areas but the quality of water does not meet international health standards. Unaccounted water loss is less than 20%. | The city has 24 x 7 treated water supply which follows national and global standards and also available in sufecient quantity and affordable across all sections of the society. Unaccounted loss less than 15%. | 2 | The city has intermittent water supply with a supply of 105lpcd and moderate levels of unaccounted for water (UfW) | 3 | Smart water meters help to identify critical water pressure and flow points and take measures to reduce UfW. Carried out through convergence from KFW fund |
| 17 | Water management | A Smart City has advanced water management programs, including smart meters, rain water harvesting, and green infrastructure to manage stormwater runoff. (Guideline 6.2) | The city does not measure all its supply. It does not recycle waste water to meet its requirements and rain water harvesting is not prevalent. Flooding often occurs due to storm water run-off. | The city has meters for all its water supply but lacks mechanisms to monitor. Water wasteage is very high. Some, but not much, rainwater harvesting exists. | The has meters for all its water supply with some smart mechanisms to monitor. Rainwater harvesting systems are installed and storm water is collected and stored in water bodies. However, recycling of waste water and reusage of storm water is limited. | The city has meters for all its water supply. It includes smart mechanisms to monitor remotely. Rainwater harvesting systems are installed and utilised through the city and storm water is collected and stored in water bodies and treated for usage. Recycled waste water is supplied for secondary uses | 1 | Low water metering of around 14% but moderate quantity of water supply | 3 | Installation of smart water meters for accurate measurement of flow and water quantity from convergence through KFW and network improvement through existing Water Supply Detailed Project Report (DPR) |

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|---|---|---|---|---|---|---|---|---|---|---|
| 18 | Waste water management | A Smart City treats all of its sewage to prevent the polluting of water bodies and aquifers. (Guideline 2.4) | The city is unable to treat all its sewage. Many local sewer lines open on to water bodies and open ground and pollute the environment | Most waste water is collected and treated before before disposal. However the treated water does not meet standards and is not recycled for secondary uses. | All the waste water is collected and treated before before disposal. It is also treated to a high standard and some is recycled. | The city has zero waste water because all the waste water is collected, treated and recycled. It meets standards an reduces the need for fresh water. | 1 | Low coverage of UGSS with more than 21% coverage in the city | 3 | Waste water treatment plants being set up to treat the waste water and establishment of quality monitoring system to monitor the quality of discharge. This is set up through convergence from AMRUT and the DPR |
| 19 | Air quality | A Smart City has air quality that always meets international safety standards. (Guideline 2.4.8) | City does not have plans, policies or programs to improve the air quality. Systems to monitor air quality are absent. | City has programs and projects to monitor air quality and spatialising the data to ascertain reasons for degrees of pollution in the air. A few strategies to decrease air pollution have been implemented. | City has programs and projects to monitor air quality and spatialising the data to ascertain reasons for degrees of pollution in the air. Pollution levels are acceptable. | The city has clean air by international standards. Live Air quality monitoring cover the entire city and data of air quality are mapped. | 1 | Absence of plans/programmes to improve the air quality | 2 | Adoption of a green growth strategy through promotion of Non motorised transport and pedestriatnisation by convergence from AMRUT; Making the Nellai Appar Temple Area a Zero Emission Zone |
| 20 | Energy efficiency | A Smart City government uses state-of-the-art energy efficiency practices in buildings, street lights, and transit systems. (Guideline 6.2) | City has no programs or controls or incentive mechanisms to promote or support energy effeciency in buildings | The city promotes energy efficiency and some new buildings install energy effeciency systems that track and monitor energy use and savings | Most new public buildings install energy effeciency systems and some older buildings are also retrofitted to be more energy efficient. Local government conducts counselling and outreach with developer, businesses and residents to adopt energy effeciency strategies | All the existing old and new public buildings employ energy effeciency principles in development and operation and apply for energy rating by national and international forums. Many non-public buildings are also energy efficient because the government promotes energy efficiency through incentices and regulations. | 1 | Lack of initiatives to promote energy efficiency in the city | 2 | Upgradation of existing streetlights into more energy efficient LED lights under the ESCO project thus improving the energy efficiency in the city. Incentives will be provided to the stake holders whom carrying out green building initiatives |
| 21 | Underground electric wiring | A Smart City has an underground electric wiring system to reduce blackouts due to storms and eliminate unsightliness. (Guideline 6.2) | City does not have plans for underground electric wiring system. | More than 40% of the city has underground electric wiring system. | More than 75% of the city has underground electric wiring system. | More than 90% of the city has underground electric wiring system | 1 | Absence of underground electric wiring in the city with no future plans of underground wiring | 4 | Underground electricity cabling under the Smart City Mission Programme |
| 22 | Sanitation | A Smart City has no open defecation, and a full supply of toilets based on the population. (Guidelines 2.4.3 & 6.2) | Many parts of the city do not have access to sanitation infrastructure and facilities. | Sanitation facilities are availabile to 70% of the city's population. | Sanitation facilities are available to 90% of the city's poopulation | Sanitation facilities are available to 100% of the city's population. | 1 | 100% ward coverage with public and community toilets | 3 | Provision of individual household latrines, public and community toilets through convergence through Swachh Bharat Mission (SBM) |
| 23 | Waste management | A Smart City has a waste management system that removes household and commercial garbage, and disposes of it in an environmentally and economically sound manner. (Guidelines 2.4.3 & 6.2) | Waste collection systems do not pick up waste on a frequent basis and waste often enters into water bodies. | Waste generated is usually collected but not segregated. Recycling is attempted by difficult to implement. | Waste is segretated, collected, recycled and disposed in an environmentally sound manner. | The city reduces land fill caused by waste so that it is minimal. All the solid waste generated is seggregated at source and sent for recycling. Organic waste is sent for composting to be used for gardening in the city. Energy creation through waste is considered | 3 | 80% ward coverage out of 55 wards. 100% source seggregation. | 4 | Waste to Energy plant is being proposed at Ramayanpatti and the practice of conversion of organic waste into manure is planned to extended throughout the city.Installation of GIS based bin and conveyance system |
| 24 | Safety and security | A Smart City has high levels of public safety, especially focused on women, children and the elderly; men and women of all ages feel safe on the streets at all hours. (Guideline 6.2) | The city has low levels of public safety - most groups of residents feel insecure during most parts of the day in many parts of the city. | The city has medium levels of public safety - some more vulnerable groups feel insecure during some points of the day and in some parts of the city | The city has high levels of public safety - all citizens including women, children and the elderly feel secure in most parts of the city during most time in the day. | The city has very high levels of public safety - all residents feel safe in all parts of the city during all hours of the day. | 2 | Marginal decrease of 6% of crime rates with improved crime monitoring through patrolling | 4 | Surveillance camera based monitoring system through convergence under Digital India and Nirbhaya Initiative |

# 3.1 City Profile
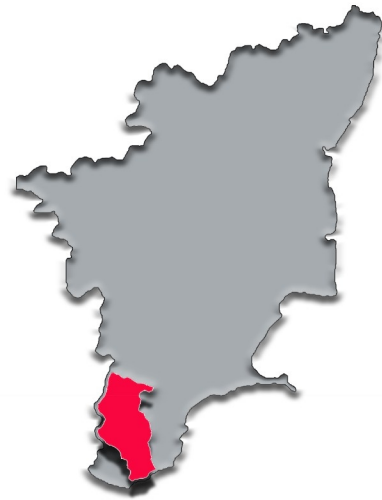
**Tirunelveli Location**
8.73°N 77.7°E

## DEMOGRAPHY

**2,40,195** FEMALE

**4,74,838** POPULATION

**2,34,639** MALE

**4370** PERSONS/SQ.KM
POPULATION DENSITY

**1027** SEX RATIO

**90.39%** LITERACY RATE

**1,01,200** SLUM POPULATION

**Tirunelveli LPA**
353.78 sq.km

TO ALAGIAPANDIAPURAM
TO MADAVAKURICHI
TO NOVILUKURUSUPURAM
TO SANKARANKOIL
TO MADURAI
TO MADURAI
TO KATTALAIVUDAIYANERI
TO KALKURICHI
TO THENKASI
TO MARUTHUR
TO VELLANKULAM
TO NADUVAKKURICHCHI
TO THENKASI
TO MUKKOODAL
TO THOOTHUKUDI
TO DESAMANIKAM
TO AMBASAMUDRAM
TO TIRUCHENDUR
TO THIDIYUR
TO NAGERCOIL
TO KANNIYAKUMARI
TO NANGUNERI
TO TERKU KARISERI
N

**Corporation Area**
108.65 sq.km

To Madurai
To Kalkurichi
To Thenkasi
NAINAR LAKE
TIRUNELVELI RAILWAY STATION
OLD BUS STAND
To Thenkasi
NELLAIYAPPAR TEMPLE
To Thoothukudi
NEW BUS STAND
To Kanniyakumari
To Tiruchendur
To Nagercoil
To Terku Kariseri

## Growth Pattern

**1999**
MAJOR GROWTH TAKES PLACE AROUND THE NELLAIYAPPAR TEMPLE WHERE THE TOWN IS PRESENT

**2006**
GROWTH TENDS TO SHIFT TO EASTERN SIDE OF THE TOWN AFTER THE NEW BUS STAND BEEN CONSTRUCTED NEW DEVELOPMENTS AND COMMERCIAL ACTIVITES ARE INCREASED

**2014**
GROWN IN ALL THE DIRECTIONS ARE OBSERVED STILL THE NELLAIYAPPAR TEMPLE ACTS AS MAJOR HUB.

## TRANSPORTATION

**60:40** PUBIC : PRIVATE MODAL SHARE

LENGTH OF ROADS
**1095.06** KM
**12%** CITY AREA
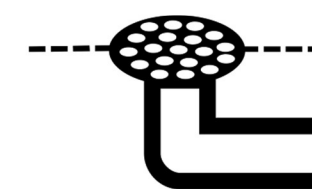
## WATER SUPPLY

**101 LPCD** PER CAPITA WATER SUPPLY

## WASTE MANAGEMENT

LENGTH OF SWD
**308.85** KM

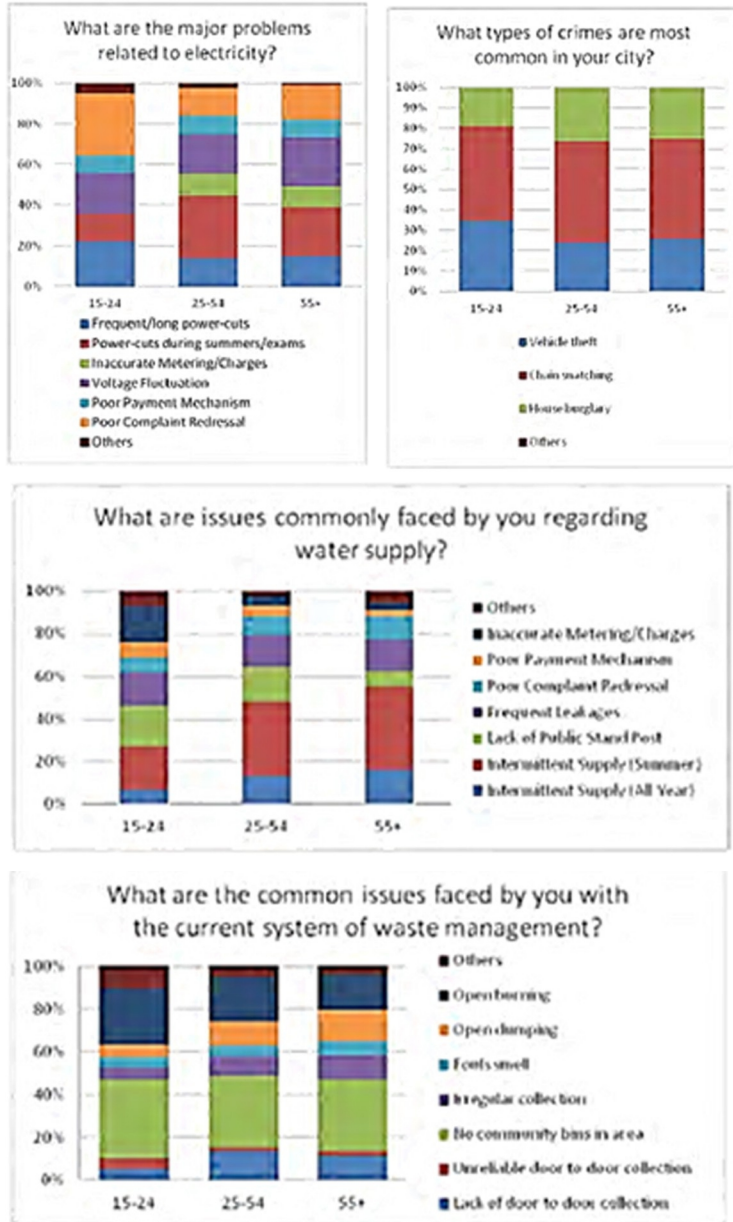**80% D2D** WASTE COLLECTION

SEWERAGE FLOW
**8.5 MLD**

## ENERGY

**25%** RENEWABLE ENERGY

**69%** THERMAL ENERGY

STAKEHOLDER CONSULTATION



FEEDBACKS FROM SOCIAL MEDIA

**Tirunelveli Smart City**



ESSAY WRITING FOR CHILDREN — Essay Writing Competition for School Children

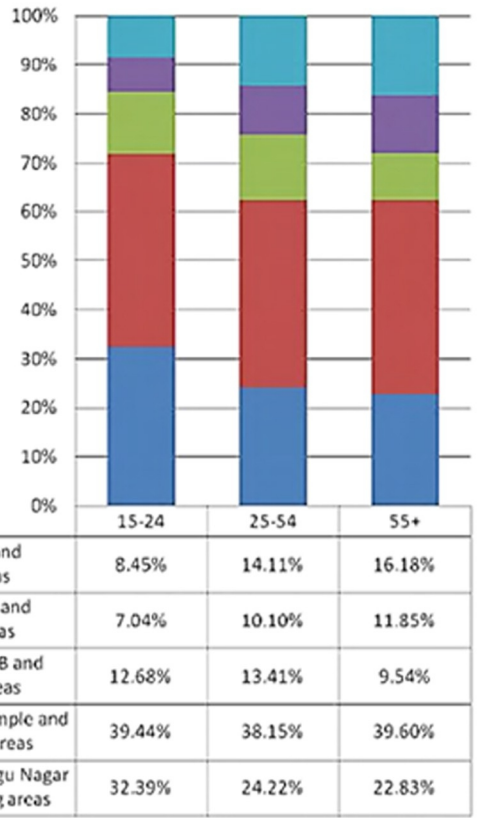ESSAY WRITING FOR ALL — Essay Writing Competition for Citizens

Logo Design Competition

Councilors Competition

Government Staff Competition

Innovative Tagline Competition for Citizens

Interview with the Community

Line Department Meetings

Open Group Discussion with the Community

Councilors Meeting to Discuss Smart City Ideas

Meeting with College Students and Entrepreneurs

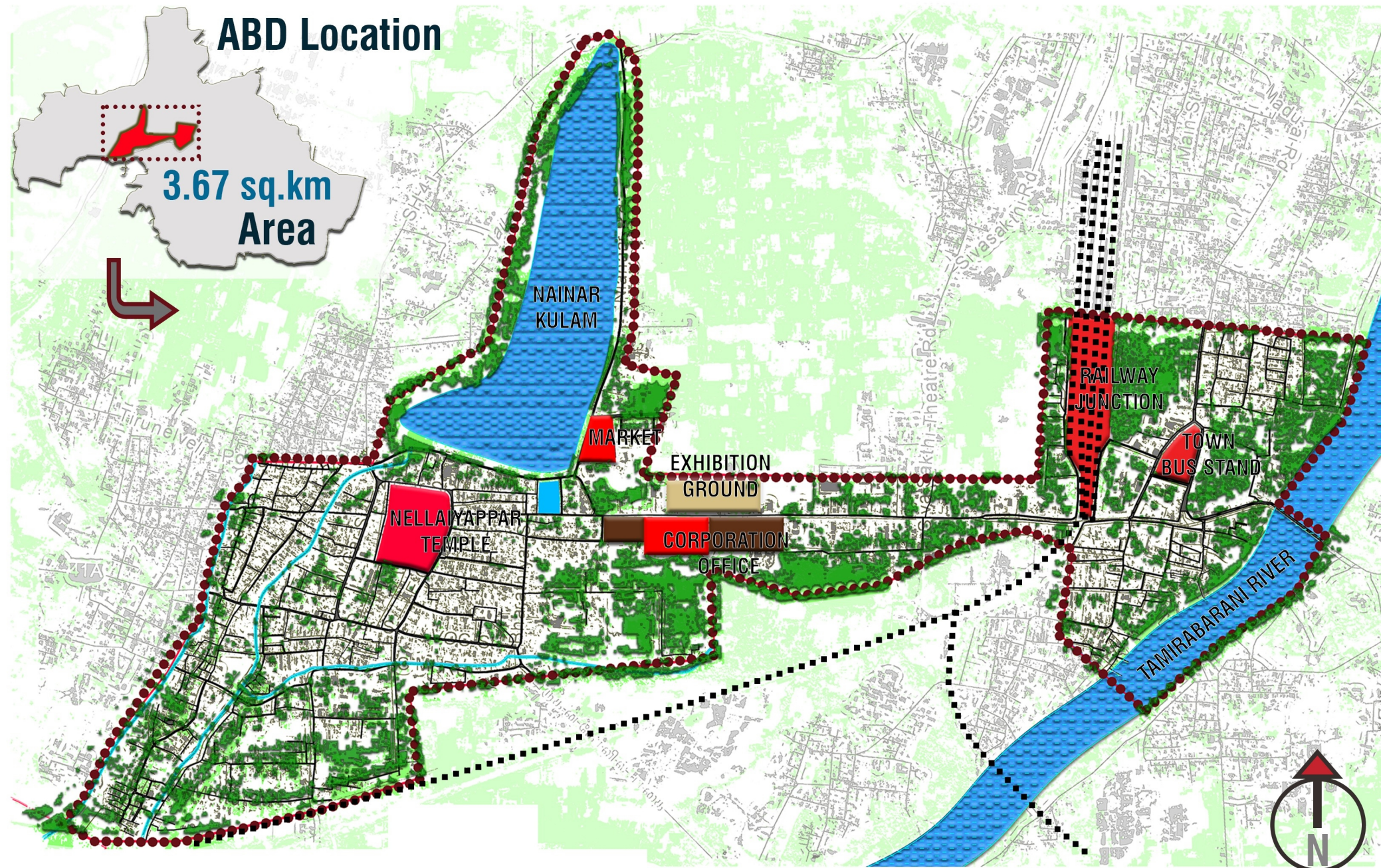Meeting with School & Resource Organization

**WEBSITE : http://www.tirunelvelicorporation.in/smartcity**

**FACEBOOK : www.facebook.com/tirunelvelismartcity**

✉ tirunelvelismartcity@gmail.com **MAIL ID**

📱 +91 80563 37061 **WHATSAPP**

ISSUES AND ITS INTENSITY SUGGESTED BY STAKEHOLDERS



What are the major problems related to electricity?
- Frequent/long power-cuts
- Power-cuts during summers/exams
- Inaccurate Metering/Charges
- Voltage Fluctuation
- Poor Payment Mechanism
- Poor Complaint Redressal
- Others

What types of crimes are most common in your city?
- Vehicle theft
- Chain snatching
- House burglary
- Others

What are issues commonly faced by you regarding water supply?
- Others
- Inaccurate Metering/Charges
- Poor Payment Mechanism
- Poor Complaint Redressal
- Frequent Leakages
- Lack of Public Stand Post
- Intermittent Supply (Summer)
- Intermittent Supply (All Year)

What are the common issues faced by you with the current system of waste management?
- Others
- Open burning
- Open dumping
- Feels smell
- Irregular collection
- No community bins in area
- Unreliable door to door collection
- Lack of door to door collection

AREA BASED DEVELOPMENT CITIZEN'S PRIORITY



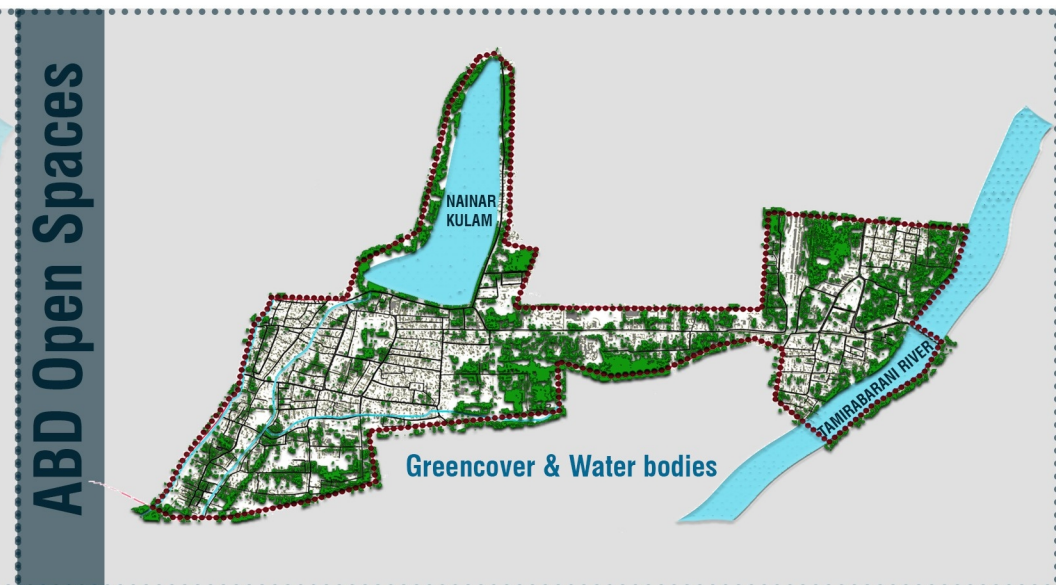| | 15-24 | 25-54 | 55+ |
|---|---|---|---|
| Ameenpuram and adjoining areas | 8.45% | 14.11% | 16.18% |
| Maharaj Nagar and adjoining areas | 7.04% | 10.10% | 11.85% |
| NGO Colony A/B and adjoining areas | 12.68% | 13.41% | 9.54% |
| Nellaiappar Temple and adjoining areas | 39.44% | 38.15% | 39.60% |
| Pettai Veerabagu Nagar and adjoining areas | 32.39% | 24.22% | 22.83% |

**AS SUGGESTED BY THE CITIZEN, NELLAIYAPPAR TEMPLE AND ITS ADJOINING AREAS ARE TAKEN FOR AREA BASED DEVELOPMENT**

**3.3** # ABD Profile

## ABD Location

3.67 sq.km Area

NAINAR KULAM

MARKET

EXHIBITION GROUND

NELLAIYAPPAR TEMPLE

CORPORATION OFFICE

RAILWAY JUNCTION

TOWN BUS STAND

TAMIRABARANI RIVER

N

### Demography

22,947 **FEMALE**

1236 **SLUM POPULATION**

45,513 **POPULATION**

22,566 **MALE**

### ABD wards

5,6,40,41,42,53 & Part of **3**(10%), **43**(60%), **44**(25%), **55**(20%)
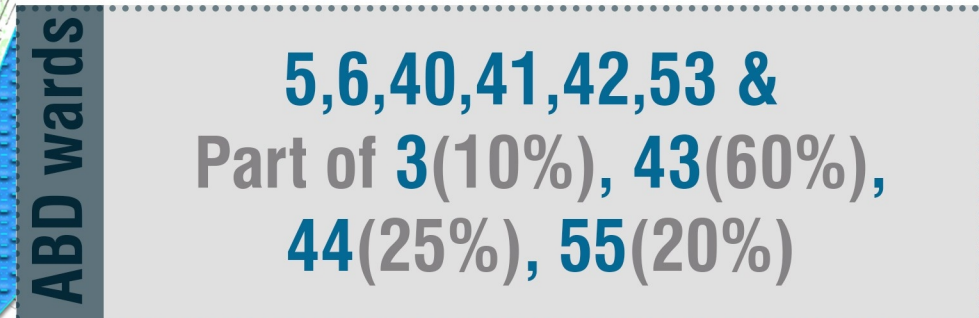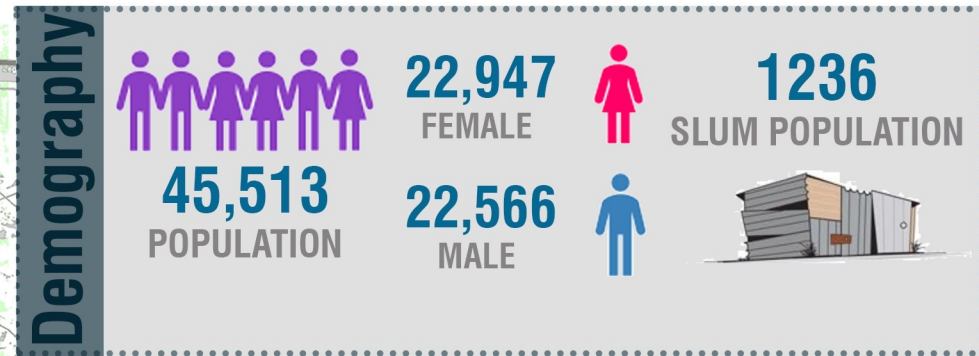
### Vision

"TO DEVELOP AN ATTRACTIVE, INVITING, AND SECURE CITY FOR ITS CITIZENS BY PROMOTING DIVERSIFIED ECONOMY, URBAN MOBILITY, HERITAGE VALUE AND EXPLOITATION OF THE FULL POTENTIAL OF THE RENEWABLE ENERGY RESOURCE AND DIGITAL TECHNOLOGY"

### ABD Landuse

NAINAR KULAM

RAILWAY STATION

EXHIBITION GROUND

NELLAI TEMPLE

CORPORATION OFFICE

TAMIRABARANI RIVER

- Commercial
- Residential
- Public/ Semi public
- Mixed use
- Greencover
- Waterbodies

### ABD Road

NAINAR KULAM

TAMIRABARANI RIVER

Length of Roads - 47 km

### ABD Open Spaces

NAINAR KULAM

TAMIRABARANI RIVER

Greencover & Water bodies

**3.4 ABD Proposals**



NAINAR LAKE FRONT DEVELOPMENT

NAINAR KULAM

SMART BUS TERMINUS

MLCP

SKYWALK

RAILWAY JUNCTION

TOWN BUS STAND

MARKET REDEVELOPMENT

MARKET

EXHIBITION GROUND

PROPOSED ZEZ AROUND TEMPLE

NELLAIYAPPAR TEMPLE

CORPORATION OFFICE

HERITAGE HUB

TAMIRABARANI RIVER

CHANNELIZATION OF DRAINS

RESTORATION AND REDEVELOPMENT OF TAMIRABARANI RIVER

N

## HERITAGE HUB DEVELOPMENT

Temple and Tank development
Skywalk - A Heritage Walk
Facade Control and Height
Restriction
Tourist Info Kiosks & App
Installation of Sculptures, arts,
Water ATMs, Fountains
Colour My City -Graffiti Wall

## GREENER NELLAI

Nainar Lakefront development
Channelization of Drains
Restoration and Redevelopment
of Tamirabarani River

## REDEVELOPMENT OF PUBLIC AMENITIES

Smart Bus Terminus
Market Improvement and
redevelopment
Water treatment plant near
Market

## SMART URBAN SERVICES

Smart Water Metering and
Quality Sensors
Smart waste Management
Access to toilets
Smart Energy Metering
Roof top Solar Panels
Underground Electric Wiring
Slum Redevelopment
ICT Interventions

## SMART URBAN MOBILITY

Inclusive Street and Road
Redesign
Project e- Vehicle
Zero Emission Zone
Smart Bus Shelter
Automated MLCP
Junction Improvement

To Preserve the world famous Nellaiappar Temple and promote heritage tourism and cultural activities by improving existing temple precinct and redevelopment of temple Theppakulam near Nainar Lake.

Tourist Information Kiosks(8nos) and mobile application are likely to be developed.
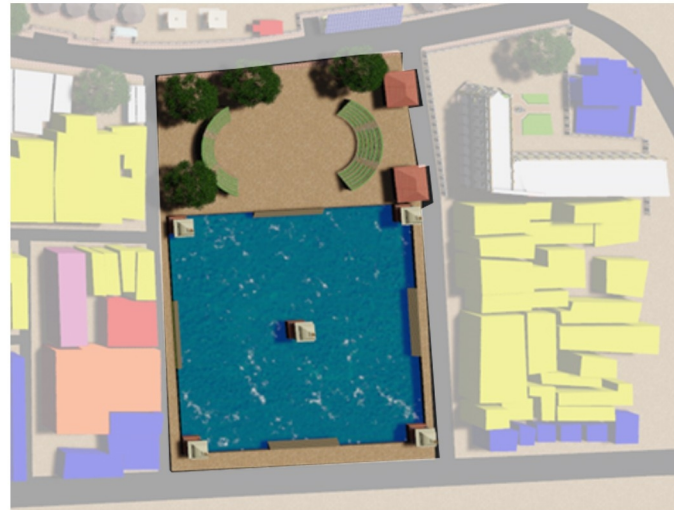
Facade treatment around the temple area and all along the proposed Skywalk so as to have aesthetic appeal and visual pleasure for the people using the facility.

Installation of Public art, fountain, street furniture, Water ATM'S(every 300m), monuments and sculptures

**ZERO EMISSION ZONE & MULTI LEVEL CAR PARKING**

Zero Emission Zone (ZEZ) been proposed from the Multi Level Car Parking (MLCP) to Nellaiyappar temple. A length of 1.50 km of road been proposed for ZEZ around the temple area.
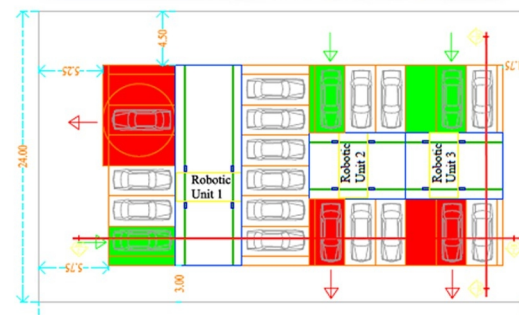
Automated Multi level car parking facilities been Proposed in the exhibition ground

**SKYWALK - A HERITAGE WALK**
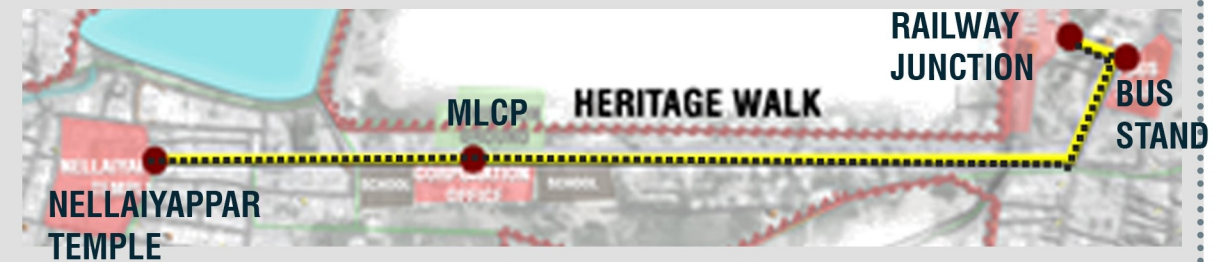
To provide a safer pedestrian zone, also an unique experience for tourists to enjoy the sky museum with all necessary facilities. Connecting the transit hubs and Nellaiyapar Temple (2600m)

**Key Features**

**Sky Museum**
**Elevators**
**Seating Facilities**
**Water ATM's**
**Smaller Shops**
**Information Kiosks**
**Advertisement Hoardings**

## TRAFFIC AND TRANSPORT MANAGEMENT

- Improvement of Public transport system
- Junction Improvement
- Creation of ZEZ with focus on e-vehicle and allied infrastructure promotion
- Street Vendor zone
- Street scape redesign
- Barrier free foot path and other NMT related
- Smart Bus shelters with integrated Passenger Information system
- Automated Traffic signals and integrated asset management systems

Improvement of Public Transport System

**Enhancing Street design and Pedestrianization**
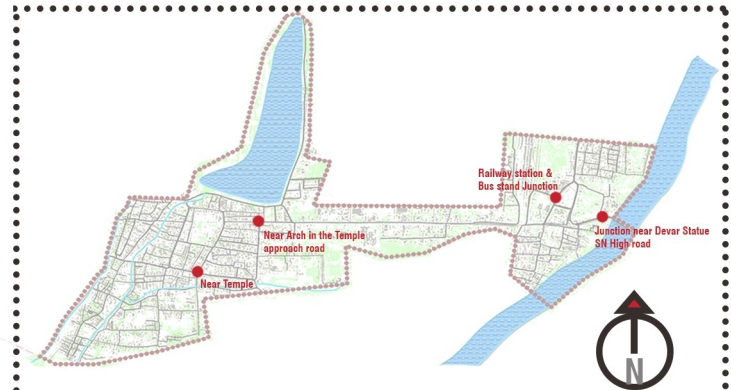
**Junction Improvement – 4 identified Junctions**

**e-Vehicles**

**e-Rickshaw**

**Integerated management systems**

**Smart Bus Shelter**

**GPS based Pasenger information syatem**

**WiFi enabled Smart Street poles**

## MARKET IMPROVEMENT



Town Bose Market and Private market near Nainar Lake are to be improved to enhance the cleanliness and to provide the necessary needs and services like

- Renovation of Platforms,
- Toilet and Sanitation facilities,
- Shop Frontage,
- Roof structures,
- Loading & Unloading Area etc.

Vehicle movements are likely to be restricted around the Bose Market to reduce the congestion in that area



MARKET

BUS STAND

N

1. **Smart Bus Terminus**
2. **Market Improvement**

## SMART BUS TERMINUS



**CONCEPTUAL VIEWS OF BUS TERMINUS**

### KEY FEATURES

Bus Platforms,
ICT based Information system,
Landscaping, Gantry Signs,
Parking Facilities,
Administrative Block,
Passenger Facilities,
Commercial Complex,
Markings & Utilities.

**BASEMENT PARKING PLAN**
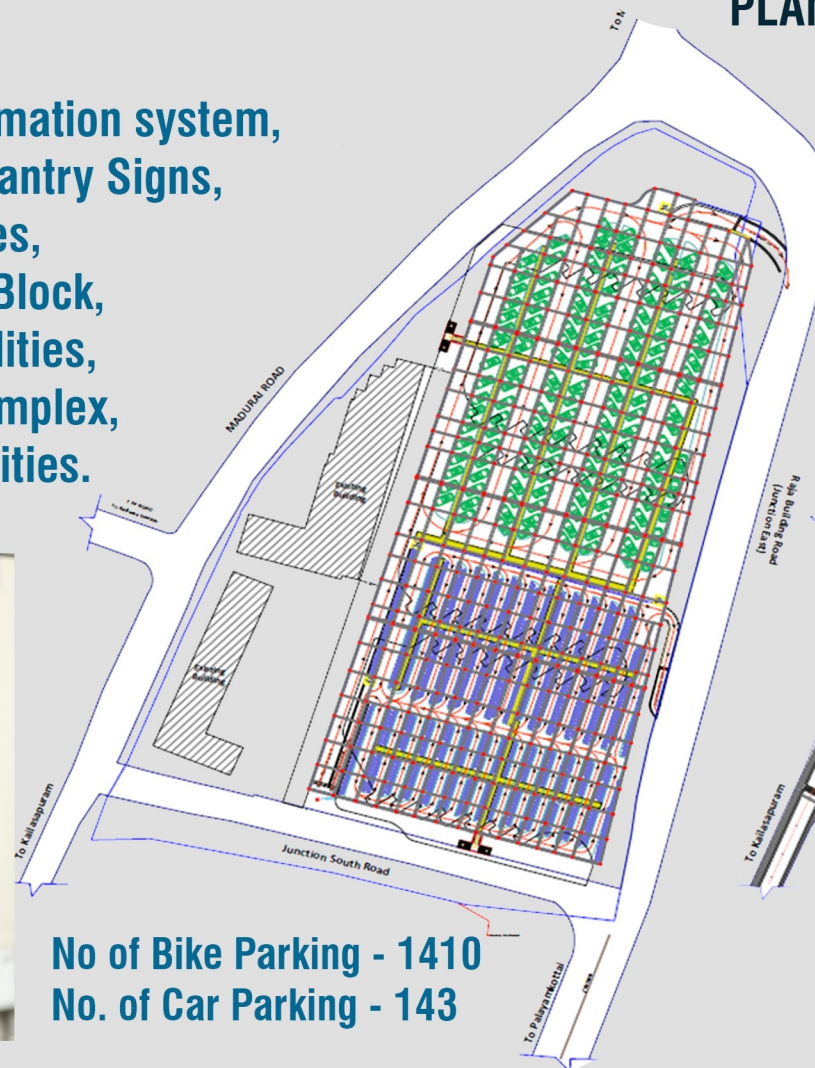


No of Bike Parking - 1410
No. of Car Parking - 143

**BUS TERMINUS GROUND FLOOR PLAN**
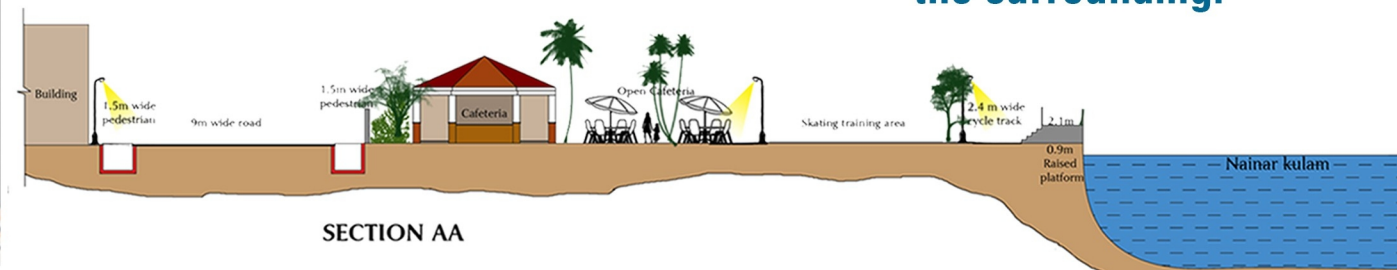


No of Bus Bays - 46

**NAINAR LAKE**

- Provides a distinctive feature and create a new signature for Tirunelveli.
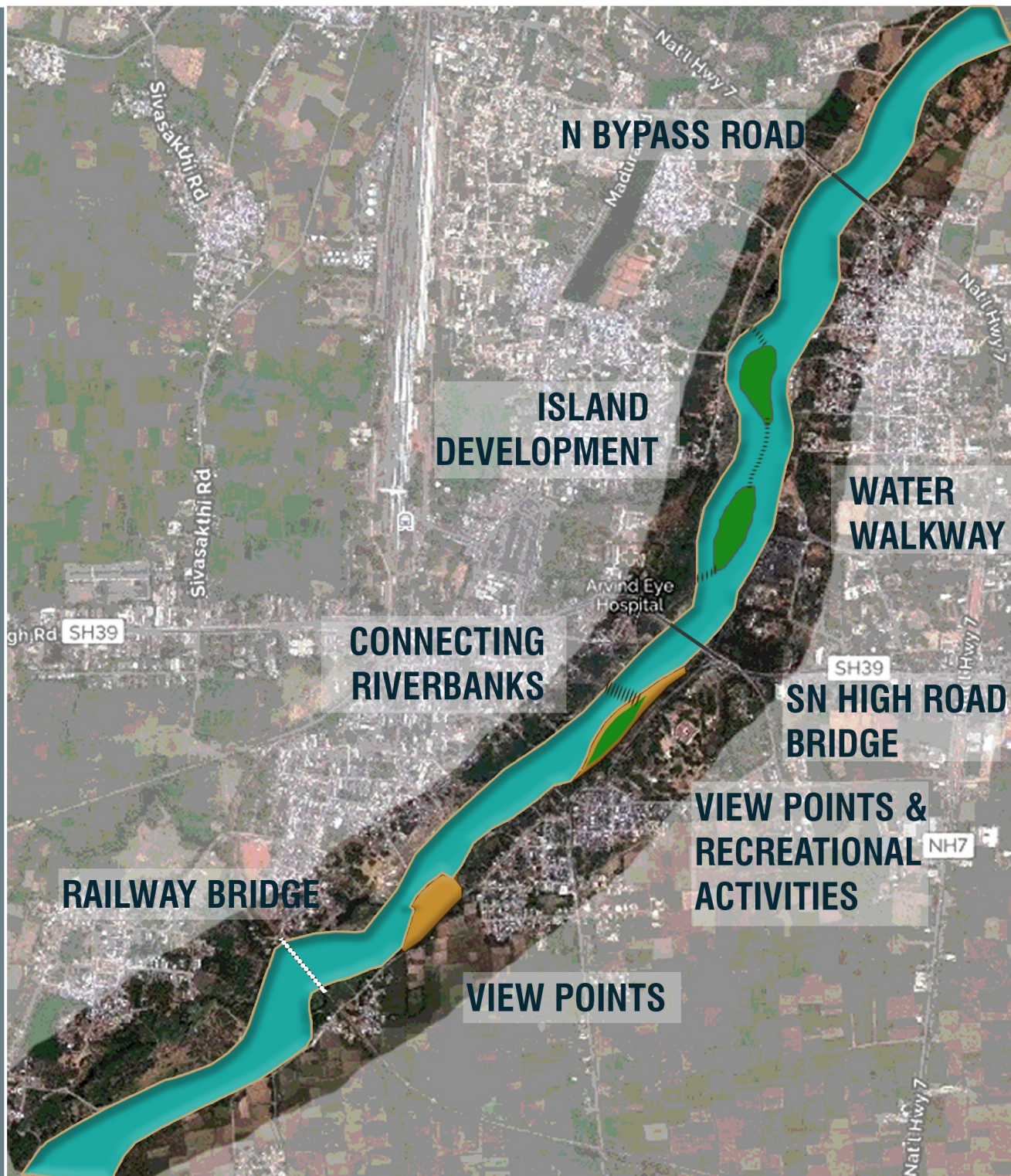- Also provides a variety of activities and experience that attract repeat visitation and invite tourists.
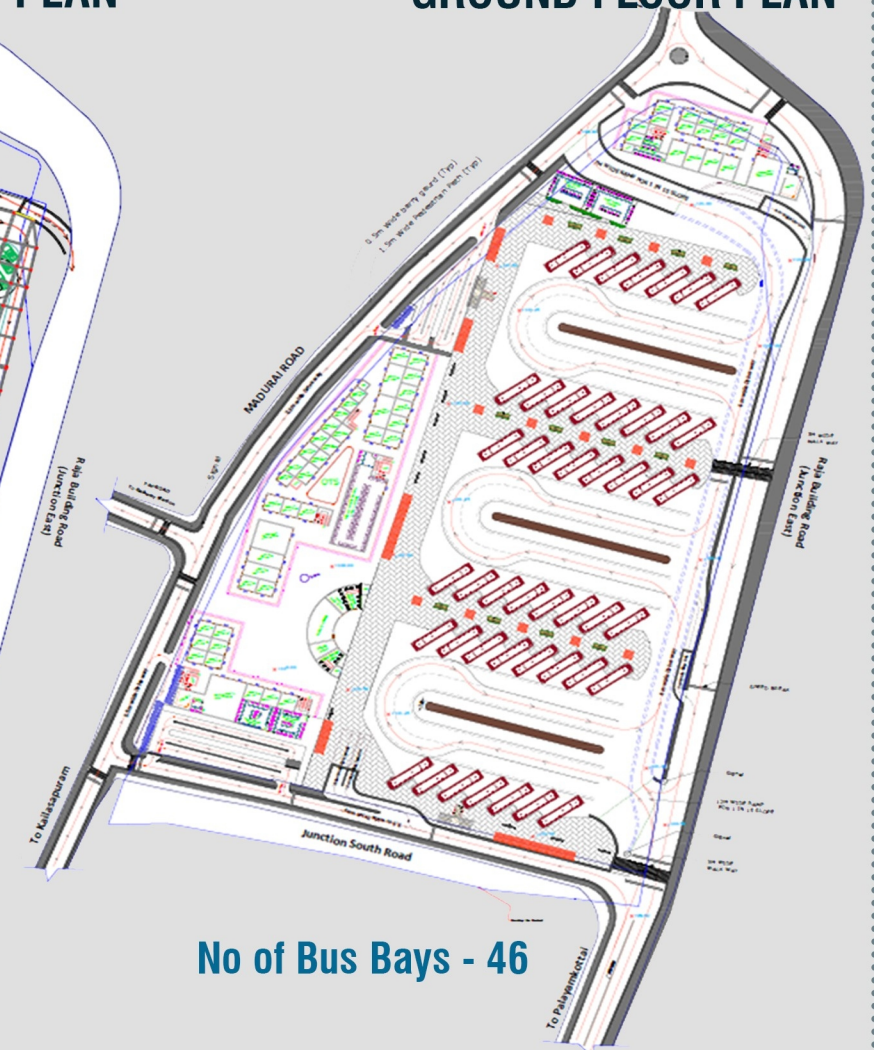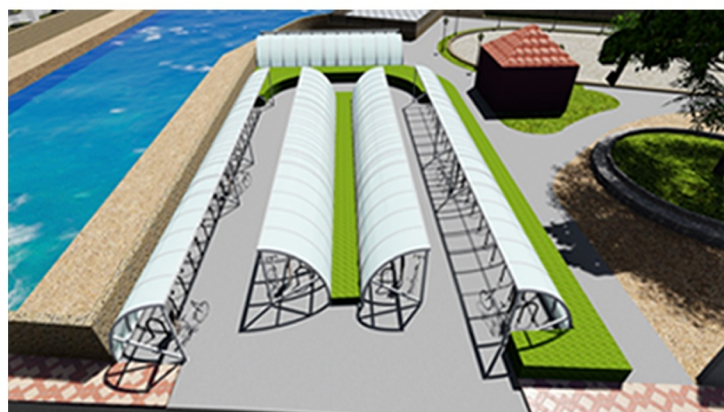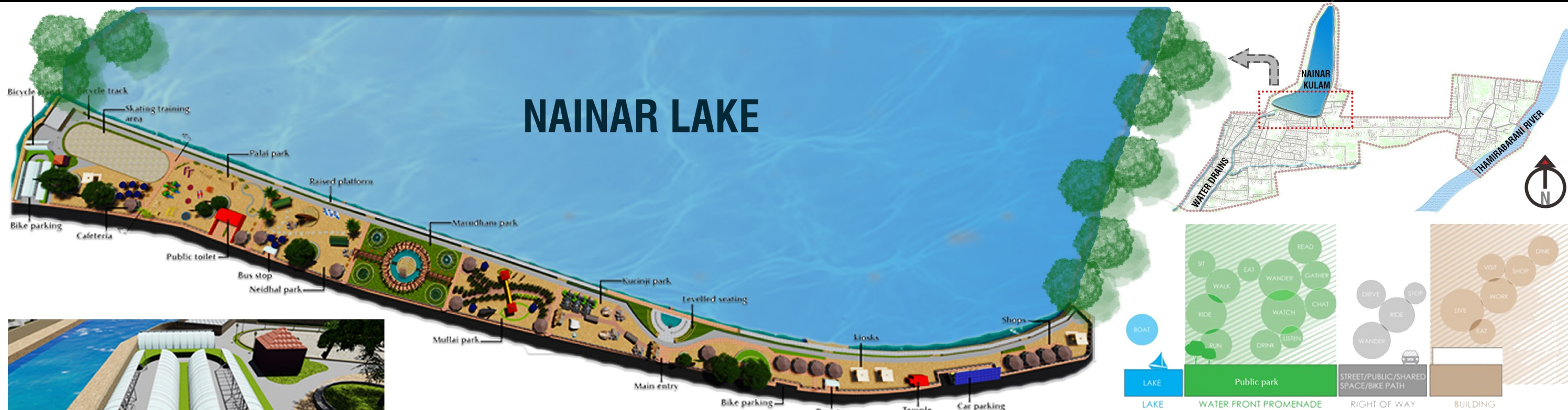
150 two wheeler parking is provided. Solar panels can be provided at the roof of the parking.

Levelled seating with view over the lake is been provided.

Shops are provided at regular interval for the ease of users.

Sculptures are provided to improve the aesthetics of the surrounding.

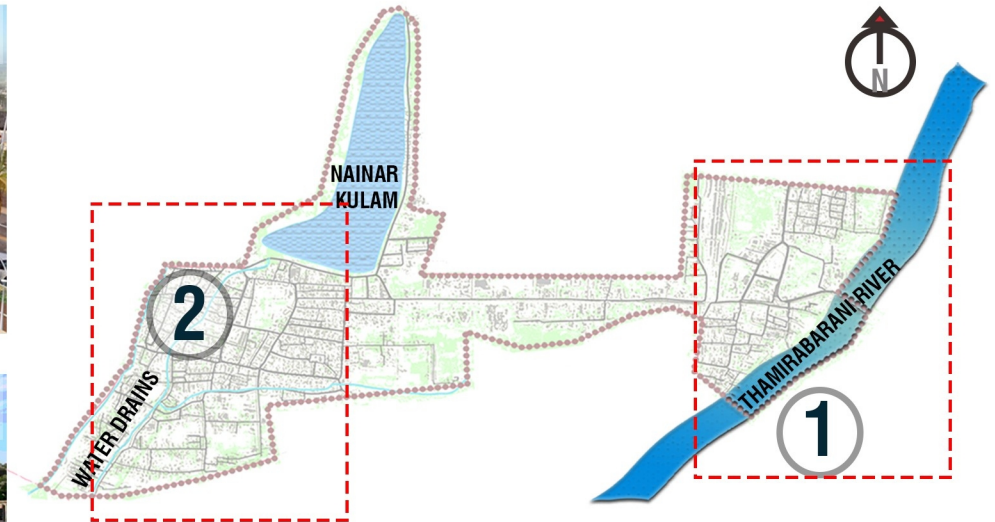Restaurants and provision for recreational activities are given in order to improve the livelihood of the lake.

SECTION AA

## TAMIRABARANI RIVER RESTORATION AND REDEVELOPMENT

N BYPASS ROAD

ISLAND DEVELOPMENT

WATER WALKWAY

CONNECTING RIVERBANKS

SN HIGH ROAD BRIDGE

VIEW POINTS & RECREATIONAL ACTIVITIES

RAILWAY BRIDGE

VIEW POINTS

**REDEVELOPMENT OF RIVER TAMIRABARANI WITH IMPROVED RIVERBANK TREATMENTS AND RECREATIONAL ACTIVITIES**
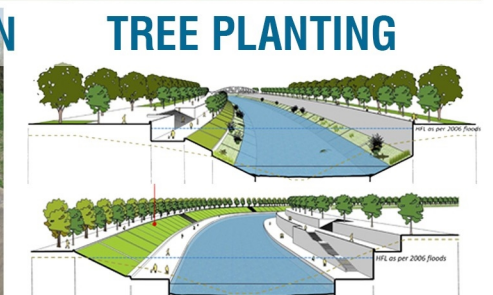
**INTEGRATING WATER TO RECREATIOANL ACTIVITIES**

VIEW POINTS

WATER WALKWAY

INFORMATION BOARDS

RIVERBANK TREATMENTS

SEATING FACILITIES

NAINAR KULAM

THAMIRABARANI RIVER

WATER DRAINS

1. Tamirabarani river restoration - 7km
2. Channelization of drains - 12km

## CHANNELIZATION OF DRAINS

Tirunelveli
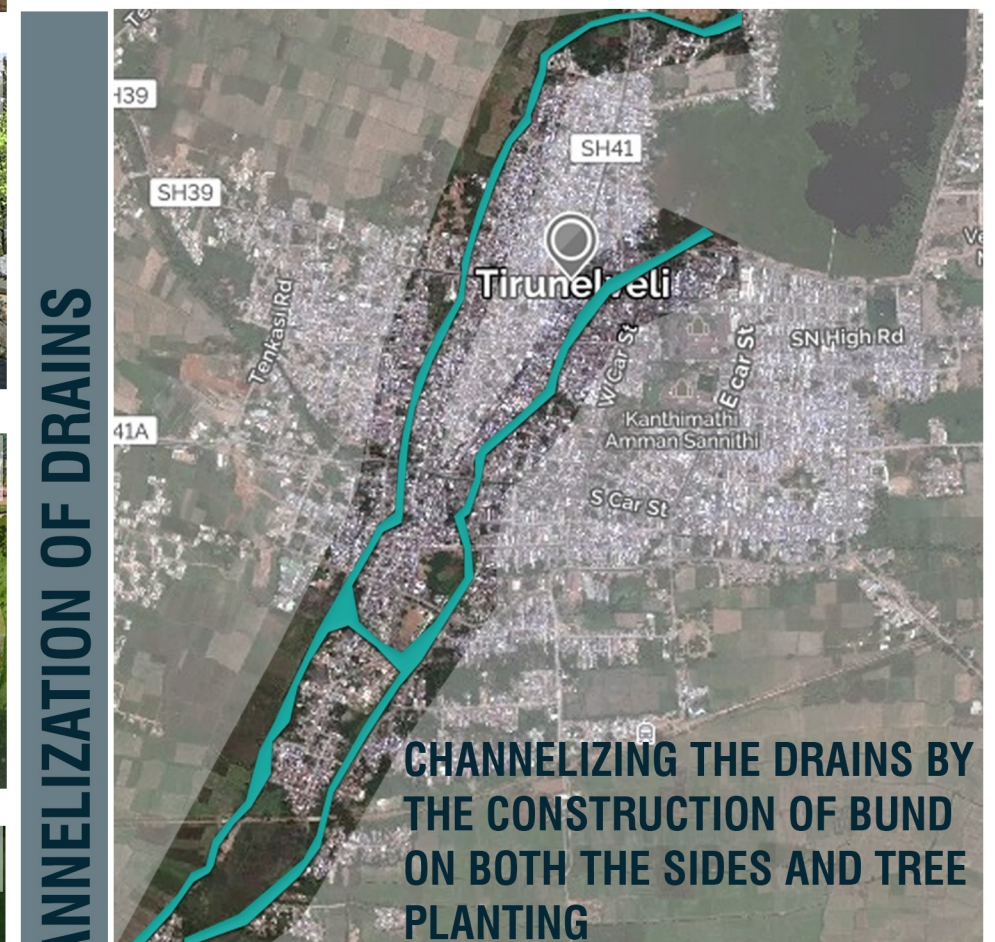
**CHANNELIZING THE DRAINS BY THE CONSTRUCTION OF BUND ON BOTH THE SIDES AND TREE PLANTING**

BUND CONSTRUCTION

TREE PLANTING

## SMART URBAN SERVICES

### WATER
- Smart Water Metering
- Water quality sensors
- Water Leakage Sensors

### SANITATION
- Access to toilets
- Solid waste management
- Underground sewerage system

### ENERGY
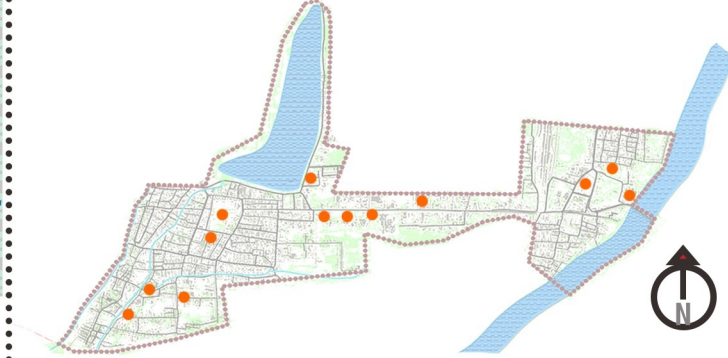- Smart Energy metering
- Underground electric wiring
- Roof Top Solar Panels
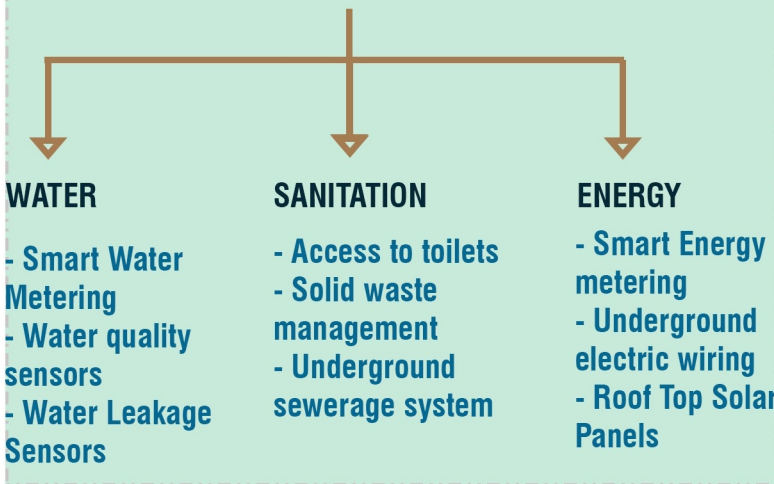
## ENERGY

Installation of Roof top Solar panels in temple premises and on all public buildings to generate approximately 4 MW of energy. Also Smart energy meters are also been provided for every household.

Roof Top Solar Panels been proposed in public buildings, schools, Commercial areas, Hospitals, etc.

## ACCESS TO TOILETS

Eventhough there present community toilets in some places most of them are unusable and not accessible.

Being a tourist place, Tirunelveli have to had better sanitary facility and inorder to increase such, e-Toilets been provided.

25 e - Toilets been proposed once in 300m along the arterial roads of 8km length which has high floating population.
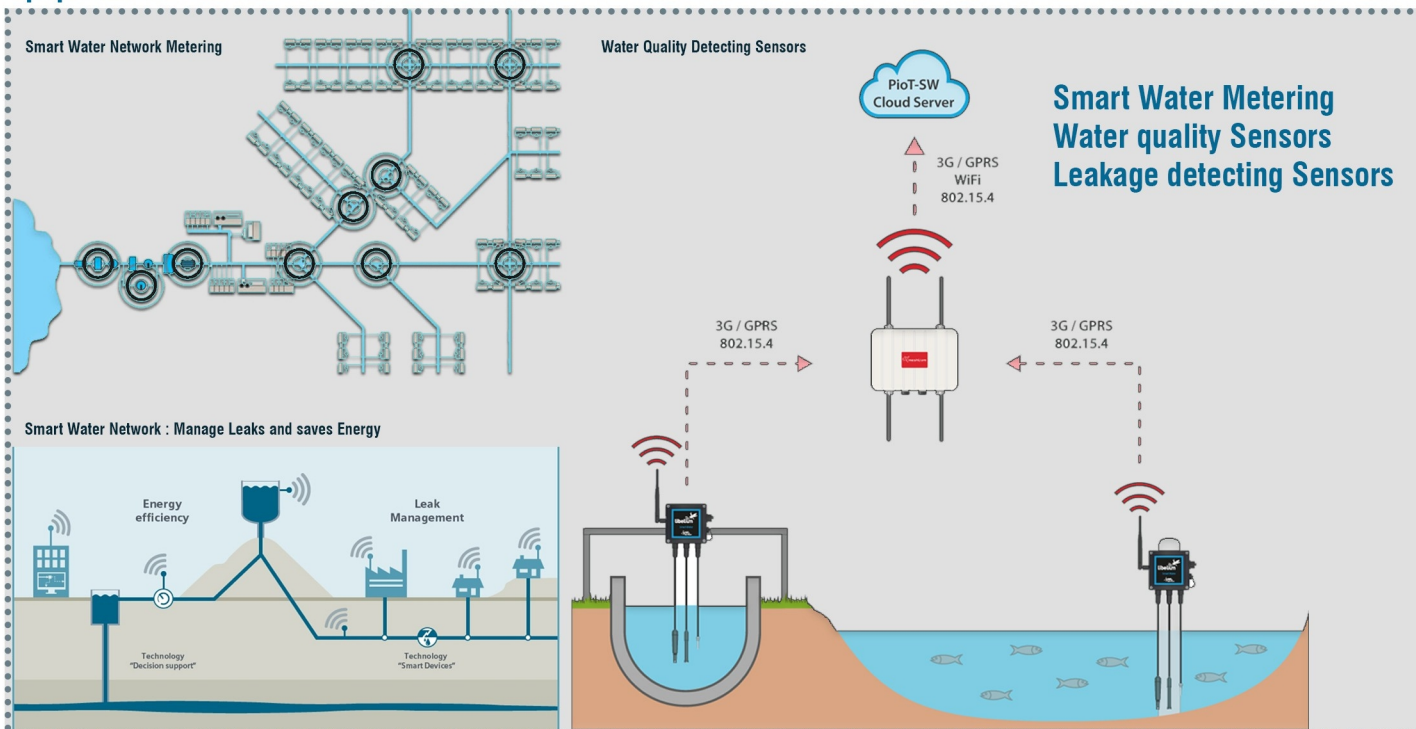
### Slum improvement programme

- 132 Housing Units with green building initiatives
- Subsidised Electricity
- Potable Water Supply
- Improved Sanitation Facilities
- LED Lighting

e-Toilets representation

Slum Housing

**SLUM HOUSING**

Smart Water Network Metering

Water Quality Detecting Sensors

PioT-SW Cloud Server

3G / GPRS WiFi 802.15.4

**Smart Water Metering**
**Water quality Sensors**
**Leakage detecting Sensors**

3G / GPRS 802.15.4

3G / GPRS 802.15.4

Smart Water Network : Manage Leaks and saves Energy

Energy efficiency

Leak Management

Technology "Decision support"

Technology "Smart Devices"

**SMART WATER SERVICES**

## SOLID WASTE MANAGEMENT - SOURCE SEGREGATION

Tirunelveli got National award for being the first district in India to achieve 100% segregation of waste from source. Also it was achieved within a short span of time i.e, within 3 months

### Tirunelveli corporation bags national award for waste management

Padmini Sivarajahl TNN | Updated: Mar 7, 2017, 08.45 AM IST

✉  🖶  A-  A+

MADURAI: The Tirunelveli Corporation ↗ has bagged the national award ↗ for source segregation of waste at the doorstep, an achievement the corporation commissioner S Sivasubramanian ↗ is proud of as he is a native of Tirunelveli town.

Sivasubramanian said he had done the planning using a five

*Corporation commissioner S Sivasubramanian (right) receives the award from director of Swachh Bharat MissionPraveen Prakash*

The houses were told only plastics would be collected on Wednesdays. If they handed over unsegregated garbage, they were asked to pay a service charge of 10 rupees on the spot. Residents began complying to avoid paying the fee.

Collectors are allowed to sell the plastics they collect. Each one earns anywhere between 50 to 100 rupees.

**2 road sweeping machines are to be bought**

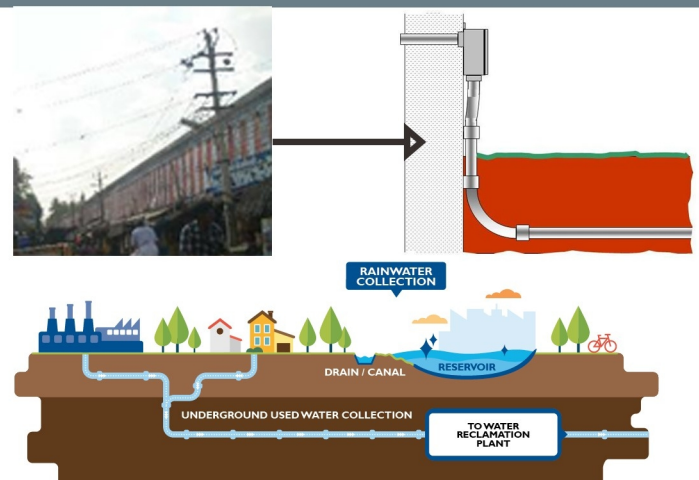**460 GPS Sensor fitted community bins are proposed**

Sensor fitted bins
Waste transportation Route Mapping
GPS based vehicle tracking
RFID based segregation

## UNDERGROUND UTILITY SERVICES

Underground Sewerage system with waste water treatment facility, Storm Water Drainage System including rain water harvesting, Optical fiber network, Electric cabling, all above utilities are to be provided in underground Utility Duct.

UGD are almost provided to all wards of ABD and works are also in progress.

Underground electric wiring been proposed all along the ABD to increase the safety and security, also to enhance the Aesthetics of the surroundings

RAINWATER COLLECTION

DRAIN / CANAL   RESERVOIR

UNDERGROUND USED WATER COLLECTION   TO WATER RECLAMATION PLANT

## INTEGRATED E GOVERNANCE SERVICES

Interlinking of all Government sectors
Grievance redressal mechanism,
analytics of feedback,
Information and response center enabling incident reporting for safety & security issues, tracking, escalation and emergency management system.
Entrepreneurship module to enable entrepreneurs to obtain Single Window Clearances for starting new operations or expanding existing business;
Access employment exchanges, online land bank and other relevant business portals.
Mobility module – Bus Locator, e-Rickshaw sharing app for ride pooling, Data center comprising data analytics
e-planning portals ,
Land Record Modernization
Online delivery of land records & kiosks,
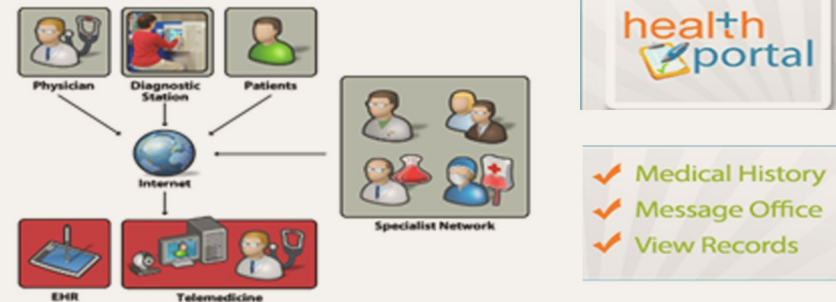Online Digitization of information, data & maps





## Unified Operations Command and Control Centre (UOCCC)

### SMART HEALTHCARE AND EDUCATION

**SMART HEALTHCARE**
Tele medicine (diet nutrition), e-health records management in Govt.Hospitals, Online City health portal.

**SMART EDUCATION**
Smart classrooms, e-books and performance management solution.





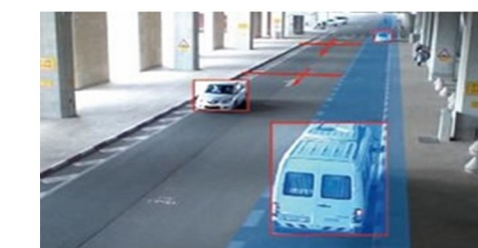### INTELLIGENT TRAFFIC AND TRANSIT MANAGEMENT SYSTEM

**TRAFFIC MANAGEMENT:**
Synchronized automatic signals,
Automated Traffic Control System (ATCS),
Pedestrian activated signals at crosswalks,
Bicycle actuated signals,
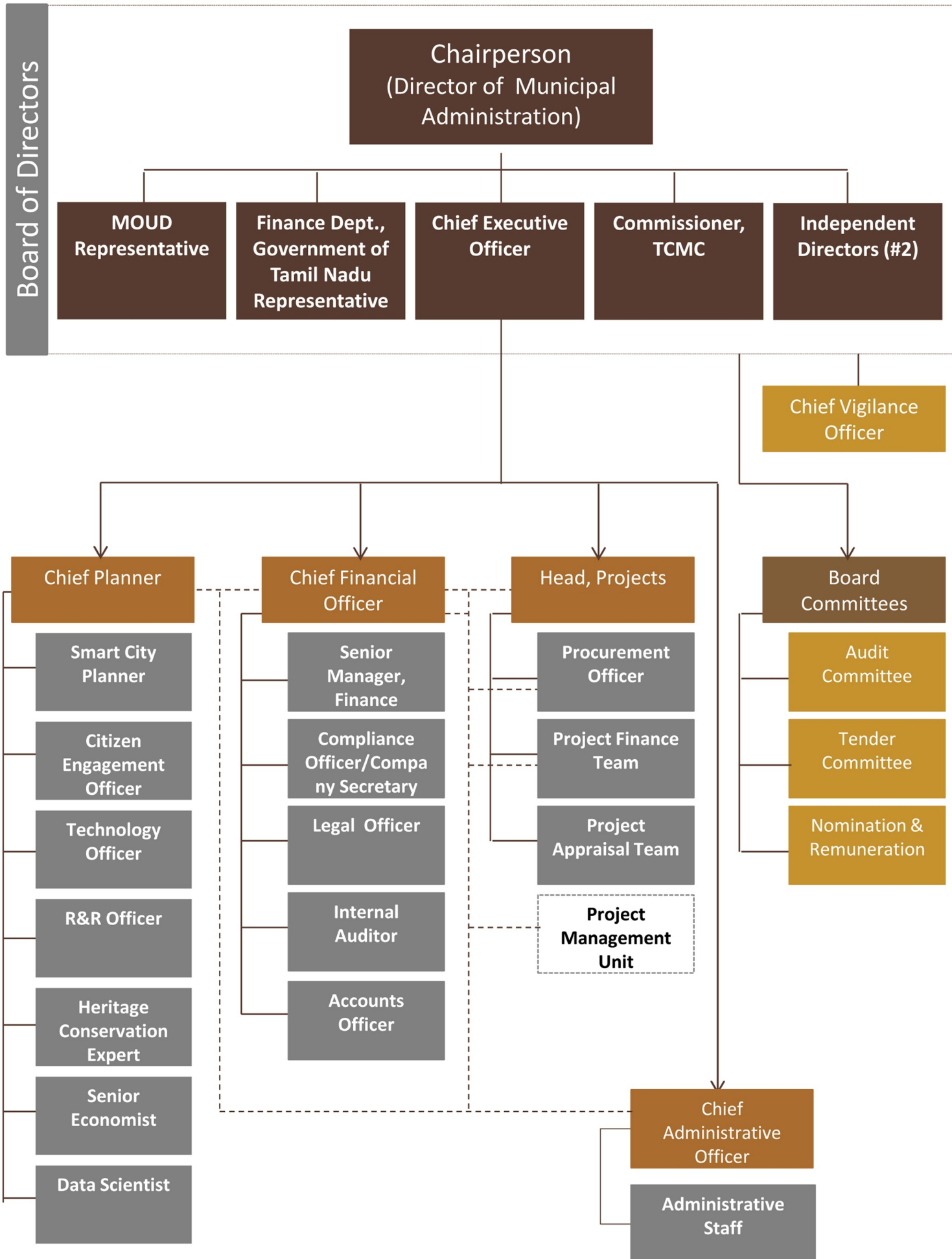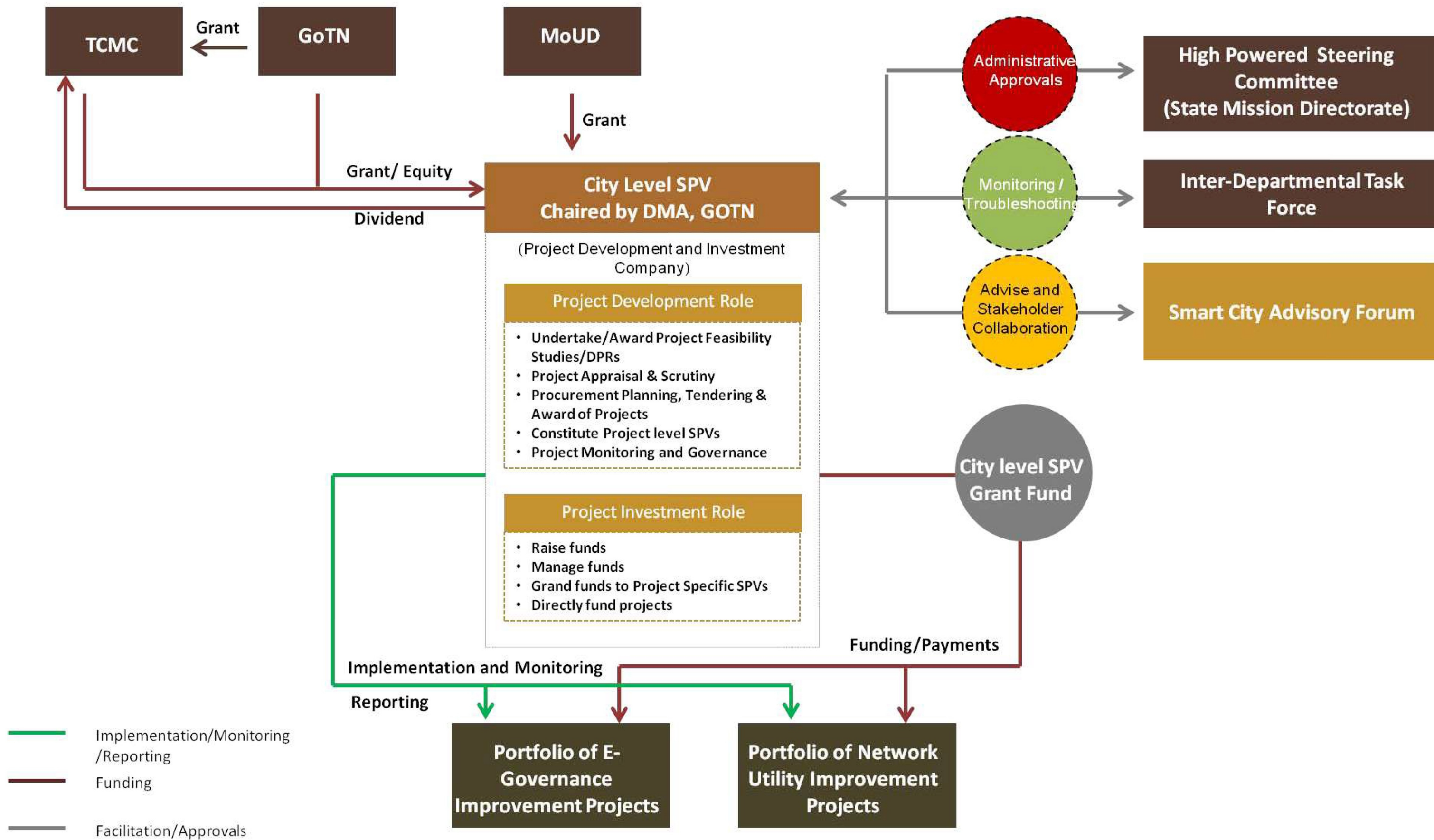Dynamic messaging boards and web/mobile applications with route information.
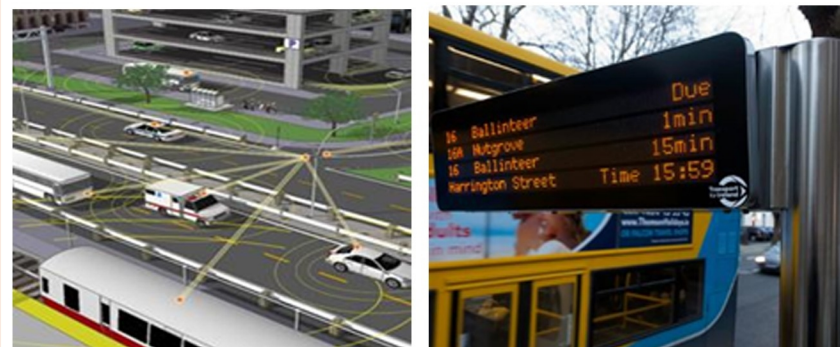
**TRANSIT MANAGEMENT:**
GPS-based tracking and route information of public transport and Fleet Management System
passenger information dissemination (On-Board, At-Stops, At-Stations)
Video Surveillance (in vehicles & terminus etc.)
Parking Management (On-Street, Off Street and Multi level): Sensors & cameras for data collection on parking lot capacity & availability.
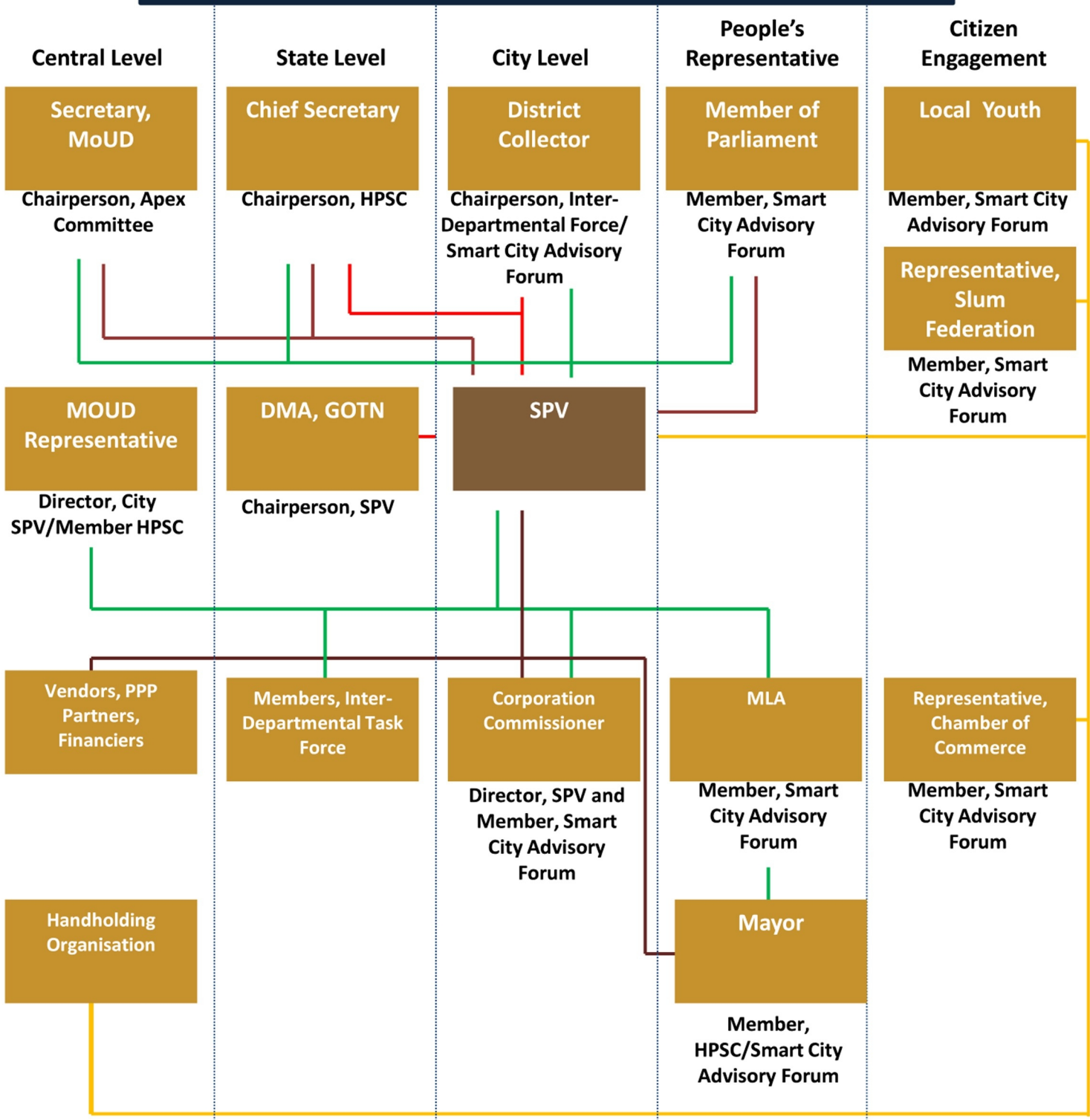
**Legend:**
- Invitation of Bids
- DPR Preparation
- Approval of DPR
- Implementation
- Activity Period

Cell markers used below: **B** = Invitation of Bids, **D** = DPR Preparation, **A** = Approval of DPR, **I** = Implementation, **P** = Activity Period (grey bar)

| Item | Y1 Q1 | Y1 Q2 | Y1 Q3 | Y1 Q4 | Y2 Q1 | Y2 Q2 | Y2 Q3 | Y2 Q4 | Y3 Q1 | Y3 Q2 | Y3 Q3 | Y3 Q4 | Y4 Q1 | Y4 Q2 | Y4 Q3 | Y4 Q4 | Y5 Q1 | Y5 Q2 | Y5 Q3 | Y5 Q4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Invitation of Bids | B | B |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Selction of agency / concessionaire |  |  | D | D |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **A1- Heritage Hub** | P | P | P | P | P | P | P | P | P | P | P | P |  |  |  |  |  |  |  |  |
| Smarter Skywalk |  |  |  |  | A | I | I | I | I | I | I | I |  |  |  |  |  |  |  |  |
| Conservation of Temple precinct and Tank development |  |  | A | I | I | I | I | I |  |  |  |  |  |  |  |  |  |  |  |  |
| Building height restrictions, Facade control and Treatment, |  |  | A | I |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Tourist Information Kiosks and mobile application |  |  | A | I |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Installation of Public art, Landscaping, fountain, street furniture, Water ATM's (every 300m), monuments and sculptures, Theme based signage, Graffiti Walls |  |  | A | I | I | I | I | I |  |  |  |  |  |  |  |  |  |  |  |  |
| **A2.Smart Urban Mobility** | P | P | P | P | P | P | P | P | P | P | P | P | P | P | P | P |  |  |  |  |
| Inclusive Street (Km) and Road Redesign (Km) |  |  |  |  | A | I | I | I | I | I | I | I | I | I | I | I |  |  |  |  |
| Project e- Vehicle |  |  |  | A | I |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Zero Emission Zone |  |  | A | I |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Smart Bus Shelter |  |  |  |  | A | I | I | I | I | I | I | I |  |  |  |  |  |  |  |  |
| Automated MLCP |  |  |  |  | A | I | I | I | I | I | I |  |  |  |  |  |  |  |  |  |
| Junction Improvement 4Nos |  |  |  |  |  |  |  |  | A | I | I | I | I | I |  |  |  |  |  |  |
| **A3.Redevelopment of Public amenities** | P | P | P | P | P | P | P | P | P | P | P | P |  |  |  |  |  |  |  |  |
| Smart Bus Terminus |  |  |  |  | A | I | I | I | I | I | I | I | I | I |  |  |  |  |  |  |
| Market improvement |  |  |  |  |  |  |  |  | A | I | I | I | I | I |  |  |  |  |  |  |
| **A4.Greener Nellai** | P | P | P | P | P | P | P | P | P | P | P | P | P | P | P | P |  |  |  |  |
| Nainar Lake Front Development |  |  |  |  | A | I | I | I | I | I | I | I | I | I | I | I |  |  |  |  |
| Decentralised Water Treatment Plant |  |  |  |  | A | I | I | I | I | I | I |  |  |  |  |  |  |  |  |  |
| Tamirabarani River Restoration and Development |  |  |  |  | A | I | I | I | I | I | I | I | I | I | I | I | I | I |  |  |
| Channelization of Drains |  |  |  |  | A | I | I | I | I | I | I | I | I | I | I | I |  |  |  |  |
| **A5.Smart Urban Services** | P | P | P | P | P | P | P | P | P | P | P | P |  |  |  |  |  |  |  |  |
| Smart Water Metering and Water quality sensors (11500 HH) |  |  | A | I | I | I | I | I |  |  |  |  |  |  |  |  |  |  |  |  |
| 100% Water Supply |  |  |  |  | A | I | I | I | I | I | I | I | I | I | I | I |  |  |  |  |
| Scientific Treatment and Disposal of Waste |  |  |  |  | A | I | I | I | I | I | I | I | I | I | I | I |  |  |  |  |
| Smart Waste Management |  |  | A | I | I | I | I | I |  |  |  |  |  |  |  |  |  |  |  |  |
| Swach Nellai |  |  | A | I | I | I | I | I |  |  |  |  |  |  |  |  |  |  |  |  |
| Smart Energy meter |  |  |  |  | A | I | I | I | I | I | I |  |  |  |  |  |  |  |  |  |
| Underground electric duct |  |  |  |  | A | I | I | I | I | I | I | I | I | I | I | I |  |  |  |  |
| Roof Top Solar Panels |  |  | A | I | I | I | I | I |  |  |  |  |  |  |  |  |  |  |  |  |
| **A6. Slum Redevelopment** | P | P | P | P | P | P | P | P | P | P | P | P |  |  |  |  |  |  |  |  |
| **A6.1 Slum Redevelopment** |  |  |  |  | A | I | I | I | I | I | I | I | I | I |  |  |  |  |  |  |
| **A7.ICT Intervention in Social Infrastructure** | P | P | P | P | P | P | P | P | P | P | P | P |  |  |  |  |  |  |  |  |
| Smart Unified Poles (15no) |  |  | A | I |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Smart Police Station (1no) |  |  |  |  |  |  |  |  | A | I | I | I |  |  |  |  |  |  |  |  |
| Education (5Nos) |  |  | A | I | I | I | I |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Health (1No) |  |  |  |  |  |  |  |  | A | I | I | I |  |  |  |  |  |  |  |  |
| WIFI Hub |  |  | A | I |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **A8.UOCCC** | P | P | P | P | P | P | P | P | P | P | P | P |  |  |  |  |  |  |  |  |
| "Namma Nellai" - (UOCCC) |  |  |  | I | I | I | I | I | I | I | I | I |  |  |  |  |  |  |  |  |

**Board of Directors**

**Chairperson**
(Director of Municipal Administration)

- **MOUD Representative**
- **Finance Dept., Government of Tamil Nadu Representative**
- **Chief Executive Officer**
- **Commissioner, TCMC**
- **Independent Directors (#2)**

**Chief Vigilance Officer**

**Chief Planner**
- **Smart City Planner**
- **Citizen Engagement Officer**
- **Technology Officer**
- **R&R Officer**
- **Heritage Conservation Expert**
- **Senior Economist**
- **Data Scientist**

**Chief Financial Officer**
- **Senior Manager, Finance**
- **Compliance Officer/Company Secretary**
- **Legal Officer**
- **Internal Auditor**
- **Accounts Officer**

**Head, Projects**
- **Procurement Officer**
- **Project Finance Team**
- **Project Appraisal Team**
- **Project Management Unit**

**Board Committees**
- **Audit Committee**
- **Tender Committee**
- **Nomination & Remuneration**

**Chief Administrative Officer**
- **Administrative Staff**

## Stakeholder Organaogram

| Central Level | State Level | City Level | People's Representative | Citizen Engagement |
|---|---|---|---|---|
| **Secretary, MoUD** | **Chief Secretary** | **District Collector** | **Member of Parliament** | **Local Youth** |
| Chairperson, Apex Committee | Chairperson, HPSC | Chairperson, Inter-Departmental Force/ Smart City Advisory Forum | Member, Smart City Advisory Forum | Member, Smart City Advisory Forum |
| | | | | **Representative, Slum Federation** |
| | | | | Member, Smart City Advisory Forum |
| **MOUD Representative** | **DMA, GOTN** | **SPV** | | |
| Director, City SPV/Member HPSC | Chairperson, SPV | | | |
| **Vendors, PPP Partners, Financiers** | **Members, Inter-Departmental Task Force** | **Corporation Commissioner** | **MLA** | **Representative, Chamber of Commerce** |
| | | Director, SPV and Member, Smart City Advisory Forum | Member, Smart City Advisory Forum | Member, Smart City Advisory Forum |
| **Handholding Organisation** | | | **Mayor** | |
| | | | Member, HPSC/Smart City Advisory Forum | |

Funding

Approvals

Facilitation

Knowledge/Information/Consultation

| Project | Capital Cost (in Cr) | Capital Cost incl Contigency 5% (in Cr) | Sector wise total capital cost incl contigencies (in Cr) | Financial Year | | | | | Convergence | | Others | | SCM + ULB fund |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | y1 | y2 | y3 | y4 | y5 | Amount in cr | Scheme | Amount | Mode of Funding | |
| **AREA BASED PROPOSAL** | | | | | | | | | | | | | |
| **A1-Heritage Hub** | | | | | | | | | | | | | |
| Smarter Skywalk | 82 | 86.1 | | | 43 | 43.1 | | | | | | | 86.1 |
| Conservation of Temple precinct and Tank development | 5 | 5.3 | | 3 | 2.3 | | | | | | | | 5.3 |
| Building height restrictions, Facade control and Treatment, | 1.5 | 1.6 | | 1.6 | | | | | | | | | 1.6 |
| Tourist Information +commercial Kiosks (25nos) and mobile application | 2 | 2.1 | 110.8 | 2.1 | | | | | | | | | 2.1 |
| Installation of Public art, Landscaping, fountain, street furniture, Water ATM's (every 300m), monuments and sculptures, Theme based signage, Graffiti Walls | 15 | 15.8 | | 7.6 | 8.2 | | | | | | | | 15.8 |
| **A2.Smart Urban Mobility** | | | | | | | | | | | | | |
| Inclusive Street  design and Road Retrofit (43Km) | 310 | 325.5 | | | 82.5 | 82.5 | 82.5 | 83 | 8.5 | TURIF,ESCO | | | 322 |
| Project e- Vehicle | 8.25 | 8.7 | | | 8.7 | | | | | | 8.7 | PPP | |
| Zero Emission Zone | 2.5 | 2.6 | 349.4 | | 1.3 | 1.3 | | | | | | | 2.6 |
| Smart Bus Shelter (5nos) | 3 | 3.2 | | | 1.6 | 1.6 | | | | | 3.2 | PPP | |
| Automated MLCP | 7 | 7.4 | | | 3 | 4.4 | | | | | 7.4 | PPP | |
| Junction Improvement 4Nos | 2 | 2.1 | | | | 1 | 1.1 | | | | | | 2.1 |
| **A3.Redevelopment of Public amenities** | | | | | | | | | | | | | |
| Smart Bus Terminus | 70 | 73.5 | 80.2 | | 12 | 25 | 36.5 | | | | | | 73.5 |
| Market improvement | 6.4 | 6.7 | | | | 3 | 3.7 | | | | | | 6.7 |
| **A4.Greener Nellai** | | | | | | | | | | | | | |
| Nainar Lake Front Development (2km) | 36 | 37.8 | | | 8 | 12 | 17.8 | | | | 20 | PPP | 17.8 |
| Decentralised water Treatment Plant | 2 | 2.1 | 191.1 | | 1 | 1.1 | | | | | | | 2.1 |
| Tamirabarani River Restoration and Development (7km) | 116 | 121.8 | | | 25 | 20 | 20 | 56.8 | 15 | Tn Gov | 40 | PPP | 66.8 |
| Channelization of Drains (12km) | 28 | 29.4 | | | 11 | 9.2 | 9.2 | | | | | | 29.4 |
| **A5.Smart Urban Services** | | | | | | | | | | | | | |
| Smart Water Metering and Water quality sensors (11500 HH) | 24.5 | 25.7 | | 12.9 | 12.8 | | | | | | | | 25.7 |
| 100% Water Supply coverage | 36 | 37.8 | | | 12.6 | 12.6 | 12.6 | | 38 | KFW | | | |
| Scientific Treatment and Disposal of Waste | 60 | 63.0 | 301.6 | | 21 | 21 | 21 | | 63 | Waste to energy programme | | | |
| Smart Waste Management | 14.2 | 14.9 | | 7.45 | 7.45 | | | | | | | | 14.9 |
| Swachh Nellai | 4.5 | 4.7 | | 2.5 | 2.2 | | | | | | | | 4.7 |
| Smart Energy meter (11500 HH) | 26 | 27.3 | | | 12.5 | 14.8 | | | | | | | 27.3 |
| Underground electric duct (43km) | 77 | 80.9 | | | 25 | 22 | 33.9 | | | | | | 80.9 |
| Roof Top Solar Panels (3MW) | 45 | 47.3 | | | 16 | 15.7 | 15.6 | | | | | | 47.3 |
| **A6.Slum Redevelopment** | | | | | | | | | | | | | |
| A6. Slum Redevelopment | 10.4 | 10.9 | 10.9 | | 5.45 | 5.45 | | | 8.4 | RAY | | | 2.5 |
| **A7.ICT Intervention in Social Infrastructure** | | | | | | | | | | | | | |
| Smart Unified Poles (15no) | 3.75 | 3.9 | | 3.9 | | | | | | | | | 3.9 |
| Smart Police Station (1no) | 0.6 | 0.6 | | | | 0.6 | | | | | | | 0.6 |
| Education | 5.5 | 5.8 | 13.0 | 3 | 2.8 | | | | | | | | 5.8 |
| Health | 0.54 | 0.6 | | | | 0.6 | | | | | | | 0.6 |
| Telecom& IT Connectivity (10 Wifi hub) | 2 | 2.1 | | 2.1 | | | | | | | 1.1 | PPP | 1 |
| **ABD COST** | | | 1057.0 | 46.15 | 325.4 | 296.95 | 253.9 | 139.8 | 132.9 | | 80.4 | | 849.1 |
| **PANCITY PROPOSAL** | | | | | | | | | | | | | |
| **A8.  "Namma Nellai" - (UOCCC)** | | | | | | | | | | | | | |
| e-Governance | 64.8 | 68.0 | | 22.6 | 22.6 | 22.9 | | | | | | | 68.1 |
| Intelligent Traffic Mangement System | 74.9 | 78.6 | 160.7 | 26.2 | 26.2 | 26.2 | | | | | | | 78.6 |
| Health and Education | 13.3 | 14.0 | | 4.6 | 4.6 | 4.6 | | | | | | | 13.8 |
| **PANCITY COST** | | | 160.7 | 53.4 | 53.4 | 53.7 | | | | | | | 160.5 |
| **Total SCM Cost (ABD+PAN)** | 1159.64 | 1217.6 | | | | | | | | | | | 1009.6 |

## FINANCIAL RESOURCE PLAN
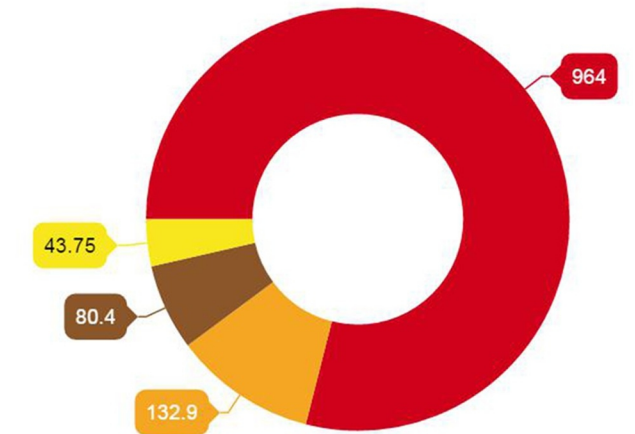
- Smart city grant (78.95%) — 964
- Covergence (10.88%) — 132.9
- PPP (6.58%) — 80.4
- ULB share (3.58%) — 43.75

| Share of Convergence | 132.9 cr (10.9%) |
|---|---|
| KFW | 38cr    (3.1%) |
| ESCO | 3.5 cr  (0.28% ) |
| RAY | 8.4cr   (0.68%) |
| TURIF | 5cr    (0.4%) |
| Waste to Energy Programme | 63cr   (5.1%) |
| Improvement of Tirunelveli channel PWD scheme | 15cr   (1.2%) |

| Project | Capital Cost in Cr | Capital Cost incl Contigency 5% in Cr | Sector wise total capital cost incl contigencies in Cr | O&M cost (Rs.in Crore) Y1 in Cr | Y2 in Cr | Y3 in Cr | Y4 in Cr | Y5 in Cr | Y6 in Cr | Y7 in Cr | Y8 in Cr | Y9 in Cr | Y10 in Cr | Total O&M Cost in crore | Life Time Cost in Crore | O&M % assumed % | Agency |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **ABD PROPOSALS** | | | | | | | | | | | | | | | | | |
| **A1- Heritage Hub** | | | | | | | | | | | | | | | | | |
| Smarter Skywalk | 82 | 86.1 | 110.78 | 5.17 | 5.48 | 5.82 | 6.17 | 6.55 | 6.95 | 7.37 | 7.82 | 8.30 | 8.80 | 68.41 | 154.51 | 6% | PVT Operator |
| Conservation of Temple precinct and Tank development | 5 | 5.3 | | 0.16 | 0.17 | 0.18 | 0.19 | 0.20 | 0.21 | 0.22 | 0.24 | 0.25 | 0.27 | 2.09 | 7.34 | 3% | HR & CE / TCMC |
| Building height restrictions, Facade control and Treatment, | 1.5 | 1.6 | | | | | | | | | | | | | | | TCMC |
| Tourist Information +commercial Kiosks (25nos) and mobile application | 2 | 2.1 | | 0.06 | 0.07 | 0.07 | 0.08 | 0.08 | 0.08 | 0.09 | 0.10 | 0.10 | 0.11 | 0.83 | 2.93 | 3% | PVT Operator |
| Installation of Public art, Landscaping, fountain, street furniture, Water ATM's (every 300m), monuments and sculptures, Theme based signage, Graffiti Walls | 15 | 15.8 | | 0.95 | 1.00 | 1.06 | 1.13 | 1.20 | 1.27 | 1.35 | 1.43 | 1.52 | 1.61 | 12.51 | 28.26 | 6% | PVT Operator |
| **A2.Smart Urban Mobility** | | | | | | | | | | | | | | | | | |
| Inclusive Street  design and Road Retrofit (43Km) | 310 | 325.5 | 349.39 | 9.77 | 10.36 | 10.99 | 11.66 | 12.37 | 13.13 | 13.93 | 14.78 | 15.68 | 16.64 | 129.32 | 454.82 | 3% | TCMC/SPV |
| Project e- Vehicle | 8.25 | 8.7 | | 0.52 | 0.55 | 0.59 | 0.62 | 0.66 | 0.70 | 0.74 | 0.79 | 0.83 | 0.89 | 6.88 | 15.55 | 6% | PVT Operator |
| Zero Emission Zone | 2.5 | 2.6 | | 0.08 | 0.08 | 0.09 | 0.09 | 0.10 | 0.11 | 0.11 | 0.12 | 0.13 | 0.13 | 1.04 | 3.67 | 3.0% | PVT Operator |
| Smart Bus Shelter (5nos) | 3 | 3.2 | | 0.09 | 0.10 | 0.11 | 0.11 | 0.12 | 0.13 | 0.13 | 0.14 | 0.15 | 0.16 | 1.25 | 4.40 | 3% | TCMC/SPV |
| Automated MLCP | 7 | 7.4 | | 0.44 | 0.47 | 0.50 | 0.53 | 0.56 | 0.59 | 0.63 | 0.67 | 0.71 | 0.75 | 5.84 | 13.19 | 6% | PVT Operator |
| Junction Improvement 4Nos | 2 | 2.1 | | 0.13 | 0.13 | 0.14 | 0.15 | 0.16 | 0.17 | 0.18 | 0.19 | 0.20 | 0.21 | 1.67 | 3.77 | 3% | TCMC/SPV |
| **A3.Redevelopment of Public amenities** | | | | | | | | | | | | | | | | | |
| Smart Bus Terminus | 70 | 73.5 | 80.22 | 2.21 | 2.34 | 2.48 | 2.63 | 2.79 | 2.96 | 3.15 | 3.34 | 3.54 | 3.76 | 29.20 | 102.70 | 3% | TCMC/SPV |
| Market improvement | 6.4 | 6.7 | | 0.20 | 0.21 | 0.23 | 0.24 | 0.26 | 0.27 | 0.29 | 0.31 | 0.32 | 0.34 | 2.67 | 9.39 | 3% | TCMC/SPV |
| **A4.Greener Nellai** | | | | | | | | | | | | | | | | | |
| Nainar Lake Front Development (2km) | 36 | 37.8 | 191.10 | 3.78 | 4.01 | 4.26 | 4.51 | 4.79 | 5.08 | 5.39 | 5.72 | 6.07 | 6.44 | 50.06 | 87.86 | 10% | PVT Operator |
| Decentralised water Treatment Plant | 2 | 2.1 | | 0.06 | 0.07 | 0.07 | 0.08 | 0.08 | 0.08 | 0.09 | 0.10 | 0.10 | 0.11 | 0.83 | 2.93 | 3% | TCMC/SPV |
| Tamirabarani River Restoration and Development (7km) | 116 | 121.8 | | 12.18 | 12.92 | 13.71 | 14.55 | 15.44 | 16.38 | 17.38 | 18.44 | 19.56 | 20.75 | 161.30 | 283.10 | 10% | PVT Operator |
| Channelization of Drains (12km) | 28 | 29.4 | | 1.76 | 1.87 | 1.99 | 2.11 | 2.24 | 2.37 | 2.52 | 2.67 | 2.83 | 3.01 | 23.36 | 52.76 | 6% | TCMC/SPV |
| **A5.Smart Urban Services** | | | | | | | | | | | | | | | | | |
| Smart Water Metering and Water quality sensors (11500 HH) | 24.5 | 25.7 | 301.56 | 0.77 | 0.82 | 0.87 | 0.92 | 0.98 | 1.04 | 1.10 | 1.17 | 1.24 | 1.31 | 10.22 | 35.95 | 3% | TCMC/SPV |
| 100% Water Supply coverage | 36 | 37.8 | | 1.13 | 1.20 | 1.28 | 1.35 | 1.44 | 1.52 | 1.62 | 1.72 | 1.82 | 1.93 | 15.02 | 52.82 | 3% | TCMC/SPV |
| Scientific Treatment and Disposal of Waste | 60 | 63.0 | | 1.89 | 2.01 | 2.13 | 2.26 | 2.40 | 2.54 | 2.70 | 2.86 | 3.04 | 3.22 | 25.03 | 88.03 | 3% | TCMC/SPV |
| Smart Waste Management | 14.2 | 14.9 | | 0.45 | 0.47 | 0.50 | 0.53 | 0.57 | 0.60 | 0.64 | 0.68 | 0.72 | 0.76 | 5.92 | 20.83 | 3% | TCMC/SPV |
| Swach Nellai | 4.5 | 4.7 | | 0.14 | 0.15 | 0.16 | 0.17 | 0.18 | 0.19 | 0.20 | 0.21 | 0.23 | 0.24 | 1.88 | 6.60 | 3% | TCMC/SPV |
| Smart Energy meter (11500 HH) | 26 | 27.3 | | 0.82 | 0.87 | 0.92 | 0.98 | 1.04 | 1.10 | 1.17 | 1.24 | 1.32 | 1.40 | 10.85 | 38.15 | 3% | TCMC/SPV |
| Underground electric duct (43km) | 77 | 80.9 | | 2.43 | 2.57 | 2.73 | 2.90 | 3.07 | 3.26 | 3.46 | 3.67 | 3.90 | 4.13 | 32.12 | 112.97 | 3% | TCMC/SPV |
| Roof Top Solar Panels (3MW) | 45 | 47.3 | | 1.42 | 1.50 | 1.60 | 1.69 | 1.80 | 1.91 | 2.02 | 2.15 | 2.28 | 2.42 | 18.77 | 66.02 | 3% | TCMC/SPV |
| **A6. Slum Redevelopment** | 10.4 | 10.9 | 10.92 | 0.33 | 0.35 | 0.37 | 0.39 | 0.42 | 0.44 | 0.47 | 0.50 | 0.53 | 0.56 | 4.34 | 15.26 | 3% | TCMC/SPV |
| **A7.ICT Intervention in Social Infrastructure** | | | | | | | | | | | | | | | | | |
| Smart Unified Poles (15no) | 3.75 | 3.9 | 13.01 | 0.12 | 0.13 | 0.13 | 0.14 | 0.15 | 0.16 | 0.17 | 0.18 | 0.19 | 0.20 | 1.56 | 5.50 | 3% | PVT Operator |
| Smart Police Station (1no) | 0.6 | 0.6 | | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.25 | 0.88 | 3% | PVT Operator |
| Education | 5.5 | 5.8 | | 0.17 | 0.18 | 0.20 | 0.21 | 0.22 | 0.23 | 0.25 | 0.26 | 0.28 | 0.30 | 2.29 | 8.07 | 3% | PVT Operator |
| Health | 0.54 | 0.6 | | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 | 0.23 | 0.79 | 3% | PVT Operator |
| Telecom& IT Connectivity (10 Wifi hub) | 2 | 2.1 | | 0.06 | 0.07 | 0.07 | 0.08 | 0.08 | 0.08 | 0.09 | 0.10 | 0.10 | 0.11 | 0.83 | 2.93 | 3% | PVT Operator |
| **ABD TOTAL COST** | | | 1056.97 | 47.31 | 50.20 | 53.26 | 56.51 | 59.95956 | 63.61709 | 67.497731 | 71.61509 | 75.98361 | 80.618614 | 626.58 | 1681.98 | | |
| **Pan City** | | | | | | | | | | | | | | | | | |
| **A8.  "Namma Nellai" - (UOCCC)** | | | | | | | | | | | | | | | | | |
| e-Governance | 64.8 | 68.0 | 160.65 | 2.04 | 2.17 | 2.30 | 2.44 | 2.59 | 2.74 | 2.91 | 3.09 | 3.28 | 3.48 | 27.03 | 95.07 | 3% | PVT Operator |
| Intelligent Traffic Mangement System | 74.9 | 78.6 | | 2.36 | 2.50 | 2.66 | 2.82 | 2.99 | 3.17 | 3.37 | 3.57 | 3.79 | 4.02 | 31.24 | 109.89 | 3% | PVT Operator |
| Health and Education | 13.3 | 14.0 | | 0.42 | 0.44 | 0.47 | 0.50 | 0.53 | 0.56 | 0.60 | 0.63 | 0.67 | 0.71 | 5.55 | 19.51 | 3% | PVT Operator |
| **PAN SOLUTION TOTAL COST** | | | 160.70 | 4.82 | 5.11 | 5.43 | 5.76 | 6.11 | 6.48 | 6.88 | 7.29 | 7.74 | 8.21 | 63.82 | 224.47 | | |
| **Total Cost** | 1159.64 | 1217.6 | | 52.13 | 55.31 | 58.69 | 62.27 | 66.07 | 70.10 | 74.37 | 78.91 | 83.72 | 88.83 | 690.41 | 1906.45 | | |

Assumptions
6.1% Inflation assumed for O&M cost

| S.No | Item | Unit | Quantity per year | Rate in rs | Amount in cr | Assumptions |
|---|---|---|---|---|---|---|
| 1 | Nainar Lake front entry fee | nos | 1825000 | 10 | 1.8 | Assuming 5000 tourist per day |
| 2 | Tamirabarani River Front | nos | 1825000 | 10 | 1.8 | Assuming 5000 tourist per day |
| 3 | Recreational facilities (Boating,Light show,Skating etc) | | 912500 | 100 | 9.1 | 50% of the tourists expected to use the recreational facilities |
| 4 | Exhibition Gallery and Kiosks in Sky walk | sqft | 20 | 5000 | 0.12 | Size of the shop assumed to be 64sqft |
| 5 | Parking | | 675250 | 50 | 2.5 | Rs 50 for every 4 hours is assumed as parking fees. a conservative estimate of 75% utilization is assumed to generate revenues of 1.4 Crore every year. |
| 6 | User Charges (Residential) | nos | 11500 | 150 | 2 | The monthly rates for the households are being based on the income levels wherein the top 20% are being charged INR 180, INR 100 for mid 60% and INR 20 for bottom 20% households.( Avg 150 rs assumed for 11500 HH) |
| 7 | User Charges (commercial) | nos | 1000 | 300 | 0.36 | The monthly rates for the commercials are 300rs per month |
| 8 | Connection Charge HH | nos | 100 | 6000 | 0.06 | one time connection charge of INR 6000 for household and INR 12000 for commercial establishments is assumed. |
| 9 | Connection Charge Commercial | nos | 75 | 12000 | 0.09 | |
| 10 | Advertisement Hoarding ( Sky walk , Bus shelters , Water promenades) | | | | 10.5 | Lump Sum |
| 11 | Wifi Hub (10 nos) | | | | 1.1 | INR 10 is estimated to recovered from every user accessing the wifi hot spots through advertisement and we estimate that the hot spots are likely to have an average of 50 users at any point in time. |
| 12 | Toilet (25 nos) | nos | 456250 | 5 | 0.22 | Assuming 50 persons per day |
| 13 | Shops/Kiosks (Bus terminus , Market and Water Promenades) | sqft | 500 | 5000 | 3 | Size of the shop assumed to be 64sqft, 320 shops in market area |
| | **Total Estimated Revenue** | | | | **32.65** | |

| Project | Short Term — Year 1 | | | | Medium Term — Year 2 | | | | Year 3 | | | | Long Term — Year 4 | | | | Year 5 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Invitation of Bids | | | | | | | | | | | | | | | | | | | | |
| Selction of agency / concessionaire | | | | | | | | | | | | | | | | | | | | |
| **A1- Heritage Hub** | | | | | | | | | | | | | | | | | | | | |
| Smarter Skywalk | | | | | | ● | ● | ● | ● | ● | ● | ● | | | | | | | | |
| Conservation of Temple precinct and Tank development | | | | ● | ● | ● | ● | ● | | | | | | | | | | | | |
| Building height restrictions, Facade control and Treatment, | | | | ● | | | | | | | | | | | | | | | | |
| Tourist Information Kiosks and mobile application | | | | ● | | | | | | | | | | | | | | | | |
| Installation of Public art, Landscaping, fountain, street furniture, Water ATM's (every 300m), monuments and sculptures, Theme based signage, Graffiti Walls | | | | ● | ● | ● | ● | ● | | | | | | | | | | | | |
| **Smart Urban Mobility** | | | | | | | | | | | | | | | | | | | | |
| Inclusive Street (Km) and Road Redesign (Km) | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | |
| Project e- Vehicle | | | | | ● | | | | | | | | | | | | | | | |
| Zero Emission Zone | | | | ● | | | | | | | | | | | | | | | | |
| Smart Bus Shelter | | | | | | | | | ● | ● | ● | ● | ● | | | | | | | |
| Automated MLCP | | | | | | | | | | | | | | | | | | | | |
| Junction Improvement 4Nos | | | | | | | | | | ● | ● | ● | ● | | | | | | | |
| **A3.Redevelopment of Public amenities** | | | | | | | | | | | | | | | | | | | | |
| Smart Bus Terminus | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | |
| Market improvement | | | | | | | | | ● | ● | ● | ● | ● | | | | | | | |
| **A4.Greener Nellai** | | | | | | | | | | | | | | | | | | | | |
| Nainar Lake Front Development | | | | | | ● | ● | ● | ● | ● | | | | | | | | | | |
| Decentralised Water Treatment Plant | | | | | | ● | ● | ● | ● | ● | | | | | | | | | | |
| Tamirabarani River Restoration and Development | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | |
| Channelization of Drains | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | |
| **A5.Smart Urban Services** | | | | | | | | | | | | | | | | | | | | |
| Smart Water Metering and Water quality sensors (11500 HH) | | | | ● | ● | | | | ● | | | | | | | | | | | |
| Water Supply | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | |
| Scientific Treatment and Disposal of Waste | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | |
| Smart Waste Management | | | | ● | ● | | | | | | | | | | | | | | | |
| Swach Nellai | | | | ● | ● | | | | | | | | | | | | | | | |
| Smart Energy meter | | | | | | ● | ● | ● | ● | ● | | | | | | | | | | |
| Underground electric duct | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | |
| Roof Top Solar Panels | | | | ● | ● | | | | | | | | | | | | | | | |
| **A6. Slum Redevelopment** | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | |
| **A7.ICT Intervention in Social Infrastructure** | | | | | | | | | | | | | | | | | | | | |
| Smart Unified Poles (15no) | | | | ● | | | | | | | | | | | | | | | | |
| Smart Police Station (1no) | | | | | | | | | | ● | ● | ● | | | | | | | | |
| Education (5Nos) | | | | ● | ● | ● | ● | | | | | | | | | | | | | |
| Health (1No) | | | | | | | | | | ● | ● | ● | | | | | | | | |
| WIFI Hub | | | | ● | | | | | | | | | | | | | | | | |
| **Pan City** | | | | | | | | | | | | | | | | | | | | |
| "Namma Nellai" - (UOCCC) | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | |

Legend:
- Activity Period (gray)
- Finance Schedule (yellow)

# ANNEXURE 4

(Supporting documents, such as government orders, council resolutions,
response to Question 33 may be annexed here)

| S. No | Particulars | ✔ |
|---|---|---|
| 1 | 4.1 Letter from High Powered Steering Committee | ✔ |
| 2 | 4.2 Minutes of the High Powered Steering Committee Meeting | ✔ |
| 3 | 4.3 Covering Letter from Tirunelveli Corporation Commissioner | ✔ |
| 4 | 4.4 Letter from Tirunelveli District Collector | ✔ |
| 5 | 4.5 Council Resolution | ✔ |
| 6 | 4.6.1 Letter of Intent - TANGEDCO | ✔ |
| 7 | 4.6.2 Letter of Intent - TNSCB | ✔ |
| 8 | 4.6.3 Letter of Intent - TWAD | ✔ |
| 9 | 4.6.4 Letter of Intent - Highways Department | ✔ |
| 10 | 4.6.5 Letter of Intent - PWD | ✔ |
| 11 | 4.6.6 Letter of Intent - Fire and Rescue Department | ✔ |
| 12 | 4.6.7 Letter of Intent - Police Department | ✔ |
| 13 | 4.7.1 G.O. Water Supply | ✔ |
| 14 | 4.7.2 G.O. Waste to Energy Project | ✔ |
| 15 | 4.7.3 G. O. Street Lights Project | ✔ |
| 16 | 4.7.4 G.O. RAY | ✔ |
| 17 | 4.7.5 AS-GO Implementation of SCM in Tamil Nadu | ✔ |
| 18 | 4.8 Preliminary Human Resource Plan | ✔ |
| 19 | | ☐ |
| 20 | | ☐ |

Annexure 4.1: HPSC Letter

**Most Immediate**

Municipal Administration
and Water Supply (MAII)
Department, Secretariat,
Chennai- 600 009.

### Letter No.29870/MA.II/2015 – 4,   dated   23.12.2015

**From**

Thiru.K.Phanindra Reddy, I.A.S.,
Principal Secretary to Government

**To**

The Mission Director, Smart Cites Mission/
   Additional Secretary  to Government of India,
Ministry of Urban Development,
New Delhi – 110 011.

**Sir,**

> **Sub:**  Smart Cities Mission – Smart City
> Proposals of the 12 Cities of Tamil Nadu –
> Forwarded - Reg.
>
> -------

I am directed to inform that, the second meeting of the State Level High Powered Steerng Committee of the Smart Cities Mission of the State of Tamil Nadu under the Chairmanship of the Chief Secretary to Government, held on 21.12.2015 reviewed the Smart City Proposals of the Mission Cities of the State, viz., 12 City Municipal Corporations and resolved to forward the said proposals for participation in the Stage II National level Challenge.  Accordingly, the proposals are forwarded.

Yours sincerely,

231215

for Principal Secretary to Government

**Copy to**

The Chairperson and Managing Director,
Tamil Nadu Urban Finance  and Infrastructure
      Development Corporation Limited, Chennai-35.

Annexure 4.2: HPSC Minutes

## MINUTES OF THE SECOND STATE LEVEL HIGH POWERED STEERING COMMITTEE MEETING HELD ON 21.12.2015 AT 5.30 P.M FOR SMART CITY MISSION

The Second meeting of the **State Level High Powered Steering Committee** for **Smart City Mission** was held in the Chief Secretary Conference Hall, Secretariat on 21.12.2015 at 5.30 P.M under the Chairmanship of **Thiru K. Gnanadesikan, I.A.S.,** Chief Secretary to Government.

The following members attended the meeting:

1. Thiru K Shanmugam IAS.                     Member
   Principal Secretary to Govt,
   Finance Department, Secretariat
   Chennai-600 009

2. Thiru K.Phanindra Reddy IAS.               Member
   Principal Secretary to Government.
   Municipal Administration and
   Water Supply Department
   Secretariat, Chennai-600 009

3. Thiru S.Krishnan IAS.                      Member
   Principal Secretary to Government.
   Planning, Development and
   Special Initiatives Department,
   Secretariat, Chennai-600 009

4. Thiru.Vikram Kapoor, I.A.S.               Member
   Principal Secretary/Commissioner,
   Corporation of Chennai,
   Chennai-600 003.

5. Dr. S. Swarna, I.A.S.                     Member-Secretary
   Chairperson and Managing Director,
   TUFIDCO, Nandanam,
   Chennai – 600 035.

6.  Dr.B.Chandra Mohan, I.A.S.,                Member
    Managing Director,
    Chennai Metropolitan Water Supply
    and Sewerage Board,
    Chennai- 600 002

7.  Thiru. Vijayaraj Kumar, I.A.S.             Member
    Managing Director,
    TamilNadu Water supply & Drainage Board,
    Chepauk,
    Chennai-600 009.

8.  Thiru G. Prakash, I.A.S.                   Member
    Director of Municipal Admin.
    Chepauk,
    Chennai-600 005.

9.  Tmt. Kakarla Usha, I.A.S.                  Mentor
    Managing Director,
    TNUIFSL,
    Chennai.

10. Thiru M. Kathiravan, I.A.S                 Member
    Commissioner,
    Madurai Corporation

11. Dr.Vijaya Karthikeyan, I.A.S              Member
    Commissioner,
    Coimbatore Corporation

12. Tmt M.Vijayalakshmi                        Member
    Commissioner,
    Trichy Corporation

13. Thiru N.Manohar                            Member
    Commissioner,
    Dindugul Corporation

14. Thiru P.Kumar                              Member
    Commissioner,
    Thanjavur Corporation

15. Thiru S.Sivasubramanian                    Member
    Commissioner,
    Tirunelveli Corporation
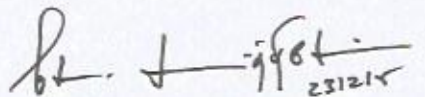
| 16. Thiru K.R.Selvaraj | Member |
| Commissioner, | |
| Salem Corporation | |

| 17. Thiru R.Mohan | Member |
| Commissioner, | |
| Erode Corporation | |

| 18. Tmt P.Janaki Ravindran | Member |
| Commissioner, | |
| Vellore Corporation | |

| 19. Thiru A.Laxmanan | Representing |
| City Engineer, | Thoothukudi Corporation |
| Thoothukudi Corporation | |

| 20. Thiru M.V.D.Tamilselvan | Representing |
| Executive Engineer, | Tiruppur Corporation |
| Tiruppur Corporation | |

The Chairperson and Managing Director, TUFIDCO elaborated the process adopted such as Citizen Engagement, Impact on the population, the rationale behind selection for Area based Development and PAN city Development Strategy by the Corporations for finalizing the 12 Smart Cities proposals before the Committee.

The Committee reviewed the Proposals presented by the 12 Corporations and deliberated in detail. The Committee accepted the rationale behind the strategy adopted by all the 12 Cities. The committee also directed that the technological options presented would have to be evaluated in detail for their technical feasibility and financial sustainability during projectisation stage. On discussion, the committee directed that the proposals be forwarded to Ministry of Urban Development, Government of India on-time.

**K.GNANADESIKAN**
**CHIEF SECRETARY &CHAIRMAN OF HPSC**

**//True Copy//**

**Section Officer**

# MINUTES OF THE THIRD STATE LEVEL HIGH POWERED STEERING COMMITTEE MEETING HELD ON 23.06.2016 AT 5.30 P.M FOR SMART CITY MISSION

The third meeting of the **State Level High Powered Steering Committee** for **Smart City Mission** was held in the Chief Secretary conference hall, Secretariat on **23.06.2016 AT 5.30 P.M** under the Chairmanship of **Dr.P.Rama Mohana Rao, I.A.S.,** Chief Secretary to Government .

The following members attended the meeting:

| 1 | Thiru K.Shanmugam, I.A.S., Addl Chief Secretary to Government, Finance Department, Secretariat, Chennai-600 009 | Member |
|---|---|---|
| 2 | Thiru K. Phanindra Reddy, I.A.S., Principal Secretary to Government Municipal Administration and Water Supply Department Secretariat, Chennai - 600009. | Member |
| 3 | Thiru S.Krishnan, I.A.S., Principal Secretary to Government, Planning Development and Special Initiatives Department, Secretariat, Chennai-600 009 | Member |
| 4 | Thiru.Vikram Kapoor, I.A.S. Principal Secretary/Managing Director, Chennai Metropolitan Water Supply and Sewerage Board, Chennai- 600 002. | Member |
| 5 | Dr. S. Swarna, I.A.S. Chairperson and Managing Director, TUFIDCO, Nandanam, Chennai – 600 035. | Member-Secretary |
| 6 | Thiru. Vijayaraj Kumar, I.A.S. Managing Director, TamilNadu Water supply & Drainage Board, Chepauk, Chennai-600 009. | Member |
| 7 | Thiru.Sandeep Nanduri, I.A.S., Commissioner, Madurai Corporation | Member |

| 8 | Tmt. N.S.Prema,<br>Commissioner,<br>Trichy Corporation | Member |
|----|----|----|
| 9 | Thiru N.Manohar,<br>Commissioner,<br>Dindigul Corporation | Member |
| 10 | Thiru. M.Varadaraj,<br>Commissioner,<br>Thanjavur Corporation | Member |
| 11 | Thiru. Sivasubramaniam,<br>Commissioner,<br>Tirunelveli Corporation | Member |
| 12 | Thiru. K.R.Selvaraj<br>Commissioner,<br>Salem Corporation | Member |
| 13 | Thiru. Seeni Ajmalkhan,<br>Commissioner,<br>Erode Corporation | Member |
| 14 | Thiru T.Kumar,<br>Commissioner,<br>Vellore Corporation | Member |
| 15 | Tmt.R.Poongodi Arumaikkan,<br>Commissioner<br>Thoothukudi Corporation | Member |
| 16 | Thiru M.Ashokan,<br>Commissioner,<br>Tiruppur Corporation | Member |

The Chairperson and Managing Director, TUFIDCO elaborated the process adopted such as Citizen Engagement, Impact on the population, the rationale behind selection for Area Based Development and PAN city Development Strategy by the Corporations for finalizing the 10 Smart Cities proposals before the Committee.

The Committee reviewed the Proposals presented by the 10 Corporations and deliberated in detail. The Committee accepted the rationale behind the strategy adopted by all the 10 Cities. The Committee requested to incorporate all the basic service projects in the ABD area and also explore the possibility of more PPP projects. The Committee also directed that the technological options presented would have to be evaluated in detail for their technical feasibility and financial sustainability during projectisation stage. On discussion, the Committee directed that the proposals be forwarded to Ministry of Urban Development, Government of India on-time.

Principal Secretary,
Municipal Administration and Water Supply Department

Chief Secretary to Government &
Chairman of the SHPSC

Annexure 4.3: Covering Letter from Commissioner

**S.SivaSubramanian, B.Sc.,B.L.,**
Commissioner,
Tirunelveli Corporation,
Tirunelveli 627 001
Telephone: 0462 – 2329328
Fax : (0462) 2329327
Email : commr.tirunelveli@tn.gov.in
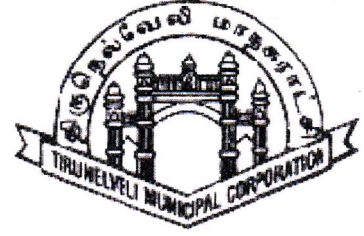
**Roc.No. E1/6526/2015**          **Dated : 24 .12.2015**

To

The Director (SC)-1
Ministry of Urban Development,
(MoUD),
Nirman Bhavan,
New Delhi.

Sir,

**Sub**: SMART City – Submission of Final Smart City Proposal of Tirunelveli City
for 2$^{nd}$ stage competition under Smart City Mission.

--------------------

I, on behalf of Tirunelveli City Municipal Corporation (TCMC) are hereby
submitting the Final Smart City Proposal for Tirunelveli City for 2$^{nd}$ stage competition
I have prepared the proposal as per the guidelines and formats provided by Smart
City Mission of MoUD, GoI.

Please find enclosed herewith the SCP for Tirunelveli City in five hard copies and
one soft copy (1DVD) along with the minutes of the meeting of the High Power Steering
Committee (HPSC) of Government of Tamil Nadu.

**Commissioner,**
**Tirunelveli Corporation.**

24/12/2015

**Encl:-**

1. Five Hard Copies and One Soft Copy (1DVD) of Smart City Proposal of Tirunelveli City

2. Minutes of the Second State Level High Powered Steering Committee Meeting ( HPSC) of
Govt. of Tamil Nadu on 21.12.2015 for Smart City Mission

**S.SivaSubramanian., B.Sc.,B.L.,**
Commissioner,
Tirunelveli Corporation,
Tirunelveli 627 001
Telephone:  0462 – 2329328
Fax    :  (0462) 2329327
Email : commr.tn.gov.in@gmail.com

Roc.No. E1/6526/2015          Date   28.6.2016

To:
The Director (SC) – I,
Ministry of Urban Development (MoUD)
NirmanBhavan,
New Delhi – 110108
Sir,

Sub: Submission of Revised Smart City Proposal - Tirunelveli City Municipal
Corporation for 2nd Stage Competition under Smart City Mission

----------------------------

I am hereby submitting the Revised Smart City Proposal for 2nd Stage
Competition. I have prepared the proposal as per the guidelines and formats provided
by Smart City Mission of MoUD, GoI. Please find enclosed herewith the revised
proposal for Tirunelveli City in Five hard copies and one soft copy (1 DVD).

Commissioner
Tirunelveli City Municipal Corporation

Encl:-

1.  Five Hard Copies of Revised Tirunelveli Smart City Proposal
2.  One Soft Copy (1 DVD) of Revised Tirunelveli Smart City Proposal

# Annexure 4.4: Collector Letter

**Dr. M. Karunagaran I.A.S.,**

**DISTRICT COLLECTOR**

Phone Off : 2501032
Per: 2501222
Res:2577983
Fax:2500224

TIRUNELVELI DISTRICT
TIRUNELVELI 627 009

**Roc.No. N14/ 54169 /2015**     **Date: 12.12.2015**

To,

The Mission Director
Smart Cities Mission
Ministry of Urban Development
Government of India

Dear Sir,

Sub:     Smart city - the Presentation of Athena Infonomics
India Pvt. Ltd., Chennai -   concurrence regards.

\*\*\*\*\*\*\*\*\*\*

It gives me great pleasure to note that Tirunelveli City Municipal Corporation (TCMC) has been shortlisted to participate in the Smart City Challenge.
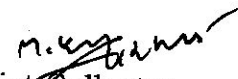
Today 12.12.2015 Presentation was done before the departments mentioned below about the following items. I express   my concurrence for the same.

## I - Pan City Initiative

| Project/Activity | Department |
|---|---|
| Creation of a comprehensive Emergency Monitoring and Response Service system. The proposed pan city initiative involves the establishment of an Integrated Emergency Monitoring and Response System (EMRS) which provides a systematic, proactive approach to guide departments to co-ordinate and work seamlessly to prevent, protect and respond to emergencies. The system involves Incident Monitoring, Multiagency Co-ordination and Public Information. EMRS integrates historical and real time data on incidents and supplementing the City's response capabilities. EMRS aims to reduce crime rates, fatalities and ensure citizen safety and security in Tirunelveli City. | Police and Traffic Department, Fire Service, Tirunelveli City Municipal Corporation. |

## II -Area Based Development

| Sl. No. | Project/Activity | Department |
|---|---|---|
| 1. | Nainar Kulam Lake Front Development | Public Works Department |
| 2. | Upgradation of Solid Waste Management Activities and creation of a Bio-methanation Plant (4 MT Capacity) in Thachanallur wholesale Market | Tirunelveli City Municipal Corporation |
| 3. | Introduction of Smart Water Meters and water quality monitoring systems in the Water Supply Network | Tamil Nadu Water supply and Drainage Board |
| 4. | (i)Construction of sewer in the area<br>(ii)Decentralized waste water treatment plant with a capacity of 5 MLD<br>(iii)Quality Monitoring System at the discharge point | City Corporation |
| 5.. | (i)Construction of storm water drains in the area<br>(ii) Sensors to detect overflow and blockage and ICT system | City Corporation |
| 6. | (i)Installation of Smart Electricity Meters<br>(ii)Rooftop Solar Panels<br>(iii)Net metering facility and Open access facility for solar<br>(iv)Underground power cabling | TANGEDCO |
| 7. | Road widening and Improvement and Pedestrianization of existing roads | PWD, City Corporation and Highways Department |
| 8. | Modernization of Bus shelters | Highways and Corporation |
| 9. | Smart Parking Facility along with buggies for aged and disabled | City Corporation |
| 10. | Wi-fi Hotspots | BSNL |
| 11. | Safety and signages | Traffic Police, City Corporation |
| 12. | Wireless Soil Monitoring systems | Agriculture and City Corporation |
| 13. | Integrated Utility Dashboard | City corporation |
| 14. | Smart Components in Low Cost Housing | Slum Clearance Board |

District Collector,
Tirunelveli.

# Annexure 4.5: Council Resolution

# 30.11.2015–ம் தேதிய திருநெல்வேலி மாநகராட்சி அவசரக் கூட்டத் தீர்மானம் எண்.177 –ன் உண்மை நகல்

மத்திய நகர்ப்புற வளர்ச்சி அமைச்சகத்தில் இந்தியாவிலுள்ள 98 நகரங்களில் ஒன்றாக திருநெல்வேலி மாநகராட்சியை சீர்மிகு நகரமாக மாற்ற தேர்வு செய்யப்பட்டுள்ளது. அதனை நிறைவேற்றும் பொருட்டு நம்பகத் தன்மை, செயலாக்கம் மற்றும் குடிமக்கள் ஒத்துழைப்பு ஆகியவற்றின் அடிப்படையில் இம்மாநகரை மேம்படுத்துவதற்காக மத்திய, மாநில அரசுகள் நிதி வழங்குகிறது. எனவே, கீழ்க்கண்ட திட்டங்களை செயல்படுத்தப் பட வேண்டியுள்ளது.

## வெற்றி நகரமாக மாற்ற செயல்படுத்தப்படும் முயற்சி

இம்மாநகராட்சியை சீர்படுத்தும் முகமாக வெற்றி நகரமாக மாற்றம் செய்ய 2 திட்டங்களை செயல்படுத்திட அனுமதி கோரப்படுகின்றது.

## பான் சிட்டி (Pan City)

### (1)பொன்னான நேரம் (Golden Hours)

ஒருங்கிணைந்த அவசர கண்காணிப்பு மற்றும் பிரதிபலிப்பு அமைப்பு (EMRS) ஒரு பணியை குறைந்த நேரத்தில் அனைத்து துறைகளையும் இணைத்து பணியினை முடித்தல்.

## பகுதி சார்ந்த மேம்பாடு (ஏரியா டெவலப்மென்ட் - Area Development)

திருநெல்வேலி மாநகராட்சிப் பகுதியில் சுமார் 500 ஏக்கர் பரப்பளவு பகுதியை தேர்வு செய்து மேம்பாடு செய்தல்.

## சிறப்பு நோக்கத்திற்கான வாகனம் (SPV)

இம்மாநகராட்சியை சீர்மிகு நகரமாக மாற்றம் செய்ய மத்திய நகர்ப்புற வளர்ச்சி அமைச்சகத்தின் வழிகாட்டுதல்படி சிறப்பு நோக்கத்திற்கான வாகனம் (SPV) ஏற்படுத்துதல் & அனுமதித்தல்.

மேற்படி திட்டங்கள் மற்றும் அமைப்புகள் அமைத்தல் ஆகிய பணிகளை சீர்மிகு நகரமாக மாற்றம் செய்யும் பொருட்டு இம்மாநகராட்சி பகுதிகளில் செயல்படுத்திட மாமன்றத்தின் அனுமதிக்கு.

அலுவலகக் குறிப்பு:

பொருளில் கண்டுள்ளவாறு மேற்படி திட்டங்கள் மற்றும் அமைப்புகளை அமைத்து திருநெல்வேலி மாநகராட்சியை சீர்மிகு நகரமாக மாற்றம் செய்வதற்கு மாமன்றம் அனுமதிக்கலாம்.

**தீர்மானம்:**

அலுவலகக் குறிப்பு அங்கீகரிக்கப்பட்டது. சீர்மிகு நகரம் திட்டத்தின் கீழ் திருநெல்வேலி மாநகராட்சியில் கீழ்க்கண்ட பணிகளை நடைமுறைப்படுத்த ஏகமனதாக தீர்மானிக்கப்பட்டது.

### பகுதி அபிவிருத்தித் திட்டம் (Area Development Programme)

வார்டு எண்.39,40,41,42,43,44,55 மற்றும் 52,54 பகுதிகள் உள்ளடக்கிய பல்வேறு அபிவிருத்தி பணிகள் செய்ய உத்தேசிக்கப்பட்ட தொகை ரூ.735.00 கோடியும் மற்றும் மாநகர பகுதி முழுவதும் பயனடையும் விதமான Pan city Initiatives திட்டத்தின் கீழ் ஒருங்கிணைந்த அவசர கண்காணிப்பு மற்றும் பிரதிபலிப்பு அமைப்பு (EMRS) பணிக்கு உத்தேசிக்கப்பட்ட தொகை ரூ.285.00 கோடிக்கு முன்மொழிவுகள் அனுப்ப தீர்மானிக்கப்பட்டது. மேலும், அரசாணை எண்.112 நகராட்சி நிர்வாகம் மற்றும் குடிநீர் வழங்கல் துறை நாள் 31.07.2015 —ல் குறிப்பிட்ட வழிகாட்டுதலின்படி உபயோகிப்போர் கட்டணம் இதற்கென உருவாக்கப்படவுள்ள அமைப்பு (SPV) மூலம் நடைமுறைப்படுத்த தீர்மானிக்கப்பட்டது.

(ஒம்)இ.புவனேஸ்வரி
மேயர்
திருநெல்வேலி மாநகராட்சி.

உண்மை நகல்

கண்காணிப்பாளர்
திருநெல்வேலி மாநகராட்சி.

Annexure 4.6.1: Letter of Intent (TANGEDCO)

TANGEDCO

From                                              To
Er.K.Selvakumar.,B.E.,MBA.,M.I.E.,                The Mission Director,
Superintending Engineer,                          Smart Cities Mission,
Tirunelveli E.D.C.,                               Ministry of Urban Development,
Tirunelveli.                                      Government of India,
                                                  New Delhi.

Lr. SE/TEDC/Tin/AEE/Cable/F.Smart City/D.No. 12 dt. 15.12.15

Sir,

    Sub  :  TEDC/Tirunelveli – Letter of support towards programmes to be
            implemented in the smart city plan involving conveyance with
            TNEB - Reg
    Ref  :  Your Letter dt.12.12.2015.
                        * * * * * * * * * * * * * *

    Adverting to the above reference letter of support from TANGEDCO side to
the points given as detailed below.

1.Facilitating open access for sale of energy generated from solar.

    With the available infra-structure on technical and accounts allowing open
access solar power is tedious one.

2.Providing net metering facilities for solar

    Already net metering facilties are available for solar in TANGEDCO.

3.Implementation of the underground cabling plan.

    There is no proposal for underground cabling plan in Tirunelveli city at
present.

4.Introduction of smart electricity meters.

    In TANGEDCO, smart meter fixing in consumer side is under study stage.

    This is for your kind information. All the above replies are in policy decision of
the Board.


                                        Sd/-----------

                                        Superintending Engineer
                                        TEDC /Tirunelveli

Annexure 4.6.2: Letter of Intent (TNSCB)

# TAMIL NADU SLUM CLEARANCE BOARD
## TIRUNELVELI DIVISION

From
Thiru.S.Edwin Sam, B.E.,
Executive Engineer,
Tamilnadu Slum Clearance Board,
Tirunelveli Division,
NGO 'B' Colony Extension,
Perumalpuram,Tirunelveli-7.

To
The Mission Director,
Smart Cities Mission,
Ministry of Urban Development.
New Delhi.

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L.r.No.2032/AE (RAY)/2015                                    Dated. 15.12.2015

Sir,

Sub:  Tamilnadu Slum Clearance Board-Tirunelveli Division – support
      towards programmes to be implemented in the Smart City Plan
      involving convergence with RAY schemes – reg.

Ref:  Director,Athena Informatics India Pvt Ltd,Chennai
      Lr.dt.12.12.2015.

      ......

        Tamilnadu Slum Clearance Board, has takenup the work of construction of
414 insitu and 432 relocation houses in Tirunelveli Corporation.  All the works are in
progress.  It is requested to  implement Smart City initiative components such as roof
top solar panel and digital kiosks  in convergence with the existing RAY schemes vide
above reference cited.

        We assure our support to the newly set up Special Purpose Vehicle in
facilitating the implementation of the above mentioned smart city components.

Encl:List of schemes

Executive Engineer,
Tirunelveli Division.

## List of Schemes Under RAY in Tirunelveli Corporation

| Sl.No | Name of the scheme | Ward No. | No.of houses | FS Cost (Rs. in lakhs) | Remarks |
|---|---|---|---|---|---|
| 1 | Nagammalpuram | 30 | 60 | 367.15 | Work is in progress |
| 2 | Karuvelankundu | 49 | 36 | 252.34 | Work is in progress |
| 3 | Keelatheru | 44 | 14 | 99.984 | Work is in progress |
| 4 | Kumaran Street | 44 | 100 | 614.507 | Work is in progress |
| 5 | Devipuram | 44 | 18 | 117.559 | Work is in progress |
| 6 | Sentamilnagar | 48 | 21 | 156.653 | Work is in progress |
| 7 | Vagaikulam | 48 | 41 | 321.69 | Work is in progress |
| 8 | Annai Indra Nagar | 50 | 7 | 69.966 | Work is in progress |
| 9 | Sardharpuram | 50 | 117 | 839.026 | Work is in progress |
| 10 | Relocation at VOC nagar | 48 | 432 | 2225.06 | Work is in progress |
|  | **Total** |  | **846** | **5063.935** |  |

Executive Engineer,
Tirunelveli Division

15/12/15

# Annexure 4.6.3: Letter of Intent (TWAD)

# TAMILNADU WATER SUPPLY AND DRAINAGE BOARD.

FROM

Er.L. Subramanian,M.E.,M.B.A.,
Superintending Engineer,
TWAD Board,
Tirunelveli-Kanyakumari Circle,
Tirunelveli.

TO

The Mission Director,
Smart cities mission,
Ministry of Urban development,
Government of India.

## Lr. No. 151215/F. T'veli. Corpn.WSIS/AE.3/2015/dt. 16.12.2015

Sir,

Sub: Letter of support towards Programmes to be implemented in the Smart City Plan involving convergence with TWAD - Regarding

Ref: Project Coordinator – SMART CITY PROJECT/Tirunelveli
Lr.No. Camp/2015 – 12/dt. 16.12.15.

******

In the reference cited, the Project Coordinator, Smart City Project, Tirunelveli has informed that the following components have been included in the Smart City Proposal for Tirunelveli Corporation.

1) Introduction of Smart Water meters in the Proposed 50 MLD Water Supply Scheme for Tirunelveli Corporation.
2) Introduction of Water quality sensors and ICT based monitoring systems.

As requested in the letter cited, we assure our support restricting within the scope and limits of TWAD Board, in implementation of the above water supply scheme to Tirunelveli corporation, to the newly set up "Special Purpose Vehicle", in facilitating the implementation of the above mentioned "Smart City Components".

Sd/- L. Subramanian, 16.12.15
Superintending Engineer-TWAD,
T.K.Circle, Tirunelveli.

For Superintending Engineer-TWAD,
T.K.Circle, Tirunelveli.

Annexure 4.6.4: Letter of Intent (HIGHWAYS)

# HIGHWAYS DEPARTMENT

From

**Tmt.T.Santhi, B.E.,**
Divisional Engineer (H) C& M,
Tirunelveli

To

**The Mission Director**
Smart cities mission
Ministry of urban development
Government of India

## Letter No: 07/ 2015 / JDO / dt. 14.12.2015

Sir,

    **Sub:**    Letter of Support towards programmes to be implemented in the Smart City Plan involving convergence with Highways Department.

**✸✸✸✸**

    As part of the Smart City initiative, the following initiatives have been proposed to be implemented with the support of the Highways Department.

1. Strengthening and widening of select roads such as the North Mount road, West Mount road and Tirunelveli-Shencottai-Kollam road (SN High road)

2. Creation of pedestrian pathways and infrastructure for non – motorized transport

3. Modernization of Bus Shelters

    We assure our support to the newly set up Special Purpose Vehicle in facilitating the implementation of the above mentioned Smart City components.

17-12-15

for Divisional Engineer,
Highways, C&M,
Tirunelveli

Annexure 4.6.5: Letter of Intent (PWD)

PWD/WRO

**From**

Er.A.Subramanian,B.E.,
Executive Engineer, PWD/WRO.,
Thambraparani Basin  Division,
Tirunelveli -2

**To**

The Mission Director,
Smart Cities Mission,
Ministry of Urban Development.
Government of India,

Lr.No./JDO.1/ 396ᵐ /C.167/2015/Dt. 16.12.2015

Sir

Sub  :  Letter of Support towards programmes to be implemented in the
Smart City Plan involving convergence with PWD.

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As part of the Smart City initiative, the Development of the
Nainarkulam Lake Front Development has been proposed.  This will
include projects such as:

1. Desilting the lake
2. Creation and sustenance of a green belt around the lake
3. Creation of Vendor Stalls around the Lake

We assure our support to the newly set up Special
Purpose Vehicle in facilitating the implementation of the above
mentioned smart city components.

16.12.15
Executive Engineer, PWD/WRO.,
Thambraparani Basin Division,
Tirunelveli.

Annexure 4.6.6: Letter of Intent (FIRE & RESCUE)

| FROM | TO |
|---|---|
| B.Saravanababu, B.Sc., M.B.A., PGDIS., Assistant District Officer / District Officer (Full Addl.Ch.), Fire and Rescue Services, Tirunelveli District. Ph: &Fax: 0462 2572342 / Cell No: 9445086249 Mail Id : doti.tnfrs@gov.in | The Mission Director, Smart.Cities Mission, Ministry of Urban Development, Government of India. |

R.C.No. 6746 /A/2015,  Date.  14.12.2015
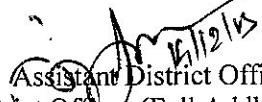
Sir,

Sub :  Fire and Rescue Services – Tirunelveli District – Smart City development initiatives – requirements of Fire & Rescue Service infrastructure improvisation - scheme development Regarding.

Ref :  Your letter dated 12.12.2015 and meeting held under District Collector Tirunelveli on 12.12.2015.

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With reference to your letter cited, as part of the smart city initiative the following components are supposed to be undertaken inconvergence with this Department.

1) Creation of Customised ERS called the golden hour to alert the Fire and Rescue Services Department in case of emergency. Response system will have added features identifying the geo position of the location requiring attention.  In this regard the infrastructure facility available at Palayamkottai Fire and Rescue Station, Pettai Fire and Rescue Station has to be upgraded with modernized communication and rescue equipments.

2) Integration and pilot testing of Incident Response System (IRS) frame work for the district official of Tirunelveli District fixing responsibilities, as per the governance given by National Institute of Disaster Management (NIDM), New Delhi under DM act, Government of India.

3) Modernization of the city Fire and Rescue Services Department through ICT related or remote sensing based technologies.

4) In order to reduce response time, creation of Fire & Rescue Station outpost with modernized communication system, vehicles, rescue tools and other required infrastructure in between Tirunelveli Junction and Town limit of Tirunelveli District at the land provided by the District Administration for easy access to the project area.

We assure our support to the newly setup Special Purpose Vehicle (SPV) in facilitating implementation of the above mentioned Smart City project activities.

Assistant District Officer -
District Officer (Full Addl. Charge),
Fire-Rescue Services,
Tirunelveli District.

Annexure 4.6.7: Letter of Intent (POLICE)

T.S. Anbu, IPS.,
Commissioner of Police,

Tirunelveli City,
Tirunelveli.

Phone : 0462 - 2571444
Fax    : 0462 – 2582696

C.No.202/Camp/COP/TIN-C/2015, Dated  : 14.12.2015

To

The Mission Director,
Smart Cities Mission,
Ministry of Urban Development,
Government of India.

Dear Sir,

Sub: Letter of Support towards programmes to be implemented in the Smart City Plan involving convergence with Police and Traffic Department.

Ref : Letter dated 12.12.2015 of the Director, Athena Infonomics India Pvt Ltd.

-oOo-

As part of the Smart city initiative, the following initiatives have been proposed to be implemented with the support of the Police and Traffic Department.

1. Create a strong surveillance infrastructure in all key points of the city with wireless transmission of information (cameras to be fixed at 1500 locations to start with and should be enhanced at later stage to at least 1000 locations more.  This should include purchase of Drones (4) to utilize for aerial surveillance).

2. Modernization of the command and control systems in the Police Department with parallel one or two additional command post.

3. Creation of additional smart parking facilities to reduce the stress on roads.

4. Creation of a No vehicle zone around the Nellaiyappar Temple.

5. Creation of buggy facilities for disabled people to commute in and around the temple.

6. Enforce strict traffic norms preventing lorries from entering the no vehicle zone during peak hours.

7. Introduction of Modernized traffic regulatory and safety structures to prevent accidents including purchase of vehicle fitted with speed Radar gun and cameras (speed interceptors).

8. Creation of additional May I help you Booths in various locations within the City, Modernized traffic umbrellas with signals at various junctions (if possible integrated traffic management system can be included in the proposal).

We assure our support to the newly set up special purpose vehicle in facilitating the implementation of the above mentioned smart city components.

For Commissioner of Police,
Tirunelveli City.

Annexure 4.7.1: G.O. (WATER SUPPLY)
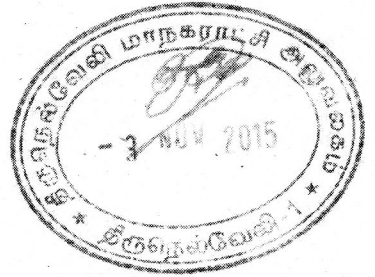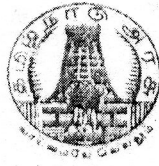
குடிநீர் வழங்கல் – திருநெல்வேலி மாநகராட்சி – அரியநாயகிபுரம் அணைக்கட்டு நீர்த்தேக்கப்பகுதியிலிருந்து – 50 மில்லியன் லிட்டர் குடிநீர் பெற்று குடிநீர் விநியோகம்-மேம்பாடு திட்டப்பணி மேற்கொள்ளுதல் – தமிழ்நாடு குடிநீர் வடிகால் வாரியத்திற்கு பணி ஒப்படைத்தல் – அனுமதி அளித்தல் – ஆணை - வெளியிடப்படுகிறது.

## நகராட்சி நிர்வாகம் மற்றும் குடிநீர் வழங்கல் (குவ3) துறை

அரசாணை (டி) எண்.634                                      நாள்: 28.10.2015
                                                                          படிக்க:

1.  அரசாணை (நிலை) எண் 9, ந.நி.(ம)கு.வ.(குவ4) துறை நாள் 27.01.2014.
2.  நகராட்சி நிர்வாக இயக்குநரின் கடித ந.க.எண். 43465/ 2006/குவ3,
    நாள் 02.09.2015.

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## ஆணை

பார்வை ஒன்றில் காணும் அரசாணையில் திருநெல்வேலி மாநகராட்சியில் தமிழ்நாடு நகர்புற உட்கட்டமைப்பு நிதி சேவை நிறுவனத்தின் மூலம் ஜெர்மன் வங்கி நிதியுதவியுடன் (KfW Funding through TNUIFSL) ரூ.230 கோடி மதிப்பீட்டில் திருநெல்வேலி மாநகராட்சிக்கு அரியநாயகிபுரம் அணைக்கட்டு நீர்த்தேக்கப் பகுதியிலிருந்து (Ariyanayagipuram Anicut upstream side) நாளொன்றுக்கு 50 மில்லியன் லிட்டர் குடிநீரை பெற்று குடிநீர் விநியோக மேம்பாட்டுத் திட்டப் பணிகளை மேற்கொள்வதற்கு நகராட்சி நிர்வாக ஆணையருக்கு அனுமதி அளிக்கப்பட்டது.

2. பார்வை இரண்டில் காணும் கடிதத்தில், நகராட்சி நிர்வாக இயக்குநர் அவர்கள் மேற்கண்ட குடிநீர்த் திட்டப்பணிகளை மேற்கொள்வதற்கு திருநெல்வேலி மாநகராட்சியில் போதிய அளவில் பொறியியாளர்கள், தொழில் நுட்ப உதவியாளர்கள், செயல்திறன் பணியாளர்கள் ஆகியோர் இல்லாத காரணத்தினால் தமிழ்நாடு குடிநீர் வடிகால் வாரியம் மூலம் இப்பணிகளை மேற்கொள்வதற்கு அரசின் அனுமதி கோரி திருநெல்வேலி மாநகராட்சி, மாமன்ற தீர்மான எண்.105, நாள் 31.08.2015-ல் தீர்மானம் நிறைவேற்றியுள்ளது எனக் கூறியுள்ளார்.

3. மேற்காணும் சூழ்நிலையில், திருநெல்வேலி மாநகராட்சியில் குடிநீர் திட்டப்பணிகளை தமிழ்நாடு குடிநீர் வடிகால் வாரியம் மூலம் மேற்கொள்ள அனுமதி வழங்குமாறும் மற்றும் வரப்பெற்ற ஒப்பந்தப்புள்ளியை முடிவு செய்ய தமிழ்நாடு குடிநீர் வடிகால் வாரியத்திற்கு அனுமதி அளிக்கவும் கோரிய நகராட்சி நிர்வாக இயக்குநரின் கருத்துருவினை அரசு கவனமுடன் பரிசீலித்து அவ்வாறே செயலாக்க அரசு ஆணையிடுகிறது.

/ஆளுநரின் ஆணைப்படி/

க. பணீந்திர ரெட்டி
அரசு முதன்மைச் செயலாளர்

பெறுநர்
நகராட்சி நிர்வாக இயக்குநர், சென்னை–5.

மேலாண்மை இயக்குநர், தமிழ்நாடு குடிநீர் வடிகால் வாரியம், சென்னை—5.

நகல்:

ஆணையர், திருநெல்வேலி மாநகராட்சி, திருநெல்வேலி.

முதன்மைச் செயலாளரின் முதன்மை முதுநிலை தனிச் செயலர், நகராட்சி நிர்வாகம்
மற்றும் குடிநீர் வழங்கல் துறை, சென்னை—9.

நகராட்சி நிர்வாகம் மற்றும் குடிநீர் வழங்கல் (அ.நு.1 )துறை, சென்னை—9.
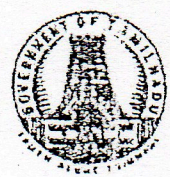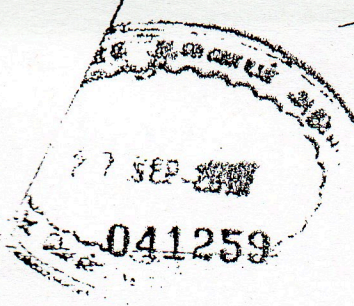
இருப்பு கோப்பு/உ திரி ந்கல்.

/ஆணைப்படி அனுப்பப்படுகிறது/

தென்வதணம்
28.10.15
பிரிவு துலுவலா.

# Annexure 4.7.2: G.O. (WASTE TO ENERGY)

041259
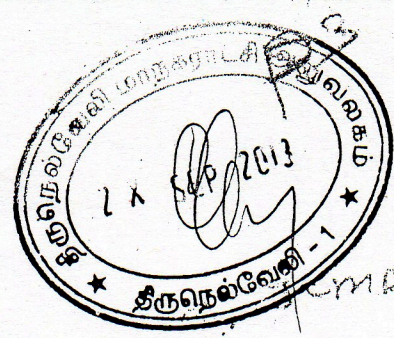
## ABSTRACT

Budget Speech 2012 -2013 -- Solid Waste Management - Waste to Energy project in the Public Private Partnership (PPP) mode in Tirunelveli Corporation – Orders - Issued

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## Municipal Administration and Water Supply (MC.II) Department

G.O.(Ms.)No.89

Dated : 26.09.2012

Read:

1. G.O.(Ms.)No.6, MA&WS (MA.II) Department dated 17.01.2012
2. From the Commissioner of Municipal Administration, Letter Roc.No. 51810/2011/P3 dated 31.08.2012

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## ORDER

In the Budget Speech 2012-2013, among others it has been announced that

"Urban Solid Waste Management is a major challenge confronting the local bodies. It is estimated that 13,533 metric tonnes of solid waste is generated in our urban Local bodies every day. Solid Waste Management projects for scientific disposal of waste have been taken up in Madurai, Coimbatore, Salem Corporations and Namakkal Municipality in the Public Private Partnership (PPP) mode. Further, we are proposing to implement a "waste to energy" project in the Public Private Partnership (PPP) mode in Tirunelveli. All urban Local Bodies will practice source segregation of solid waste into degradable and non-degradable components in a phased manner.

2.     The Commissioner of Municipal Administration in his letter se
read above has stated that in general, the Urban Local Bodies find it very di
to identify and procure suitable land for development of processing and disp
facility for solid waste. Therefore, an attempt has been made to bring a ho
approach to overcome the constraints faced by the Urban Local Bodie
identifying land for development of such facilities. Accordingly, it is propose
develop six Regional Landfill facilities at Tiruppur, Tiruchirappalli, Tirune
Nagercoil, Thoothukudi and Vellore wherever sufficient land is available
clustering the nearby Urban Local Bodies. The Commissioner of Muni
Administration has stated that the draft Request for Proposal (RFP) is u
preparation and will be floated only after it is vetted by Public Private Partner
cell of the Finance Department.

3.     In view of the above, the Commissioner of Municipal Administra
in his letter second read above has requested the Government to permit hir
utilise a sum of Rs.3.00 Crore sanctioned in the G.O. first read above, ur
Integrated Urban Development Mission (IUDM 2011-2012) to Tirune
Corporation for Solid Waste Management.

4.     The Commissioner of Municipal Administration in his letter seco
read above has proposed to take up the waste to energy project in the Pul
Private Partnership (PPP) mode in Tirunelveli corporation with the follow
activities as per the time line mentioned below :-

| | |
|---|---|
| ➤ Bid due date and opening of Technical Proposal for engaging Transaction Advisor | 05.09.2012 |
| ➤ Award of work to Transaction advisor | 10.09.2012 |
| ➤ Floating of RFP for establishing waste treatment and scientific landfill on cluster basis on PPP mode | 31.10.2012 |
| ➤ Issue of Work order | 31.01.2013 |

5.     The Commissioner of Municipal Administration has also propose
that priority will be accorded for disposing of the solid wastes by scientific metho
on BOOT basis under the Public Private Partnership (PPP) mode in the existin
ward at Ramayanpatti in Tirunelveli Corporation.

6.     The Government after careful examination accept the proposal of the Commissioner of Municipal Administration at paras 3, 4  and 5 above and permits him to utlilise the amount of Rs.3.00 Crore sanctioned in the G.O. first read above under Integrated Urban Development Mission (IUDM 2011-2012) to Tirunelveli Corporation for Solid Waste Management and also direct him to take action as per the schedule proposed at para  4 above.

7.     This order issues with the concurrence of Finance Department vide its U.O.No.474/Secretary (Expenditure)  dated 12.09.2012

### (By Order of the Governor)

**SHEELA BALAKRISHNAN**
**ADDITIONAL CHIEF SECRETARY TO GOVERNMENT.**

To
The Commissioner of Municipal Administration, Chennai -5
The Commissioner, Tirunelveli Corporation, Tirunelveli

Copy to :
The Special Personal Assistant to Hon'ble Minister for Municipal Administration and Rural Development, Chennai -9
The Private Secretary to Additional Chief Secretary , Municipal Administration and Water Supply Department, Chennai -9
The Municipal Administration and Water Supply (OP.II/ Budget) Department, Chennai

**/ forwarded by order/**

26/09/2012
**Section Officer**

Annexure 4.7.3: G.O. (ESCO-STREET LIGHTS)

R.Lakshmi, B.Sc.
Commissioner,
Municipal Corporation,
Tirunelveli – 627 001.
Phone : 2329328 (O), 2583801(R)
Fax : (0462) 2329327
Email commr.tirunelveli@tn.gov.in
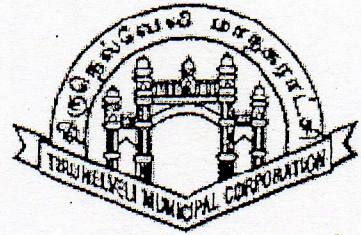
Roc.No.E4/2819/2012,        dated    27.06.2015

# Issue of Notice to Proceed with the Work

To

M/s. Akash Engineering Associates (p) Ltd.,
No.16, North Wall Road,
Kondithope,
Chennai 600079.

**Sir,**

**Sub:** Tirunelveli Corporation- Implementation of Energy Efficiency Projects including Investment Grade Audit in Tirunelveli City Municipal Corporation Street Lights through PPP Model- Issue of Notice to Proceed with the Work - Regarding

**Ref:**
1) Letter of Intent issued on 21.08.2013
2) M/s.TUV SUD South Asia (P) Ltd.IGA Validation certificate, dated 22.08.2014.
3) Corporation Council Resolution No.398, dated 31.03.2015
4) Letter of Acceptance issued on 21.04.2015.
5) Your Letter dated 02.06.2015 along with UCO Bank Guarantee No.01581GPER000115, (Performance Security Rs.5225000/--)
6) Confirmation letter for Bank Guarantee from UCO Bank, Adyar Branch, Chennai. Dated on 15.06.2015.
7) Agreement dated 27.06.2015

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In Pursuant to the above references and also furnishing the requisite Performance Security deposit as stipulated and signing of the contract for the work of Implementation of Energy Efficiency Projects including Investment Grade Audit in Tirunelveli City Municipal Corporation Street Lights through PPP Model at a Investment cost of 24,44,74,810/--(Twenty four crores forty four lakhs seventy four thousand eight hundred and ten only) you are hereby instructed to proceed with the contract as per terms and conditions.

Commissioner
Tirunelveli Corporation

27-6-15

Annexure 4.7.4: G.O. (RAY)

No. N-11011/44/2014-I&M
Government of India
Ministry of Housing & Urban Poverty Alleviation
(JNNURM & RAY)
****

Nirman Bhawan, New Delhi
Dated: 2$^{nd}$ Septmeber 2014

## OFFICE MEMORANDUM

**Sub: Minutes of the 10$^{th}$ Meeting of the Central Sanctioning and Monitoring Committee (CSMC) under Rajiv Awas Yojana (RAY) - Implementation phase held on 13$^{th}$ August 2014 in New Delhi-reg.**

The undersigned is directed to enclose herewith a copy of the 10$^{th}$ Meeting of the CSMC under RAY- Implementation phase held under the Chairpersonship of Secretary (HUPA) on 13$^{th}$ August 2014 at New Delhi for information and further necessary action.

Encl: Minutes of the meeting

(Rahul Mahna)
Under Secretary to the Government of India
Tel: 23061285

Members of the CSMC as follows:-

1. Secretary, Ministry of Urban Development, Nirman Bhavan, New Delhi.
2. Secretary, Department of Expenditure, Ministry of Finance, North Block, N. D.
3. Senior Advisor (HUA), Planning Commission, Yojana Bhawan, New Delhi.
4. Secretary, Ministry of Environment and Forests, Paryavaran Bhavan. CGO Complex, Lodhi Road, New Delhi.
5. Secretary, Ministry of Social Justice and Empowerment, Shastri Bhavan, N.D.
6. Secretary, Department of Health and Family Welfare, Nirman Bhawan, New Delhi.
7. Secretary, Department of School Education and Literacy, Department of School Education & Literacy, Room No. 124, "C" Wing, Shastri Bhavan, New Delhi.
8. Secretary, Department of Financial Services, Ministry of Finance, Jeevan Deep Building, Parliament Street, New Delhi.
9. Secretary, Ministry of Labour & Employment, Shram Shakti Bhawan, New Delhi.
10. Secretary, Ministry of Minority Affairs, Paryavaran Bhawan, CGO Complex, New Delhi.
11. Joint Secretary and Financial Adviser, Ministry of Urban Development & Ministry of Housing and Urban Poverty Alleviation, Nirman Bhavan, New Delhi.

12. Mission Directors (JNNURM): Ministry of Urban Development & Ministry of Housing and Urban Poverty Alleviation, Nirman Bhavan, New Delhi.
13. Chief Planner, Town and Country Planning Organisation (TCPO), I.P. Estate, New Delhi.
14. Adviser, CPHEEO, Ministry of Urban Development, Nirman Bhavan, New Delhi.
15. Member Secretary, Joint Secretary in charge of RAY, Ministry of Housing and Urban Poverty Alleviation, Nirman Bhavan, New Delhi.

Copy to:

1. Joint Secretary (PP), Ministry of Minority Affairs, 11$^{th}$ Floor, Paravaran Bhawan, CGO Complex, Lodhi Road, New Delhi
2. Joint Secretary (Housing), M/o HUPA
3. CMD (HUDCO), India Habitat Centre, Lodhi Road, New Delhi
4. ED (BMTPC), India Habitat Centre, Lodhi Road, New Delhi
5. Senior ED (Projects), HUDCO, India Habitat Centre, Delhi
6. Director (NURM-II)
7. Deputy Financial Adviser (DFA)
8. All States (as per list attached)

(Rahul Mahna)
Under Secretary to the Government of India

*Copy for information to:*

PS to MHUPA/ PS to Secretary (HUPA)/PS to JS(H)/ PS to JS&MD(JNNURM&RAY)/ PS to Director (JNNURM & RAY)/PS to Director (NBO)/ AEA, NBO/Deputy Director, Releases (JN&RAY)/ Dy. Chief (MIS), JNNURM – to upload on the JNNURM website/MIS Cell, JNNURM Directorate

(Rahul Mahna)
Under Secretary to the Government of India

# Annexure 4.8: Preliminary Human Resource Plan

## Preliminary Human Resource Plan

In order to run the City level SPV and manage smooth execution of projects identified under the Smart City Proposal, the city would require additional human resources that have the skill sets and hands on experience. It is also expected that the City level SPV would be a lean organization with only critical staff on its pay roll. Further, a detailed Human Resource Plan would be prepared at a later stage that would lay out the profiles, qualifications and timelines for engagement of the resources. A preliminary Human Resource Plan is presented below:

1. SPV Board

| Sl. No. | Board Member | Designation | Organisation /Institution | Functions | Remarks |
|---|---|---|---|---|---|
| 1 | Chairperson | Director | Director of Municipal Administration, GoTN | ▪ To preside over the activities of the Board and provide strategic inputs from time to time | ▪ By Designation<br>▪ Tenure as per Indian Companies Act 2013<br>▪ Requirement: Immediate |
| 2 | Director | Representative | Finance Department, GoTN | ▪ To participate in Board Meetings and take stock of the affairs of the company | ▪ By Designation<br>▪ Tenure as per Indian Companies Act 2013<br>▪ Requirement: Immediate |
| 3 | Director | Representative of the Government of India | Ministry of Urban Development, GOI | | ▪ Appointed by MoUD<br>▪ Tenure as per Indian Companies Act 2013<br>▪ Requirement: Immediate |
| 4 | Director | Commissioner, | Tiruvelveli City Municipal Corporation | | ▪ By Designation<br>▪ Tenure: Full time<br>▪ Requirement: Immediate |

| Sl. No. | Board Member | Designation | Organisation /Institution | Functions | Remarks |
|---|---|---|---|---|---|
| 5 | Director | Chief Executive Officer | To be Identified | | ▪ By Designation<br>▪ Tenure as per Indian Companies Act 2013<br>▪ Requirement: Immediate |
| 6 | Independent Director(s) | Director | To be identified | ▪ To provide industry perspective and sectoral expertise on strategic decisions of the Board | ▪ By name<br>▪ Selected from Data Bank maintained by MCA<br>▪ Preference would be given to those who have served as Independent Directors in the Board of Companies fulfilling Clause 49 of the listing agreement of SEBI.<br>▪ Tenure as per Indian Companies Act 2013<br>▪ Requirement: Medium Term |

2. CEO, SPV

| Responsibility | Qualification | Tenure and Appointment |
|---|---|---|
| ▪ Overseeing and managing the general conduct of the day-to-day operations of the | ▪ Over ten years of experience in running | ▪ Appointment for a period of *three* years |

| Responsibility | Qualification | Tenure and Appointment |
|---|---|---|
| SPV subject to the supervision and control of the Board<br>▪ Entering into contracts or arrangements for and on behalf of the Company in all matters within the ordinary course of the Company's business<br>▪ To formulate and submit to the Board of Directors for approval a Human Resource Policy that will lay down procedures for creation of staff positions, qualifications of staff, recruitment procedures, compensation and termination procedures<br>▪ Recruitment and removal of the senior management of the Company and the creation of new positions in accordance with the Company's approved budget and the recruitment or increase of employees in accordance with the Human Resource Policy laid down by the Board<br>▪ Supervising the work of all employees and managers of the Company and the determination of their duties, responsibilities and authority. | and managing infrastructure companies as Chief Executive Officer/Managing Director<br>▪ Experience in implementing and running day-to-day operations of large infrastructure projects preferably in the urban sector<br>▪ Should have experience in setting up SPVs<br>▪ Should have experience in raising finances including from the bond market<br>▪ Experience in working with Government would be preferred | with the approval of MoUD<br>▪ Will be selected and appointed through a competitive process from the market<br>▪ Requirement: Medium |

### 3. Chief Vigilance Officer

| Responsibility | Qualification | Tenure and Appointment |
|---|---|---|
| ▪ Preventive and surveillance vigilance<br>▪ Flagging cases to the SPV Board<br>▪ Conveying Government Instructions on vigilance to all divisions for compliance<br>▪ Vigilance clearance in certain service aspects<br>▪ Handling Departmental Vigilance Cases | ▪ The officers should be holding JS/ IG/ DIRECTOR/DIG / DS level posts in Central/State level Departments/Agencies | ▪ Will be appointed by the Board of the City level SPV<br>▪ Initial Deputation for a period of three years extendable up to a further period of two years.<br>▪ Requirement: Medium |

### 4. Core Team

It is proposed that the SPV would have four verticals – Planning, Projects, Finance and Administration that would seamlessly operate towards managing the projects identified under the Smart City Proposal.

| Sl. No. | Designation | Qualification | Job Description | Hiring Plan[1] | Remarks |
|---|---|---|---|---|---|

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[1] Immediate: 0 to 3 months; Medium:3 to 6 months; Long Term: After 6 months

| Sl. No. | Designation | Qualification | Job Description | Hiring Plan[1] | Remarks |
|---|---|---|---|---|---|
| 1. | Head, Planning | ▪ Master's degree in Urban/Regional Planning or equivalent<br>▪ 15 or more years of experience in assisting city governments in planning of infrastructure/service delivery projects like water supply, transportation, etc. | ▪ Overall responsibility planning the various smart city projects in line with the Smart City Plan<br>▪ Work closely with the CEO and other Government Agencies for implementation of the Smart City Plan | Long Term | Tenure: Full time |
| 2. | Chief Financial Officer | ▪ Chartered Accountant/PG in Finance or equivalent with over fifteen years of experience<br>▪ More than ten years experience as Head, Finance in large infrastructure /construction companies | ▪ Identification of potential sources of raising funds<br>▪ Discussions with Lenders, Finalisation of Term Sheet / Financing Documents.<br>▪ Negotiation at senior level with potential financiers and investors and identifying avenues for funding | Long Term | Tenure: Full time |
| 3. | Head, Projects | ▪ Post Graduation in Civil Engineering or equivalent from reputed academic institutes with good academic record<br>▪ More than ten years of experience as Head, Projects in large infrastructure/construction companies<br>▪ Experience of implementing and managing projects in urban sectors would be preferred | ▪ Developing guidelines, protocols, structures and standard operating procedures for project financing under various Public Private Partnership (PPP) models<br>▪ Advise CEO on strategic matters related to identified projects (feasibility, finance, policy etc)<br>▪ Building financial models and analysis (profitability indicators, projections, scenarios, etc.). for evaluating financial feasibility of new projects as well as existing infrastructure projects<br>▪ Preparing optimal commercial structure and institutional framework design for various infrastructure projects<br>▪ Preparation of project | Long Term | Tenure: Full time |

| Sl. No. | Designation | Qualification | Job Description | Hiring Plan[1] | Remarks |
|---|---|---|---|---|---|
| | | | monitoring and governance frameworks | | |
| 4. | Smart City Planner | ▪ Master's Degree in Urban Planning or equivalent from reputed academic institutes with good academic record<br>▪ More than seven years of experience in Urban Planning / City Planning / Country Planning / Town Planning / Regional Planning / Infrastructure Planning / Transport Planning / Environmental Planning)<br>▪ Experience in assisting city governments in innovating planning solutions like land use, transit oriented development, sustainable environmental planning etc | ▪ Reviewing of smart city projects from urban planning perspective<br>▪ Provide technical expertise in procurement of smart city solutions<br>▪ Ensure compliance with various development plans and strategies identified for the city<br>▪ Ensure regulatory compliance of projects as per existing policies, FSI, land use among others | Long Term | Tenure: Full time |
| 5. | Citizen Engagement Expert | ▪ Post Graduation on Mass Communication/Social Work or equivalent from reputed academic institutes<br>▪ More than ten years of experience in formulation and implementation of strategies for engagement with citizens/civil society<br>▪ Experience of working with City Governments would be preferred | ▪ Formulation of Citizen Engagement Strategy covering life cycle of projects<br>▪ Convening meeting with the Smart City Citizen Forum<br>▪ Advise on matters pertaining to managing citizen's expectations | Long Term | Tenure: Full time |
| 6. | Technology Expert | ▪ Post Graduation in Engineering (IT/Computer Science) or equivalent<br>▪ More than ten years of experience in developing and implementing smart solutions related to public service delivery | ▪ Review of technological aspects presented in Project feasibility studies<br>▪ Provide advise on technological matter as and when required | Long Term | Tenure: Full time |
| 7. | Relief & Rehabilitation Officer | ▪ More than 15 years of experience in Relief and Rehabilitation works preferably in the urban sector<br>▪ Knowledge of implementation of resettlement and rehabilitation programmes as per the | ▪ Preparation of social impact assessment, planning/implementation of resettlement and rehabilitation activities<br>▪ Advise on R&R matters for infrastructure projects | Long Term | Tenure: Full time |

| Sl. No. | Designation | Qualification | Job Description | Hiring Plan[1] | Remarks |
|---|---|---|---|---|---|
| | | provisions of Right to Fair Compensation and Transparency in Land Acquisitions, Rehabilitation and Resettlement Act, 2013 through periodic monitoring<br>▪ Knowledge of national and State guidelines, policies, and Acts on land acquisition, rehabilitation and resettlement.<br>▪ Full time First Class Degree in Civil Engineering/ Full time First class Master's Degree in Social Work or Social Sciences | and services<br>▪ Estimation of R&R Costs for project components<br>▪ Review of project documents prepared by consultations | | |
| 8. | Heritage Conservation Expert | ▪ At least Post Graduation in Heritage and Tourism Management, Planning or Architecture/Conservation<br>▪ More than 20 years of experience in planning, implementation and management of conservation projects/programmes at national/international level<br>▪ Experience in spatial analysis, zonal/development plans, heritage conservation and assistance in integration of projects at city/region area level<br>▪ Expertise in integrated tourism planning and tourism infrastructure, development and management<br>▪ Experience of working with the Government at the national, state or local level | ▪ Designing and implementation of tourism/heritage conservation specific projects, sub-projects and activities<br>▪ Advise on commercial utilization of spaces in heritage sites identified in the plan<br>▪ Advise on relaxation of municipal bye-laws for preservation and better management of heritage areas<br>▪ Work closely with the Head, projects and Chief Planner in overall planning and implementation of the identified projects | Medium Term | Tenure: Contractual |
| 9. | Senior Economist | ▪ Doctorate/ Post Graduation in Economics<br>▪ More than 15 years of experience in infrastructure projects<br>▪ Experience of working with large PSU/Infrastructure Companies | ▪ Undertake a detailed economic and financial analysis of projects in accordance with relevant guidelines<br>▪ Advise on creation of economic opportunities at the city level | Long Term | Tenure: Full time |
| 10. | Data Scientist | ▪ More than 10 years of experience in data analysis | ▪ Overall data collation and analysis | Long Term | Tenure: Full time |

| Sl. No. | Designation | Qualification | Job Description | Hiring Plan[1] | Remarks |
|---|---|---|---|---|---|
| | | ▪ More than 7 years of experience in design and development of data infrastructure and data management ▪ Experience in Big data would be preferred ▪ Post graduate degree in Statistics/Economics/Econometrics from a reputed institute | ▪ Design of database management structure ▪ Design of data collection templates for different projects and services | | |
| 11. | Senior Manager, Finance | ▪ Should be Chartered Accountant/ M.B.A. Finance/ M.Com/ICFAI or equivalent from a recognized University/Institute with good academic record | ▪ Work Closely with the CFO in managing Financial Operation of the Projects ▪ Preparation project financial status on monthly/quarterly basis | Long Term | Tenure: Full time |
| 12. | Legal Officer | ▪ Post Graduation degree in law or equivalent from reputed academic institutions ▪ More than ten years of experience in formulation and drafting of internal policies | ▪ Formulation and drafting of internal policies – Human Resource, Risk Management, ▪ Review and vetting of all legal documents ▪ Representation of company in legal matters | Long Term | Tenure: Full time |
| 13. | Compliance Officer/Company Secretary | ▪ A demonstrated background within a compliance, audit or legal field (preferably in a related industry such as financial services or an advisory business) ▪ Company Secretary / Chartered Accountant with more than fifteen years of experience ▪ More than ten years of experience as Head, Compliance in large infrastructure/construction companies | ▪ Ensuring regulatory compliance as per the Indian Companies Act 2013 and other acts ▪ Monitoring and maintaining compliance calendars, checklists, registers and associated documents ▪ Liaising with internal and external stakeholders including employees, clients, custodians, lawyers and auditors and dealing with information requests ▪ Providing advice on compliance issues associated to the SPV ▪ Managing all special purpose vehicle matters, including register updates | Long Term | Tenure: Full time |

| Sl. No. | Designation | Qualification | Job Description | Hiring Plan[1] | Remarks |
|---|---|---|---|---|---|
| | | | ■ and maintenance<br>■ General filing, record keeping and other ad-hoc administrative tasks as required | | |
| 14. | Accounts Officer | ■ Should be Chartered Accountant/ M.B.A. Finance/ M.Com/ICFAI or equivalent from a recognized University/Institute with good academic record<br>■ More than five years of experience in managing accounts/finance in large infrastructure/construction companies | ■ Assistance in preparation of financial statements of the SPV<br>■ Regular Maintaining of SPV accounts<br>■ Flagging issues pertaining to finance | Long Term | Tenure: Full time |
| 15. | Procurement Officer | ■ More than 15 years of experience in handling procurements of large infrastructure projects/services preferably in urban sector<br>■ At least ten years of experience in review and drafting of tender documents including contracts/concession agreement<br>■ Experience in assisting Government agencies in transaction advisory services<br>■ Robust understanding of legal framework and procurement laws in Tamil Nadu/Multi-lateral/Bi-lateral agencies<br>■ Post Graduate Degree in Law from recognised Institute with good academic record | ■ Review and drafting of tender documents<br>■ Review of project documents from policy/legal perspective<br>■ Procurement of vendors/financiers/Partners<br>■ Assistance in procurement matters | Medium Term | Tenure: Full time |
| 16. | Internal Auditor | ■ More than 15 years of experience in undertaking financial audit in large infrastructure/construction companies<br>■ Chartered Accountant from ICAI | ■ Undertaking internal audit of the financials | Medium Term | Tenure: Full Time |
| 17. | Chief Administrative Officer | ■ More than 15 years of experience in general administration of PSU/large infrastructure organization | ■ Overall in-charge of administrative functions, responsible to Board/CEO<br>■ Performance | Medium Term | Tenure: Full time |

| Sl. No. | Designation | Qualification | Job Description | Hiring Plan[1] | Remarks |
|---|---|---|---|---|---|
| | | ▪ Post Graduate Degree in Management/M.B.A with good academic record | Management and grievance handling<br>▪ Preparation of the Annual Report of the SPV<br>▪ Assessment of Administrative Support requirements on a regular basis | | |
| 18. | Project Finance Team (2 Nos.) | ▪ Should be Chartered Accountant/ M.B.A. Finance/ M.Com/ICFAI or equivalent from a recognized University/Institute with good academic record<br>▪ Minimum two years of experience in project finance including raising of finance from the market<br>▪ Experience of working in large infrastructure / construction companies | ▪ Assistance in preparation of investment proposals<br>▪ Compliances for the Financing Agreements, other requirements, Other agreements BG, LC, BC etc.<br>▪ Carrying out risk assessments and mitigation strategy | Long Term | Tenure: Full time consultancy support model Tenure: Initially for a period of two years with the provision for extension by one more year. |
| 19. | Project Appraisal Team (3-4 Nos.) | ▪ Post Graduate in Finance/Commerce/Economics/ Management or Chartered Accountant<br>▪ Experience in scrutiny and appraisal of technical documents such as feasibility studies, DPRs, technical designs, financial documents such as cash flow statements, legal documents such as Tender Acts, Tender documents – RFP, Concession Agreement etc. | ▪ Review and scrutiny of project preparatory and tender documents<br>▪ Preparation of Observation Notes for CEO for update and decision making<br>▪ Review of policy, acts, guidelines<br>▪ Provide support to the City Government/SPV<br>▪ Undertake secondary and primary research as required | Long Term | Tenure: Full time consultancy support model Tenure: Initially for a period of two years with the provision for extension by one more year. |