ANNEXURE 1 : SELF ASSESSMENT

	Level of Development of city overall	Level of Development of city overall	(OPTIONAL) Any additional information, inlcuding any quantitative information
Citizen participation	**Scenario 4**	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.	
Identity and culture	**Scenario 4**	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.	
Economy and employment	**Scenario 3**	There are adequate job opportunities for all sections of society. But skill availability among residents can sometimes be a challenge.	
Education	**Scenario 4**	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.	
Health	**Scenario 3**	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.	
Mixed use	**Scenario 3**	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.	
Compact	**Scenario 2**	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.	
Public open spaces	**Scenario 1**	The city has very few usable public open spaces and very few usable green spaces. Available recreational spaces 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.	
Housing and inclusiveness	**Scenario 2**	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.	
Transport	**Scenario 3**	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.	
Walkable	**Scenario 1**	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, and marked pedestrian crossings are rare. 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 are enclosed by gates. Traffic signals are often disobeyed	
IT connectivity	**Scenario 2**	The city has made plans to provide high speed internet connectivity through the existing framework.	
ICT-enabled government services	**Scenario 2**	Some of the public services are provided online and 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.	
Energy supply	**Scenario 2**	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.	
Energy source	**Scenario 3**	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.	
Water supply	**Scenario 2**	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%.	
Water management	**Scenario 1**	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.	
Waste water management	**Scenario 1**	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.	
Air quality	**Scenario 3**	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.	
Energy efficiency	**Scenario 2**	The city promotes energy efficiency and some new buildings install energy effeciency systems that track and monitor energy use and savings.	
Underground electric wiring	**Scenario 2**	More than 40% of the city has underground electric wiring system.	
Sanitation	**Scenario 4**	Sanitation facilities are available to 100% of the city's population.	
Waste management	**Scenario 2**	Waste generated is usually collected but not segregated. Recycling is attempted by difficult to implement.	
Safety and security	**Scenario 2**	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	

ANNEXURE 2 SELF ASSESSMENT SHEET

A	B	C	D	E	F	G	H	I	J	K
S. No.	**Feature**	**Definition**	**Scenario 1**	**Scenario 2**	**Scenario 3**	**Scenario 4**	**Self-assessment of the city (for Pan-City Solution) with regard to each feature**	**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**	**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.	**SCENARIO 4**	Ward sabhas conducted at every 3 months to take opinions & suggestions on various development projects. Five Yearly City Investment Plan prepared based on Ward level consultations Source: TMC, 2017	1. 100% people's participation in decision making process for various development projects	*Adopting various modes online and mass media modes for citizen engagement to bring increased transparency & 2 way communication *Awareness activities for increasing people's participation
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.	**SCENARIO 4**	***Administrative Capital -** Served as the Adminsitrative centre during past eras & presently the state capital ***Built Heritage** - Anantha Padmanabha Swami temple along with several prominent heritage structures viz. city museum, Kuthiramalika Palace, Kanaka Kunnu Palace, East Fort Area etc. form the focal attraction for tourists within city ***Eco tourism** - Well known for Kovallam Beach receiving high influx of foreign tourists. * **City based Events** - Major events inlcude the International Film Festival of Kerala & Soorya Festival (75 day event). Other include Swati Sangeethotsavam and Nishagandhi festival, Kovalam Literary festival etc. ***Fairs & festivals** - Onum, Attukal Pongala, Navratri festival, etc. * **Other land marks** - Southern Air Command headquarters of Indian Air Force, Thumba Equatorial Rocket Launching Station, Regional Medical hub Source: Kerala Tourism Dept & TMC, 2017	1. Strengthening of the weak Heritage & Cultural links	**1. Tourist Information system** - Dashboards, mobile apps, websites etc providing easy access to various tourist locations, history, festivals, fairs, local specialities, accessibility, accomodation facilties etc. **2. Mapping the Heirtage structures/ sites within the fort city** to plan a comprehensive conservation plan of the fort area **3. Heritage area building byelaws** for new buildings proposed within the heritage zone.
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.	**SCENARIO 3**	▪ Largely service sector, as the city is the administrative capital. ▪ **Industries** - Major industries include manufacturing sector, IT sector & handloom sector. KINFRA Film & Video Park, KINFRA Small Industries Park, HLL, Industrial estate & Industrial development Centre ▪ IT sector is emerging in the Northen part of the city - Technopark (Phase 2 proposed) while boost to Port based activities is anticipated due to proposed Vizhimjam International Port in Sountern part of the city ▪ Tourism is one of the major contributor to the city's economy - Internationally renowned tourist destinations, cultural events, religious circuits and local craft & art forms. Source: DIC, 2017 & Master Plan, 2015	1. Promoting & facilitating growth of IT sector which will attract global investment and employment for skilled graduates in the city. 2. Develop & capture religious, heritage and beach tourism potential of the city which will create multiplier effect for employment opportunities for the city's residents 3. Promoting & facilitating the indigenous handloom industries under Make in India initiative targeting women employment 4. Skill development training for economically weaker sections under NULM.	1. Skill development training programmes/ courses for youth of BPL/ EWS category to boost their employment rate targeting the job opportunities in the existing industries and emerging tourism/ IT/BT sectors. 2. Training & skill development in Handloom industries for women
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.	**SCENARIO 4**	▪ The city is known for its primary and higher educaional institutions, run by government as well private entities. ▪ Of the 142 schools, there are 53 HS, 34 UP and 55 LP Schools. 66% of these are government schools and 34% are aided. ▪ As an initiative to encourage collaborative learning, IT@School Project was introduced in 2011 as a customized version of the Wikipedia which is called as 'School Wiki' for all the schools in the state. In addition to this, to ensure that quality ICT equipments with necessary software and applications are supplied to schools in a systematic and meticulous manner, technical guidelines have been set and modes of funding established. ▪ A single-window system has been set up for higher secondary admissions ▪ Textbook supply monitoring system has been set up Source: General Education Department, GoK	1. Increase literacy rate from 95.10 % (2011) to 100% in the coming years 2. Besides improving the higher education facilities, the city shall focus on improving the primary education facilities in the town. 3. It is anticipated there will be more schools in the near future. Government college campuses are expected to become smart too, and be used for skill development.	1. Create a more integrated knowledge sharing and research platforms with the multiple specialised institutions in the city. 2. Link up professional instituions with jobs within the city in order to retain talent
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.	**SCENARIO 3**	▪ The modern medicine hospitals in the city have 1 bed for 668 people of city. ▪ Being the district headquarters, Trivandrum is the centre for medical facilities in the surrounding rural areas. ▪ Trivandrum is a ayurvedic healing destination known across. People from all over the world visit Trivandrum for its ayurvedic retreats. ▪ The city has seen mosquito borne communicable disease outbreak in recent times. The prevalence of diabetes in the city is 17%, as compared to the national average of 8% Source: Health Department & City disaster management Plan, 2016	1. The government health facilities shall improve the basic infrastructure and cater to more number of patients. 2. Pro-active public health information and preventive measures will keep a check on the epidemic outbreaks. 3. Ayurvedic health facilities will be affordable to all sections of community.	1. Control the epidemic outbreak by improving the hygenic conditions of the city. 2. Developing public parks with public gyms to inculcate active lifestyles among people. 3. Improving the emergency response system network for the city.

S. No.	Feature	Definition	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Self-assessment of the city (for Pan-City Solution) with regard to each feature	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	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.	**SCENARIO 3**	▪ City has well developed mixed use as per bye-laws. The commercial zones are concentrated in the city centre. Neighbourhood levele amenities available within 5 mins walking distance. ▪ Land use rules allow mixed use and do not exhibit inclination towards segregating housing, retail and office uses. ▪ Connectivity and mobility are compact. Source: Proposed Master Plan, 2015	1. Develop well developed mixed landuse pattern with 10-15 min distance from the nearest transit facility. 2. Regulations on new housing projects to undertake mixed use integrated with public amenities and commercial facilities. 3. Master Plan for the city to be proposed taking into account proper land allocation facilitating hierarchy of mixed landuse pattern - neighbourhood level, sector level and city level.	Amendment in Building Bye-laws to encourage and incentivize mixed use developments (higher FAR and TDR) like TOD and ZDP thus facilitating higher commercial activities and improved revenue collection.
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.	**SCENARIO 2**	▪ Average density of the city of the city is 3669/sqkm (36 pph). ▪ The sparsely populated areas have a density of around 1500/sqkm (15 pph) and the densely poplated city cemtres have 9000/sqkm (90 pph). ▪ Though the CBD and old areas are compact, they lack proper walkable streets, well planned public spaces and prone to traffic congestion. Source: Census 2011 & Proposed Master Plan, 2015	1. Integration of the Master Plan, Public Transport system and Non motorised transport options connecting the residences to the work place and amenities.	1. Land use bye-laws to encourage vertical developments with higher FAR and TDR. Also the horizontal expansion of the city needs to be restrict/ limited to control the haphazard unplanned expansion of the city area.
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 spaces 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.	**SCENARIO 1**	▪ Only 1% of the land is allocated for parks and open spaces in the city currently. This comes to only 0.60 sq. m/ person. ▪ This is absymally low as per the URDPFI guidelines, which recommends 10% of the city area under open spaces. Source: TMC, 2017	1. More number of neighborhood parks which will promote an active lifestyle of the people. 2. Gradual improvement towards attaining the URDPFI norm of 12 sqm/ person urban open space. 3. Additionally provision of a continuous footpath network to increase walkability.	1. The new developments shall have a dedicated percentage of land allocated for the parks and playgrounds. 2. Integrated parks connected by shaded, green pedestrain pathways. Also the parks shall be improved with open gyms, jogging tracks and other activity space
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	**SCENARIO 2**	▪ Sufficient housing is available for Middle and higher income groups. ▪ Total slums - 179 with 19,362 households. . 7.93% of the city population resides in slums. ▪ Most of these slums are locted along Coastal areas, roads or major drains/ nallahs & are devoid of land tenureship. ▪ 20,048 EWS housing units constructed by Kudumbashree and 1,707 new units under implementation under VAMBAY scheme. ▪ Central & State funds allocated for EWS housing for the beneficieries under PMAY & LIFE Source: TMC, 2017	1. Tenure issues of the slum dwellers to be resolved. 2. Affordable housing for the EWS & migrant workers 3. Basic infrastructure improvement in all the slums	1. A total investment of Rs.225cr is envisaged improvements in housing and basic infrastructure for all slums in city 2.The improvements are in the sectors of water supply, storm water drains, internal roads, street lights, IHHTs, community toilets etc.
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 unafforadable 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.	**SCENARIO 3**	▪ KSRTC is the nodal agency for bus transport within the city. It serves the city as well as region. KURTC was formed under JnNURM scheme which operates low floor buses. Apart from this private operator ply private buses within the city. ▪Total KSRTC & KURTC bus fleet - 700 nos. & private buses - 110 nos. ▪ Share of PT use is 43% while city roads covered under PT is 77%. About 45% of the population is dependent on private transportaton. ▪ Average trip length is 7.55 kms; average travel time less than 15 minutes & average travel speed is 25 kmph ▪ Last mile connectivity is through private auto rickshaws and pedetrian mode. **Proposed Projects** ▪ LRT proposed & got state approval (40 km) connecting North to South mobility corridor across city ▪ Outer Ring Road(55 km) under Capital Region Development Programme Phase -II interconnecting NH-66, SHs & M.C. road passing through city. ▪ Pilot PPP project implemented by TRDCL for city centre roads(42 kms); Maintained on BOT annuity model since 2006. Source: KRFB, KRTL & TMC, 2017	1. Increased dependence on PT system (60%) & NMT (50%) 2. Last mile connectivity from transit nodes through NMT infrastructure (within 0.5 km) 3. 100% coverage of PT system (bus stops & routes) 4. Integrated PT Information system	1. Real time information system of the PT system for increased usage 2 Integrated NMT system with . Public bike sharing system & bicycle tracks connecting LRT stations, bus stations, railway station to residential pockets 3. Awareness programmes in schools, colleges, institutions & government offices to encourage increased use of NMT infrastructure.

S. No.	Feature	Definition	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Self-assessment of the city (for Pan-City Solution) with regard to each feature	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	Input/Initiative that would move the city from its current status to Advanced status (Scenario 4: Column G)
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, and marked pedestrian crossings are rare. 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 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.	**SCENARIO 1**	▪ **NMT -** Modal share of NMT in the city is only 7%. Only 10% of the total city roads have footpaths 1.2m wide (one sided or two sided). ▪ No dedicated bicycle tracks ▪ Kerala Road Fund Board has implemented improvement of major city centre roads (42 km) for better walkability, improved traffic safety, improved road alignment, street lights, signage, tree plantation & bus bays on BOT model. ▪ **Street lights -** Coverage -100%; 74% tube lights & 13% are SV/ MV lamps. ▪ Manually monitored which has resulted in creation of unsafe black spots along the roads. ▪ Dedicated on-street parking areas & off-street parking with proper enforcement along major CBD roads. ▪ Commercial streets lack walkability, signage, street lighting and parking facilities. Source: CMP, 2015 & TMC	1. To encourage safe and secure walkability & cycling tracks within the city to all the public and semipublic zones. 2. Tree Plantations along all the pedestrain pathways and zones. 3. 100% coverage of automated LED street lights	1. CMP 2015 proposal includes: 42.3 km of bicycle lanes, 2.20 km of no vehicle zone and 89.8 km of new footpaths. 2. AMRUT proposal includes no vehicular zone with bicycle connectivity along 5 nos. of roads , 4 nos. of footover bridge and 2 MLCPs. 3. Provide smart Solar based LED street lighting system across the city.
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.	**SCENARIO 2**	▪ TVM has provided Wi -Fi spots in 12 locations within the city through BSNL providing 5G wi fi service. ▪ Access to free internet for 15 minutes/ device/ month within 100m radius of the 12 spots. Additional usage can be availed through prepaid vouchers Source: TMC, 2017	1. Access to High speed latest internet for all to improve the city's overall quality of life and ease of access to various online facilities.	1. Seamless Public WiFi all over the city which will mainly include all public buildings, educational institutes, government schools, hospitals, bus stands, bus stops, parks &MLCPs 2. In the longer run, access ponts can be installed on street lights to provide wifi through the city.
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 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.	**SCENARIO 2**	**Online systems available for citizens -** 1. Property tax , 2. Water tax, 3. Electricity bills, 4. Issue of birth. death & marriage certificates 5. Online application & disbursement of social security pension (Sevana pension) ▪ Lack of interdepartmental communication & online information system for basic services. ▪ TVM yet to introduce building plan approval system, project reports, GIS based City Master Plan, paperless office etc. **Public Grievence Addressal -** 1. Toll Free Customer care numbers (KWA) 2. Online grievience system - (KWA, KPWD, KSEB) 3. Whatsapp & Facebook page - (TVM, KWA) ▪ TVM yet to evolve efficient online public grievience system for improved service delivery Source:Information Kerala Mission (GoK), KWA, KSEB, KPWD & TMC, 2017	1. Integration of common database across all the line departments to achieve seamless and layered information which can be utilised holistically for planning, office administration and efficient service delivery system. 2. Adopting e-Governance system across all the government offices to maintain updated database on timely basis and to achieve consistentency , transparency and quick responsive system	1. Integrated citizen services portal and call center with mobile apps to service G2G, G2C & G2B. 2. Integrated E-Governance system for all the departments involved in service delivery - TVM, KWA, KSEB, KPWD, KSRTC etc.
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.	**SCENARIO 2**	KSEB is the nodal agency for power generation & supply ▪ Peak Demand - 3.71 MW ; Present Supply - 3.95 MW ▪ Implemented SCADA/DMS project for automation of distribution system up tp 33 KV. SCADA control centre under implementation ▪ 50% reduction in scheduled and unscheduled outages ▪ 98.5% collection efficiency ▪ 24x7 customer care services for city residents ▪ No smart meters yet installed in the city Source: KSEB, 2017 & MNRE	1. 24x7 power supply, with minimum supply-level losses. 2. 100% of households, commercial, institutions and public building electric meters will be replaced by smart electric meters	1. Augment the source of power supply by using renewable energy . 2. Passive lighting and cooling techniques shall be encouraged in the city to reduce the power consumption.
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.	**SCENARIO 3**	**Statewide Initiatives:** ▪ Policy Initiatives - Kerala Solar Energy Policy, 2013, GO on Land allocation for renewable energy projects, 2015, Kerala Renewable Energy Policy 2002 ▪ ANERT is a state nodal agency for MNRE(GoI) to carry out Centrally Assisted Programmes. ▪ Kerala State Electricity Board (KSEB) has set up a dedicated unit for renewable energy to explore and optimally develop renewable energy resources in state **City Based Initiatives:** ▪ KSEB has installed 12 nos. of solar units with 235 KW capacity within the city. Additional 4 units are under implementation of 90 KW capacity. ▪ Solar Master Plan has been prepared & approved by MNRE with total investment of Rs. 50 crores. Source: KSEB, 2017 & MNRE	1. To generate and substitute above 10% of the city's power requirement through Solar based energy.	1. Installation of Solar rooftops on all public, institutional and large scale commercial buildings. 2. Implement the approved Solar Master Plan for the city under MNRE scheme.
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 suffecient quantity and affordable across all sections of the society. Unaccounted loss less than 15%.	**SCENARIO 2**	▪ Surface water source -River Karamana; Total Supply - 174 MLD; 24X7 water supply system in the city ▪ 100% treated water supplied @ 100 lpcd; Quality of water supplied - 92% ▪ Increase in water supply network - 76% to 83%; Increase in HSCs from 1,67,093 to1,91,845 nos. (100% metered) Source: KWA & TMC, 2017	1. 100% coverage of 24x7 treated water supply @135 lpcd in the city 2. 100% network coverage 3. Reduction in NRW 4. Highest standards of water quality to be maintained.	1. Augmentation of water treatment facilities 2. Replacement of old pipelines and aged water meters 3. Rehabilitation of existing treatment plants 4. Augmentation of 24 X 7 WS system in newly added areas 5. ICT enabled NRW tracking & monitoring and smart metering for all connections.

S. No.	Feature	Definition	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Self-assessment of the city (for Pan-City Solution) with regard to each feature	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	Input/Initiative that would move the city from its current status to Advanced status (Scenario 4: Column G)
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.	**SCENARIO 1**	▪ 83% coverage of piped WS from River Karamana and availaibility of potable water due to high groundwater table ▪ No focussed initiative or regulatory policy for rain water harvesting initiated. ▪ Coverage of roadside drains is 60%; incidence of water logging - 21 times every year. ▪ Major strom water drains are encroached & subjected to direct discahrge of sullage & solid waste, incidence of sewerage mixing in drain is 30% ▪ State Initiative Anantha Phase 1 for cleaning & restoration of canals in the city centre implemented in 2016. Phase 2 proposed Source: KWA & TMC, 2017	1. 100% rainwater harvesting 2. 100% coverage of roadside drains 3. Cleaning & restoration of all the water canals and removal of encroachments along the water channels.	1. Rain water harvesting units for larger public, institutional & educational buildings 2. Provision of SWD for the uncovered 40% roads within the city 3. Implementation of Anantha Phase- 2 project.
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.	**SCENARIO 1**	▪ 37% coverage of UGD network. Remaining depend on onsite sanitation systems. ▪ 103 MLD of sewage is generated per day out of which only 44 MLD is treated per day (41%) ▪ Treatment efficiency of STP - 58% Source: KWA & TMC, 2017	1. 100% coverage of UGD network 2. Regularise the decentralised sanitation system	1. Lay UGD network for uncovered areas 2. Connecting streets/ neighbourhood to decentralised treatment unit 3. ICT enabled leak detection system
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.	**SCENARIO 3**	▪ Air quality is monitored in various locations in the city. In most cases, the contaminant levels are found well under the permissible levels. ▪ High levels of Nox and RSPM due to vehicular pollution. Source: KSPCB, 2017	1. The city will work towards achieving euro standards of air quality. This shall be achieved by increasing the green cover, reducing the use of private vehicles.	1. Increase in the percentage of open spaces in the city, which will act as a lung space. 2. Efficient Public Transport system & facilitating NMT mode of mobility
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.	**SCENARIO 2**	▪ The city was home to well known architect Laurie Baker who emphasised & practised cost-effective energy-efficient architecture and designs for buildings. ▪ Infosys Trivandrum Building Awarded Highest LEED Rating includes water efficiency, energy efficiency, renewable energy, indoor quality environment, efficient use of material & resources ▪ Installation of solar power units initiated by KSEB in public buildings within city. (12 nos. of solar units with 235 KW capacity) ▪Street lights mostly include tube lights (72%) and sodium vapour lamps (13%). Only 0.7% LED street lights in city. Source: KSEB, 2017	1. 100% coverage of energy efficient & reliable street lighting system for entire city 2. Adopting green & sustainable building concept in all public and institutional buildings	1. ICT based Street lighting system - auto on /off, auto updation on replacement, fitted with Solar based LED lights 2. Capacity Building and Awareness Activities under MNRE scheme 3. Ratings & Rewards for adoption of green building concept for new buildings
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.	**SCENARIO 2**	▪ Underground ducting of 441 km HT lines proposed under R-APDRP scheme. ▪ Under ground ducting for the other electric cables within the city not yet planned. Source: KSEB & TMC, 2017	1. 100% underground ducting of electric wiring to reduce T&D losses , breakages & maintenance cost, power thefts and improve city aesthetics. 2. 100% integrated underground ducting of	1. Underground ducting of all electrical wiring especially in the congested dense commercial areas and transport nodes.
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.	**SCENARIO 4**	▪ Thiruvananthapuram has been declared an ODF district, 99.5% of the households in city have IHHLs. ▪ She-toilets have been installed in various locations ▪ Total number of toilets - 35 nos.; Public toilets: 28 nos., Community toilets: 5 nos.; Private toilets: 2 nos. Source: TMC, 2017	1. 100% coverage of household toilets 2. Improvement of existing toilets & provision of best suitable public toilets in uncovered areas. .	1. Enhanced awareness and sustained behavioral change 2. Improved Institutional governance and enhanced human resource capacities for city-wide Sanitation 3. Improvise with technological efficiency and appropriateness
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.	**SCENARIO 2**	▪ 350 TPD of waste is generated in the city , of which 65% is organic. ▪ Vilappilsala waste plant was shut down in 2015 & remains so. ▪ The city has adopts a decentralised approach ▪ With little or no segregation, open dumping in water bodies and burning of mixed waste is rampant in the city. Source: Suchitwa Mission & TMC, 2017	1. Plan of 100% processing of waste by setting large scale decentralised units for different streams of waste 2. Extending 100% door to door collection for dry and reject waste streams	1. SWM Data Centre - for motnitoring, emapnelment of vendors, linking to generators, IEC and reporting of the decentralised system adopted 2. Identification of a landfill site for disposal of rejects
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.	**SCENARIO 3**	▪ **General Public** Police stations - 22 nos., CCTV cameras - 223 nos., central police control room interlinked with all police stations for immediate response within 4 - 5 minutes, hotline numbers - airports, banks & fire station, whatsapp number ▪ **Women & Children section** iSafe mobile app based alert system, pink patroling vehicles (3 nos. operating on 3 major routes), pink beat system (group of 10 women police for day to day on ground surveillence in crowded areas & public transport), 24X7 helpline service - Vanita Helpline : 9995399953; Women Helpline: 1091 connected to women cell in control room ▪ **Elderly & Senior citizen section** Grievance Readdressal Forum held monthly & action taken against any issues raised from elderly groups/ individual ▪ **Increasing Crime incidents**-10,153 (2013) to 15,594 (2015) ▪ **Street lighting coverage** - 100% . However, 74% of lights are tube lights followed by 13% SV/ MV lamps & 10% ordinary bulbs. Poor Visibility due to inconsistent lighting Source: Suchitwa Mission & TMC, 2017	1. 100% coverage of city surveillence system (day & night vision) - 2. 100% coverage of energy efficient & reliable street lighting system for entire city	**1. Integrated city surveillence system linked to central control system** which will monitor traffic junctions, city roads, public transport buses, bus stops, bus terminals, tourist spots, markets, public parks etc. **2. ICT based Street lighting system** - auto on /off, auto updation on replacement, fitted with LED and operated on solar energy.

ANNEXURE 3.1 REGIONAL CONTEXT AND CITY PROFILE

STRATEGIC LOCATION AND CONNECTIVITY

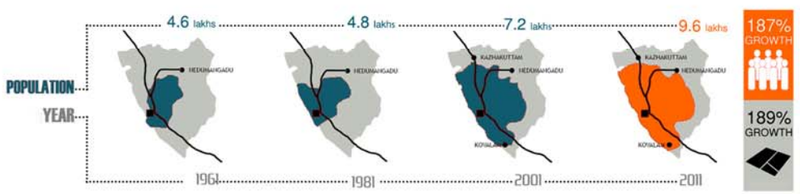
8th busiest airport in India. The International Airport is considered an all-weather airport and is busiest in terms of international traffic.

Central Railway Station is the largest railway station in Kerala in terms of passenger movement and an important rail hub in Southern Railway. There are direct rail connections to all major cities in India.

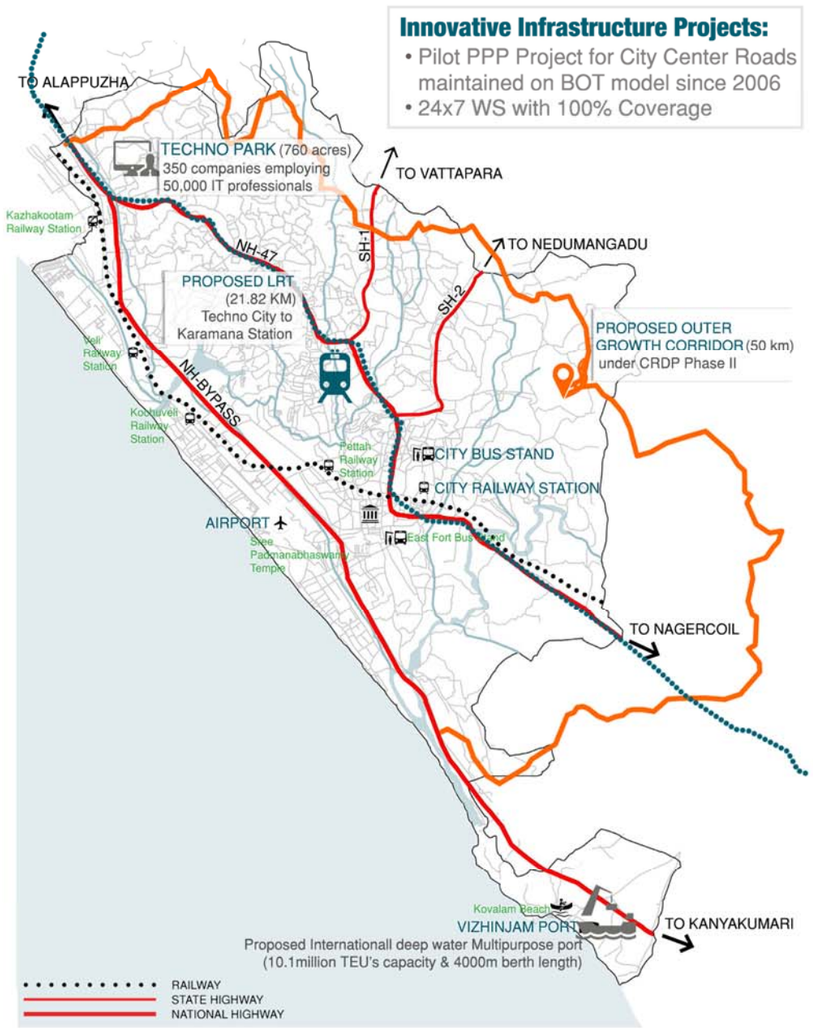
KSRTC is one of the oldest state run public bus transport services in India. Daily scheduled distance is over 14,22,546 km

- Administrative capital, located along the west coast (southernmost part of India)
- Acts as a gateway to the Middle East and South Asian countries
- Southern Air Command headquarters of the Indian Air Force

CITY EVOLUTION AND IDENTITY

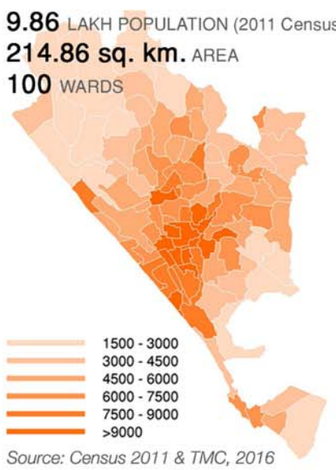


- Derived from 'Thiru-Anantha-Puram' meaning 'The town of Lord Anantha'
- Marthanda Varma founded the princely state of Thiruvithamkoor with Thiruvananthapuram as the capital in 1745
- Acted as trading post for spices, sandalwood and ivory during pre-colonial and colonial period
- Municipality set up in 1920 and upgraded to Corporation in 1940
- International tourist destination - Shri Anantha Padmanabhaswamy Temple and Kovalam Beach
- Hosts the Annual International Film Festival
- Thumba Equatorial Rocket Launching Station is located here



AREA AND DEMOGRAPHY

9.86 LAKH POPULATION (2011 Census)
214.86 sq. km. AREA
100 WARDS



Source: Census 2011 & TMC, 2016

4,470 persons/sq.km. AVERAGE DENSITY

1,088 to 1,000 SEX RATIO

75,623 persons SLUM POPULATION

1,96,202 HHs, **4** persons/HH HOUSEHOLDS AND AVERAGE SIZE

86% AVERAGE LITERACY RATE

36% WORK PARTICIPATION RATE

13.29% (1981-91), **3.25%** (2001-11) GROWTH RATE

LAND USE PATTERN

74.66 sq.km. (1966) to **214.6 sq.km.** (2012) GROWTH OF THE CITY

Land use	Area (sq. km)	%	As per URDPFI guidelines
Residential	120.34	56	40-45%
Commercial	2.53	1	3-4%
Public/ Semi Public	27.86	13	10-12%
Transportation	6.46	3	12-14%
Industrial	1.82	1	8-10%
Parks & Open Space	0.54	0	18-20%
Agriculture/ Paddy cultivation	48.27	23	-
Water Bodies	5.18	2	-
TOTAL	214.60	100%	

Source: Draft Masterplan Report 2015

BASIC SERVICES

WATER SUPPLY

Source: River Karamana
Total supply/day: 174 MLD
Distribution Network: 1500 km (83%)
Tap connections: 1,91,845 (98%)

PROPOSALS UNDER AMRUT @ 373.0 CR.
Augmentation of treatment facilities.
Replacement of old pipelines & aged water meters
Rehabilitation of existing WTPs
Augmentation of 24X7 WS (new areas)
Smart meters for bulk consumers & revenue collection centres

Source: TMC (2017)

STORM WATER DRAINS

Total coverage wrt roads: 119.78 km (60%)
Flood prone areas:
Thampanoor, East Fort, Chalai, Karamana, Manacaud, Thiruvallam, Ulloor, Vanchiyoor, Kumarapuram Attakulangara & Kannammoola

PROPOSALS UNDER AMRUT @ 292 CR.
Includes cleaning & desilting of the existing drains
Rejuvenation of existing drains
Extension of the SWD network for uncovered areas

OPERATION ANANTHA
Canal cleaning & restoration
PHASE 1(completed in 2015): 15.11 km
Project cost: 20.45 cr
PHASE 2(proposed): Project cost:6.4 cr

Source: TMC (2017)

SOLID WASTE MANAGEMENT

Current waste generation/day: 350 TPD
Waste Composition: 60% Organic | 35% recyclable | 5% reject/inert
Proposed processing (on-going): 41.6% Waste handeled at source | 35% Recycled

TMC INITIATIVES
194 Comunity Aerobins distributed
50 Biogas plants and 19 OWCS installed

SUCHITWA MISSION INITIATIVES
Green Protocol toward Zero-Waste Event demonstrated at National games 2015

Source: TMC (2017), Suchitwa Mission (2015)

TRAFFIC AND TRANSPORT

Total Road length: 1810 km
Surfaced: 1227 km (68%)
Unsurfaced: 583 km (32%)
Total Footpath length: 112 km

PUBLIC TRANSPORT:
Public Transport Coverage: 77%
KSRTC Buses: 114 (Intra-City), 586 (Inter-City)
Private Buses: 110

Source: CMP (2015), KSRTC (2017)

SEWERAGE AND SANITATION

Generation/day: 103 MLD
UGD coverage: 42 wards of 100
Treatment capacity: 107 MLD (58% used)
Toilets: 28 Public, 5 Community, 2 Private and 20+ She-Toilets

PROPOSALS UNDER AMRUT @ 1386 CR.
Extension of sewerage network
Rehabilitation of old network & 5 MLD STP
Pumping mains & stations
Septage management

Source: TMC (2017)

POWER SUPPLY

Peak demand: 3.72 MW
Present supply: 3.95 MW
Reduction in Outages: 50%
Collection effeciency: 98.5%

KSEB INITIATIVES
Installed 12 nos Solar units (235 KW capacity) within the city
Additional 4 nos Solar units (90KW) under implementation

Source: KSEB (2017)

SAFETY AND SECURITY

Police Stations: 22 nos.
CCTV cameras: 223 nos.
Response time: 4-5 mins

WOMEN & CHILDREN SECURITY:
I-SAFE app based alert system
Pink patroling and pink beat vehicles
24/7 VANITA helpline
SENIOR CITIZENS:
Monthly Grevience readdresal forums
STREET LIGHTS:
Coverage:100 %
Type: 74% Tubelights; 13% SV/MV lamps

Source: Traffic Police and City Police (2017)

HEALTH

City level Hospitals: 8 Nos.
Key Hospitals: Regional Cancer Center, Women and Children Hospital, Mental Health Center

PREVALENCE OF DIABETES
20% in the Kerala and 17% in Thiruvananathapuram; Very high in comparison to national avg. of 8%

(Source: http://www.indushealthplus.com/kerala-health-statistics.html)

TOP RANKED CITY

#1 in Quality of Life
#2 in Urban Governance

Source: Annual Survey of India's City Systems (Janagraha 2016)

ANNEXURE 3.2 TOURISM

POPULAR TOURIST SPOTS (KERALA)

RELIGIOUS CIRCUIT

Sree Ananthapadmanabha Temple and Sabarimalai

ECO - TOURISM CIRCUIT

7 popular hill stations in the state, Ponmudi being the closest to Thiruvananthapuram

BEACHES CIRCUIT

6 popular beaches along coastal line. Kovalam most popular destination in India.

TOURIST FOOTFALL

RANK IN STATE

#2 In International (31.2%)

#3 In Domestic (14.59%)

Source: Department of Tourism, GoK (2013-14)

EVENTS AND FESTIVALS IN THE CITY

JANUARY
NISHA GANDHI AGRI - FEST
FLOWER SHOW
SWATHI SANGEETHOTSAVAM

FEBRUARY
ATTUKKAL PONGAL UTSAVAM

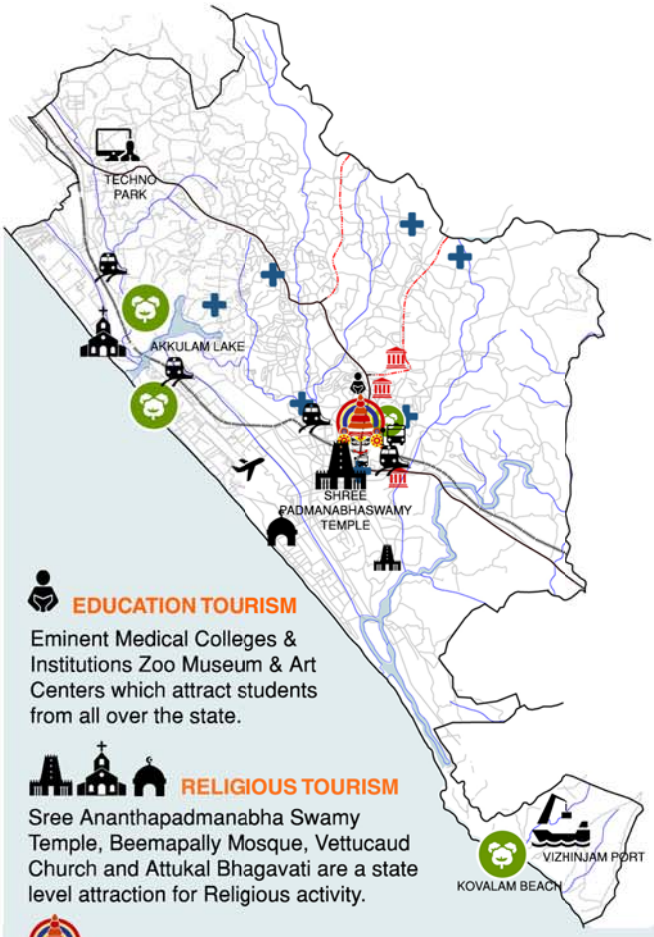
MARCH
ARATTU
UTSAVAM
ATTUKAL PONGAL
CHANDANKUDAM MA-HOTASAVAM

AUGUST
ONAM

OCTOBER
ARATTU

DECEMBER
ARATTU
UTSAVAM SREEKA-NDESHWARAM
IFFK

POINTS OF INTEREST IN THE CITY



EDUCATION TOURISM

Eminent Medical Colleges & Institutions Zoo Museum & Art Centers which attract students from all over the state.

RELIGIOUS TOURISM

Sree Ananthapadmanabha Swamy Temple, Beemapally Mosque, Vettucaud Church and Attukal Bhagavati are a state level attraction for Religious activity.

ART & CULTURE TOURISM

Three major Dance and Music festivals - Nisha Gandhi, Swathi Tirunal and Utsavam. City is a host to many Art and Dance form institutions.Street plays and perfomances at Manaveeya Veedhi

ECO - TOURISM

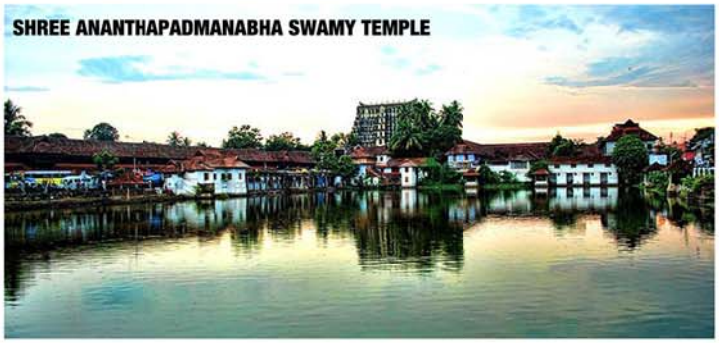
Natural Tourism spots along the coastal line. Three beaches and two natural lakes. Vizhinkam Port is also a major attraction

HERITAGE TOURISM

ASI has declared two monuments at national level. Department of Archaeology has recognised 300 heritage monuments in the city

MEDICAL TOURISM

Over 100 recognised Ayurvedic treatment centers. Three recognised state level Govt. Hospitals catering to 7 million population of the state.



CITIZEN ENGAGEMENT STRATEGY

CITIZENS & STAKEHOLDERS

ROUND 2: Conceptualisation

AWARENESS AND SETTING THE VISION & GOALS

- Setting up of the Technical Expert Committee & Smart City cell by TMC.
- Campaigns & Events to create awareness.
- Crowdsourcing through contests for suggestions and generate a theme for the city.

DEPARTMENT / EXPERTS CORPORATION OFFICIALS / CITIZENS REPRESENTATIVE

ROUND 2: Project Development

FINALISATION OF AREA & KEY INTERVENTIONS

- Ideas, Suggestions and Feedback from Ward Sabha varied Citizen groups and experts
- Survey to priotrize the city's key concerns
- Stakeholder consultations, Technical committee meeting inputs & FGD's to select ,priotrize city's key concerns.

STATE LEVEL OFFICIALS / CORPORATION / TECHNICAL EXPERTS / STATE COMMITTEE

ROUND 3: Proposal Strengthening

CONSULTATIONS FOR FURTHER IMPROVEMENT

- Post results of SCP - Round 2
- City wide concept and draft stages of proposal discussion for improvements.
- Strengthening of the final SCP

NEWS AND PRINT MEDIA:


പ്ലാസ്റ്റിക് ഉൾപ്പെടെ അഴുകാത്ത മാലിന്യം ശേഖരിക്കാൻ നഗരത്തിൽ പലയിടത്ത് കേന്ദ്രങ്ങൾ തുടങ്ങണമെന്ന് വിദഗ്ധർ

1000 കോടി വച്ച് നമ്മുടെ നഗരം ഇതാ ഇങ്ങനെ മാറണം!

consultant for Smart

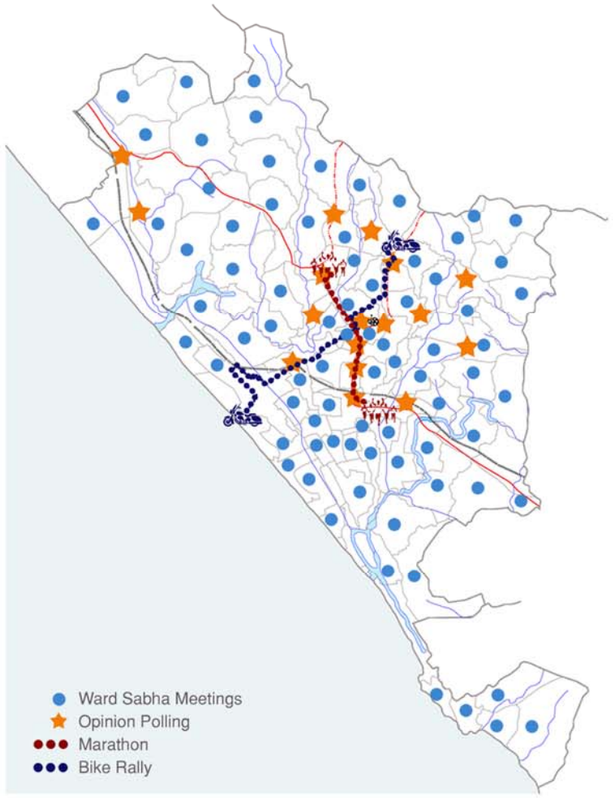
BIDS AND EVALUATION

Smart City bid

Thiruvananthapuram: The consultant to assist Thiruvananthapuram in the Smart City challenge has been finalised on Tuesday. Infrastructure Development Corporation (Karnataka) Limited (IDECK) which quoted ₹24,67,670 bagged the contract. CRISIL Risk and Infrastructure Solutions Limited and ICRA Management Consulting Services had also made it to the final round, as they

MODES OF ENGAGEMENT

ACTIVITIES AND EVENTS:



STAKEHOLDER & WARD SABHA MEETINGS:

TOTAL OUTREACH

WARD SABHAS: 3,095 RESPONSES

Ward Sabha Meetings conducted by councillors in all 100 wards in the city

PRINT MEDIA: 2,58,141 EXPOSURES

Articles and updates published weekly in 11 Malayalam and English newspapers, circulated city wide.
Over 2000 flyers and brochures handed out.

ONLINE MEDIA: 10,535 RESPONSES

Responses recieved through multiple social media portals and messaging services.

- 2,000 Likes
- 28 Broadcasts
- 391 Suggestions (e-mail & website)

EVENTS: 5,588 PARTICIPANTS

Several events and activities were held to engage citizens to become active participants of the Smart City process.

- 60 participants PAINTING COMPETITION
- 58 entries ESSAY WRITING
- 3,015 performers FLASH MOB
- 250 runners MARATHON
- 100 riders BIKE RALLY
- 95 locations SUGGESTION BOXES

STAKEHOLDER MEETINGS: 583 PPL

Over 35 stakeholder meetings held with citizen groups, NGOs, experts, officials, vulnerable groups, industry associations, etc.

TOP PRIORITY AREAS

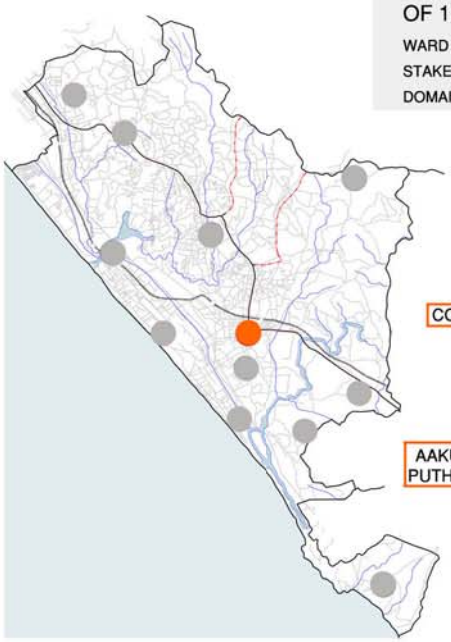
Through Ward Sabha's, 24 sectors were sent out to vote, where citizens ranked them on top priority with respect to issues faced in the city.

ANNEXURE 3.4 CITIZEN ENGAGEMENT

STAGE 01 : IDENTIFICATION OF 12 AREAS
WARD MEETINGS
STAKEHOLDER CONSULTATIONS
DOMAIN / EXPERT MEETINGS

STAGE 02 : SHORTLISTING OF 7
COUNCIL AND TECHNICAL COMMITTEE

STAGE 03 : SELECTION OF TOP 3 AREAS
CITIZEN VOTING VIA POLL

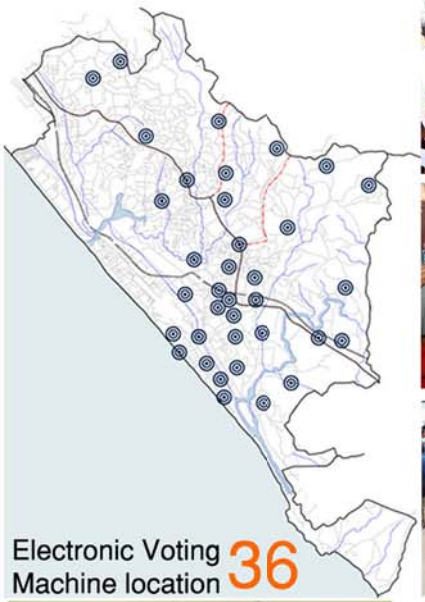


- AAKULAM - VELI LAKE & KOCHUVELI AREA ① → ①
- KAZHAKOOTAM ② → ②
- CITY CENTRE / CBD ③ → ③ → ③ → ③
- ATTUKAL ④
- CORRIDOR ALONG NH BYPASS ⑤
- OUTER AREA GROWTH CORRIDOR ⑥ → ⑥
- VIZHINJAM PORT ⑦ → ⑦
- AAKULAM - VELI LAKE - PARVATY PUTHNAR CANAL - EDYAR ISLAND ⑧ → ⑧ → ⑧
- THIRUVALLAM AREA ⑨
- MEDICAL COLLEGE ⑩ → ⑩ → ⑩
- SHREEKARYAM AREA ⑪
- NEMOM AREA ⑫

STAGE 04 FINAL ABD AREA

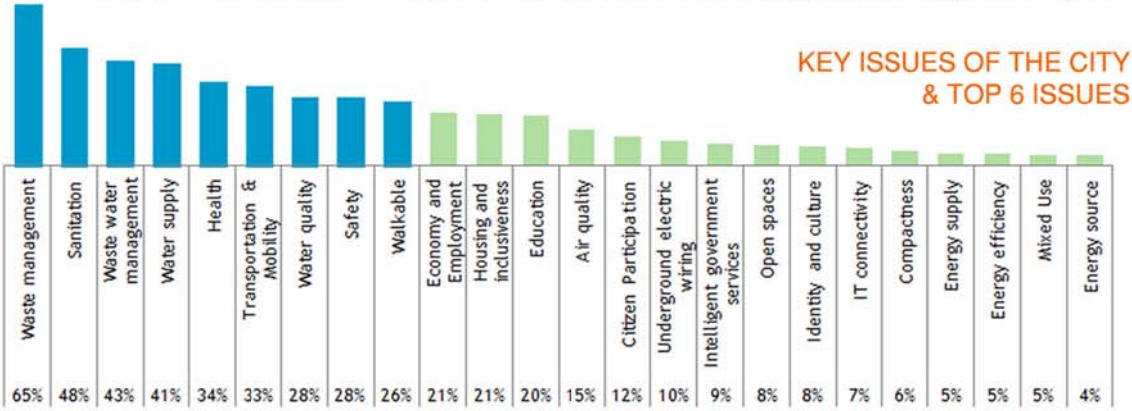
REDEVELOPMENT & RETROFITTING | **RETROFITTING & GREENFIELD** | **GREENFIELD** | **REDEVELOPMENT & GREENFIELD**

STAGE 02 : ELECTRONIC VOTING TO SELECT TOP 3 AREA

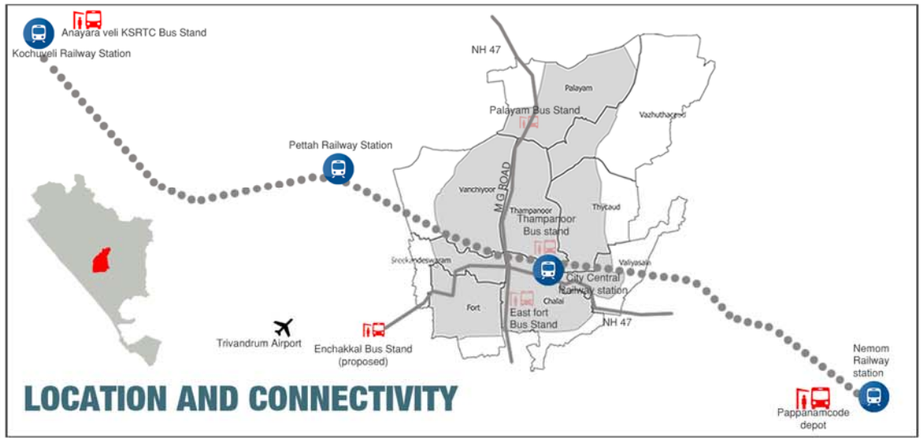


EVM VOTING FOR AREA SELECTION AT THYCAUD, KAZHAKOOTTAM &VIZHINJAM

KEY ISSUES OF THE CITY & TOP 6 ISSUES



ANNEXURE 3.5 AREA PROFILE



LOCATION AND CONNECTIVITY

AREA AT A GLANCE: RETRO-FITTING

AREA: 1403.3 Acres (2.6%)

The area covers parts of 9 central wards in the city. These include Palayam (27), Thycaud (28), Vazuthcaud (29), Vanchiyoor (82), Chalai (71), Fort (80), Sreekandeshwaram (83), Thampanoor (81), Valiyasala (43)

POPULATION: 53,225 Persons (5.6%) RESIDENTIAL POPULATION

The city centre has a large floating population as it is the city business district, the administrative centre and is the arrival point for both domestic and international tourists that visit the city.
The average density is 9,429 persons per sq.km.

KEY INFRASTRUCTURE

HERITAGE BUILDINGS: 49 NOS

Ananthapadmanabha temple, Temple tank, Mitrananda tank, Sreekandeshwaram tank, Sreekandeshwaram temple, Chalai Market, Connemera Market

TRANSPORTATION: 68.45 km ROADS, 4 NODES, 35 BUS STOPS

Thampanoor Bus stand, Thampanoor Railway Station, East Fort Bus Stand, Palayam Bus Stand

INSTITUTIONS: 10 NOS

Government High School, Fort High School, Tiruvananthapuram University. Government women's college

ADMINISTRATIVE BUILDINGS: 10 NOS

Corporation Building, Secretariat, District Court

SLUMS: 3 NOS

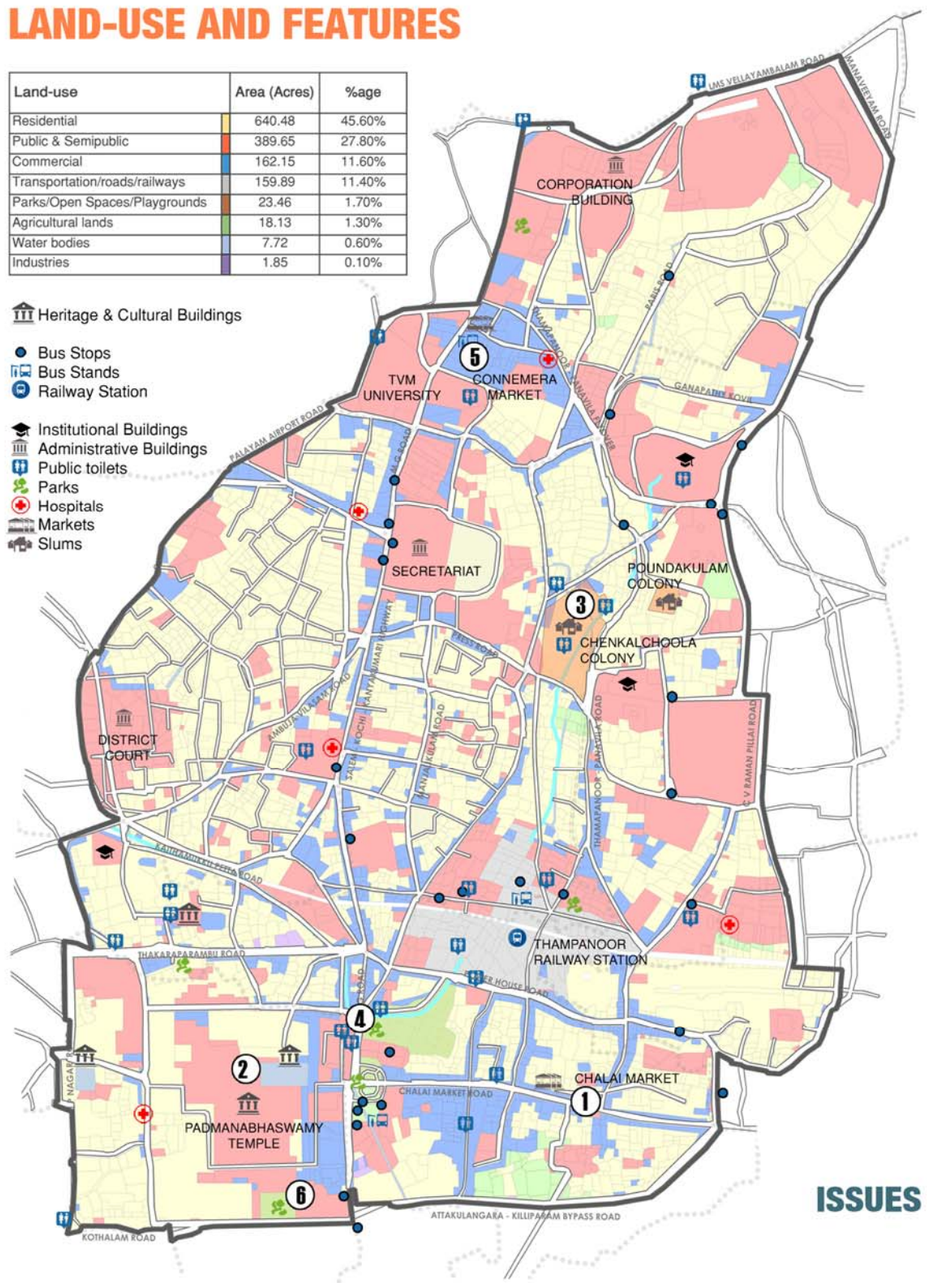
Chenkalchoola Colony/Rajajinagar Slum (971 Households), Poundakulam (142 Households), Chirrakulam (147 Households)

PUBLIC AMMENITIES:

Public Toilets (15 nos.), She-toilets (11 nos.), Parks (7 nos.), temple Tanks (10 nos.), Hospitals (5 nos.), Markets (2 nos.)

LAND-USE AND FEATURES

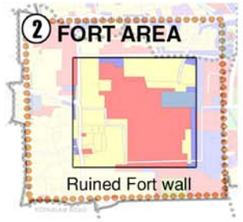
Land-use	Area (Acres)	%age
Residential	640.48	45.60%
Public & Semipublic	389.65	27.80%
Commercial	162.15	11.60%
Transportation/roads/railways	159.89	11.40%
Parks/Open Spaces/Playgrounds	23.46	1.70%
Agricultural lands	18.13	1.30%
Water bodies	7.72	0.60%
Industries	1.85	0.10%



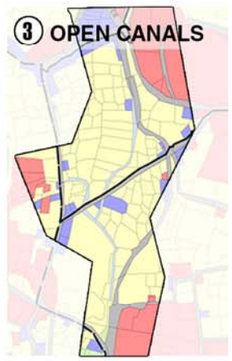
ISSUES

① CHALAI MARKET ROAD

Haphazard parking | Broken footpaths | Dilapadated structures | Prone to Fire Accidents due to short circuiting

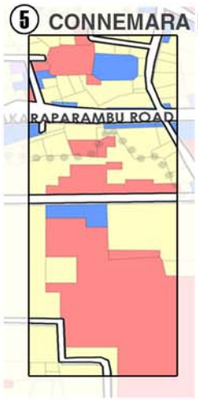


Parts of the fort wall are already broken | Presence of encroachments in certain sections | Open burning of garbage all along the wall | Character and Identity is lost due to the lack of conservation



Encroachments along the canal stretch | Open dumping of waste & sewerage | Lack of maintenance | Prone to flooding

Traffic congestion | Lack of footpaths | Bottle neck due to bad design of roads



Open dumping in premises

Unorganised Market spaces

Open burning of waste | Lack of organised parking spaces

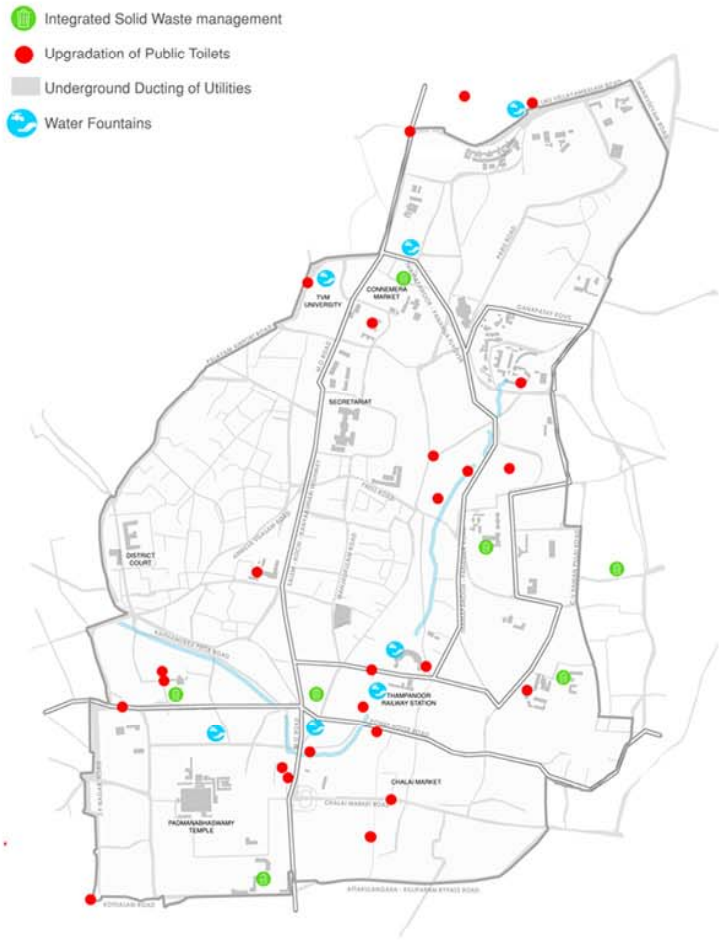
TOP ISSUES

24 Issue areas were put out to vote and these were the top 8 selected by the ABD Area Wards.

01 SOLID WASTE MANAGEMENT	75%	05 TRANSPORTATION AND MOBILITY	30%
02 SEWERAGE AND SANITATION	63%	06 SAFETY AND SECURITY	23%
03 WATER AND WATER QUALITY	37%	07 HOUSING AND INCLUSIVENESS	15%
04 HEALTH	33%	08 ECONOMY AND EMPLOYMENT	10%

ANNEXURE 3.6 URBAN BASIC SERVICES

IMPROVING BASIC SERVICES



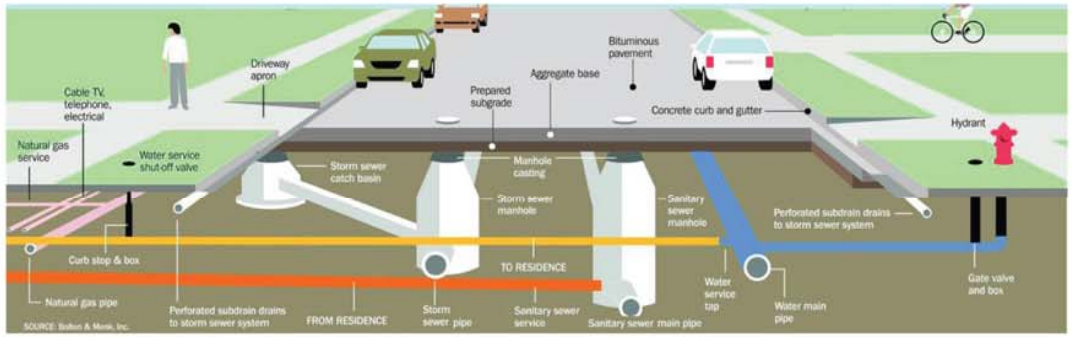
Enabling infrastructure for basic services like water, waste, sanitation, transportation, etc. leeds to the improvement in quality of life.

KEY PROPOSALS

Improving basic services
Streamlining service delivery & governance

PUBLIC UTILITIES

Provision of infrastructure for water supply,under ground drainage and storm water drains, etc.



DRINKING WATER FOUNTAIN

Safe drinking water provided in strategic locations across the city.

STORM WATER DRAINS

Safe drinking water provided in strategic locations across the city.

DECENTRALISED SOLID WASTE MANAGEMENT

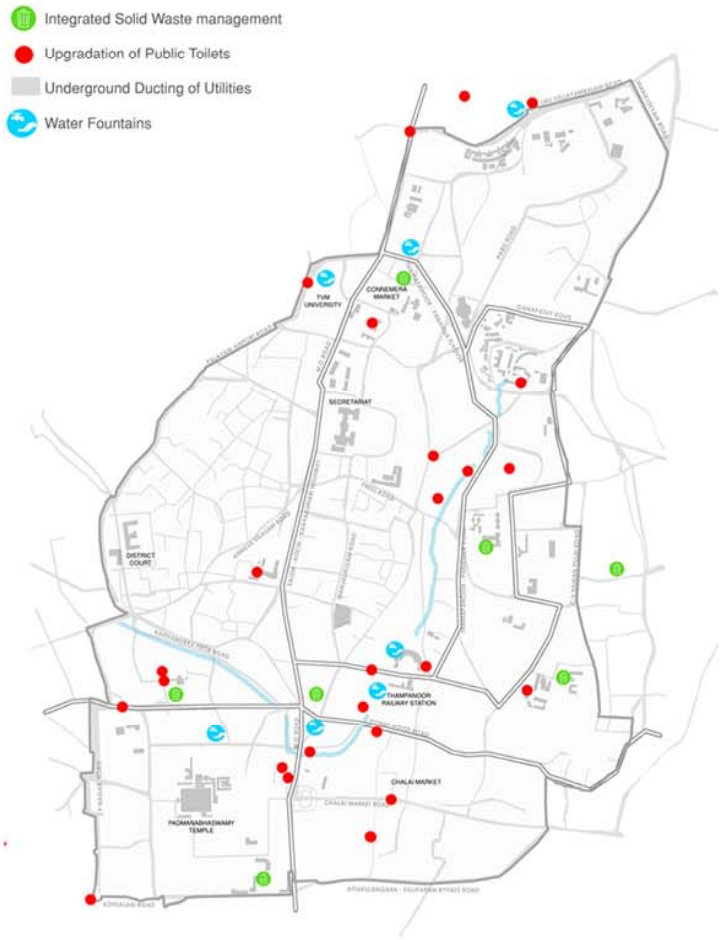
Collection & Transportation Decentralised Processing Facilities, Waste Management System in Commercial & Recreational Areas.

UPGRADATION OF PUBLIC TOILETS

This includes upgrading 15 Public toilets within the area. 11 Women only-toilets already operational in the area.

ANNEXURE 3.6 URBAN BASIC SERVICES

IMPROVING BASIC SERVICES



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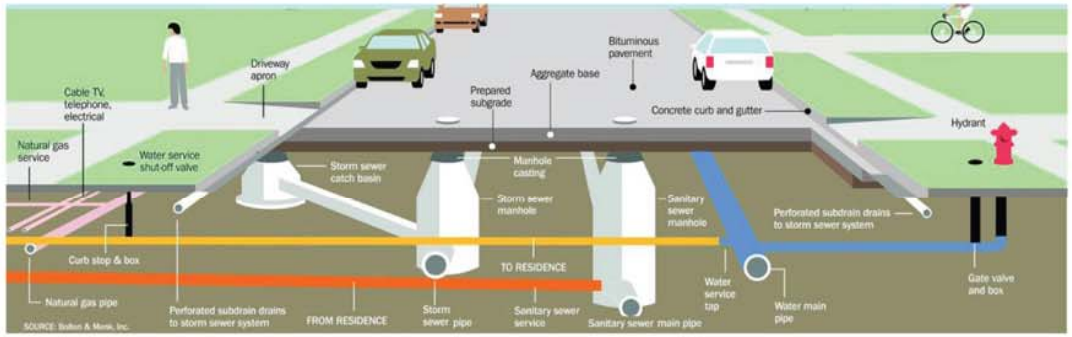

DRINKING WATER FOUNTAIN

Safe drinking water provided in strategic locations across the city.

STORM WATER DRAINS

Safe drinking water provided in strategic locations across the city.

DECENTRALISED SOLID WASTE MANAGEMENT

Collection & Transportation Decentralised Processing Facilities, Waste Management System in Commercial & Recreational Areas.

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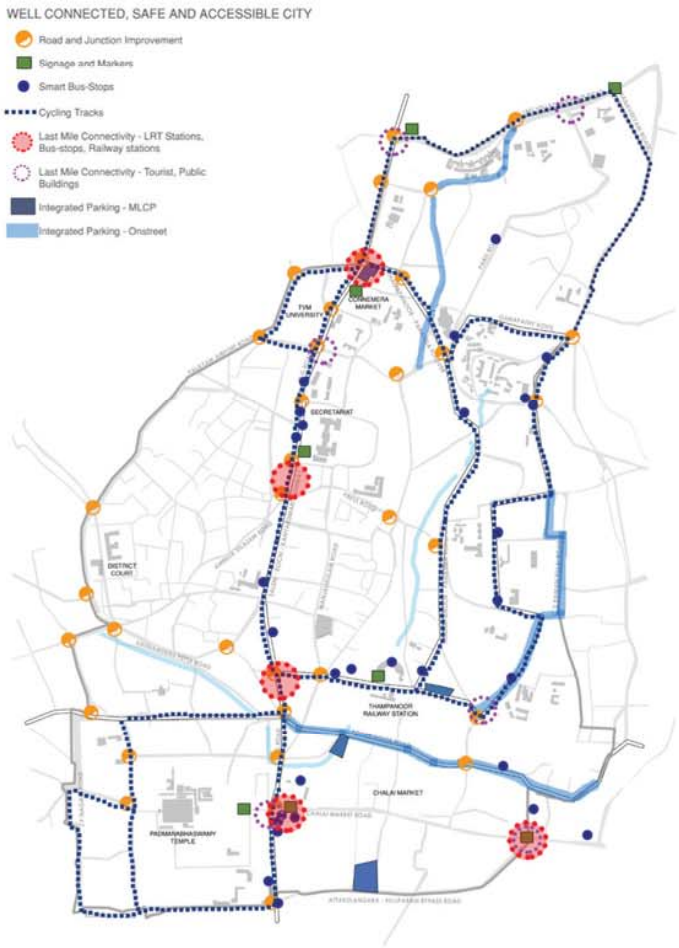
ANNEXURE 3.7 URBAN BASIC SERVICES

CREATING A WELL CONNECTED SAFE & ACCESSIBLE CITY CENTER



Improving Mobility & ease of navigation in the city centre will contribute to efficient transportation network, which makes the city friendly, accessible & pleasant to live work and travel

KEY FEATURES

Creating a well-connected, safe & accessible city centre
Creating an alternative Green mode of transport

SIGNAGE & MARKERS

Provision of an integrated & consistent Information to highlight key information & features.

INTEGRATED CYCLE LANES

Provision of an integrated cycle lane along the university area & heritage zone. Total length of the cycle track 15.6 km

SMART BUS STOP

Redesigning the 35 bus stops in the city, embedded with features like solar charging, WiFi, Digital Boards, etc.

PROPOSED BUS STAND AT EAST FORT AREA

COMPLETE STREETS

NON MOTORISED TRANSPORT

Provision of cycle tracks & footpaths to increase Cycling & Walkability along the entire network

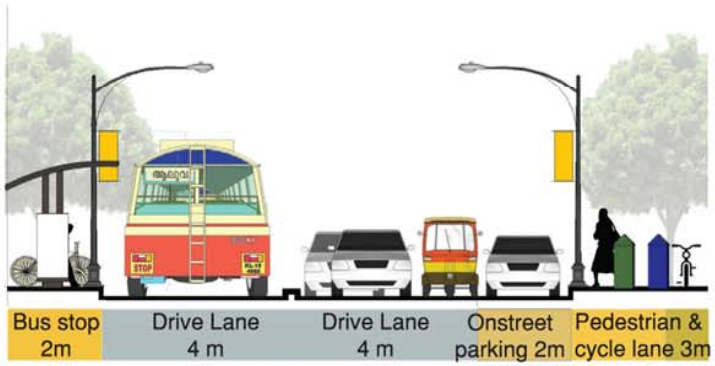
ROAD & JUNCTION IMPROVEMENT

Junction redesign, carriage way improvement, tree plantation, solar street lighting along the entire network

LAST MILE CONNECTIVITY

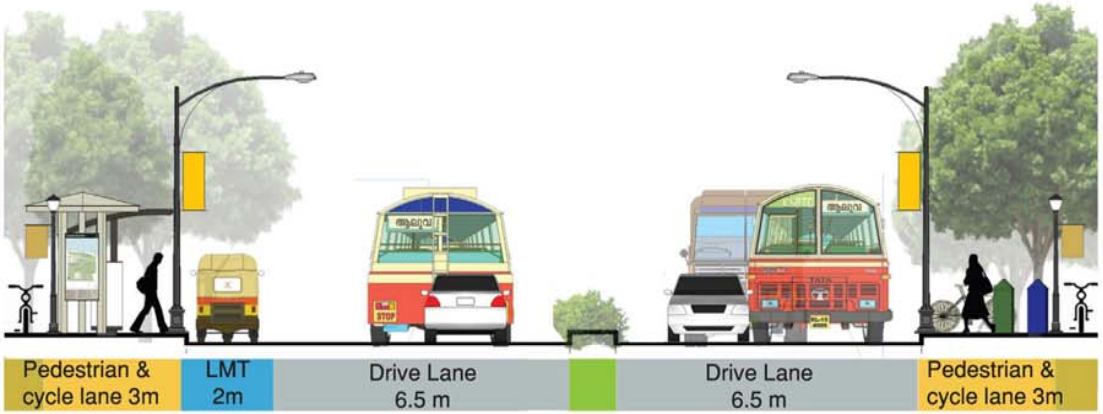
Encouraging use of Public Transport by locating auto & taxi stands in close proximity to transit nodes (bus stand, railway & LRT stations) & important locations (Tourist, Commercial, Administrative & Institutional).

TYPICAL STREET SECTION - RIGHT OF WAY 15M



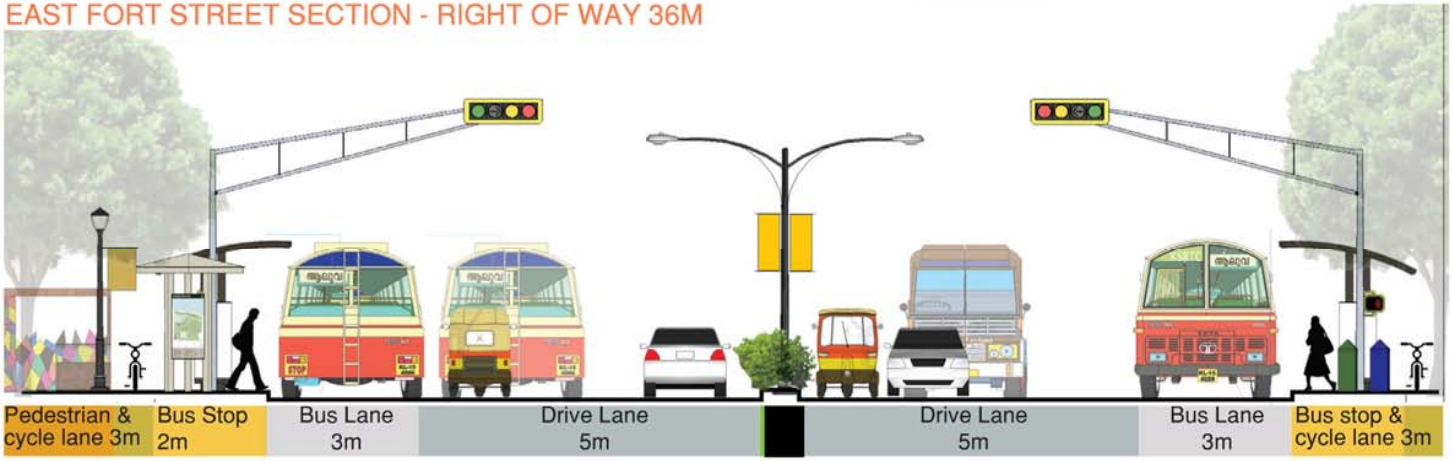
CYCLE PARKING

MG ROAD STREET SECTION - RIGHT OF WAY 24M



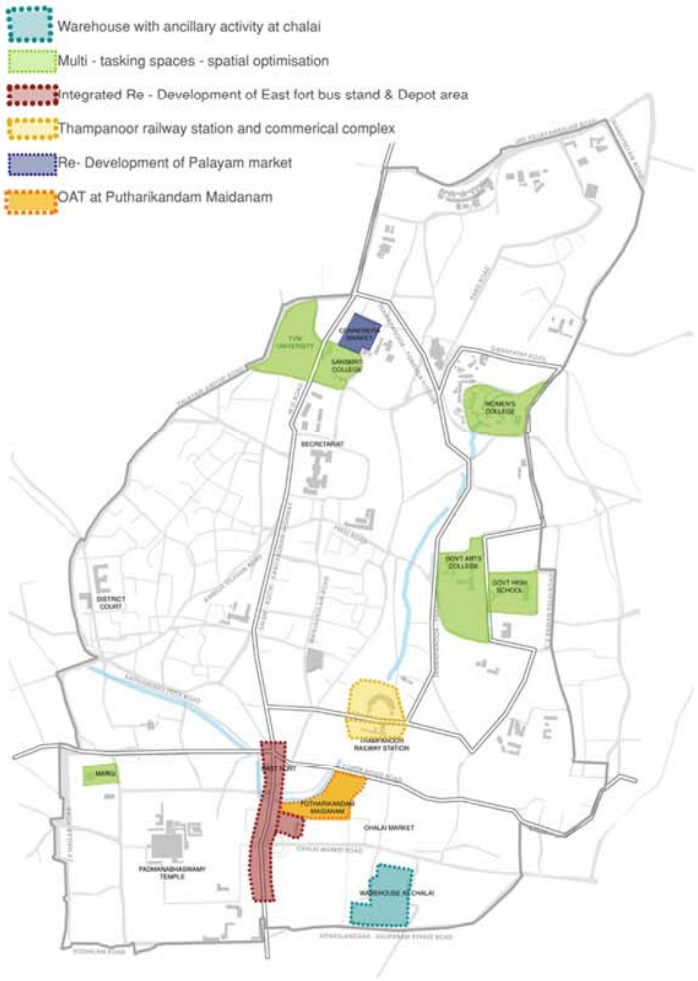
SIGNAGE

EAST FORT STREET SECTION - RIGHT OF WAY 36M



ANNEXURE 3.9 LAND-USE EFFICIENCY

RE-DENSIFICATION WITH CREATIVE LAND-USE

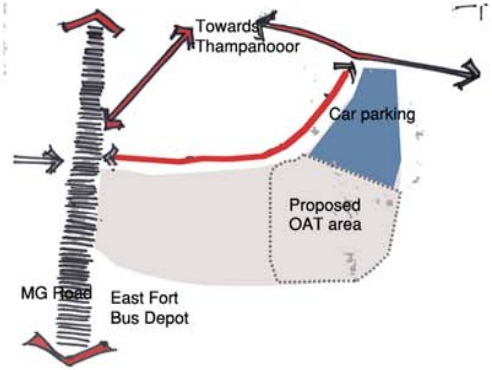


Areas like the city centre, being the oldest area might have received the highest attention in provision of infrastructure, resulting in high land value in view of location advantages.

About 90% of the buildings are old & dilapidatedhfThereby to optimise on land, the pillar respond to the city need & propose new integrated developments that house multiple activities & optimise on the 2.5 FAR.

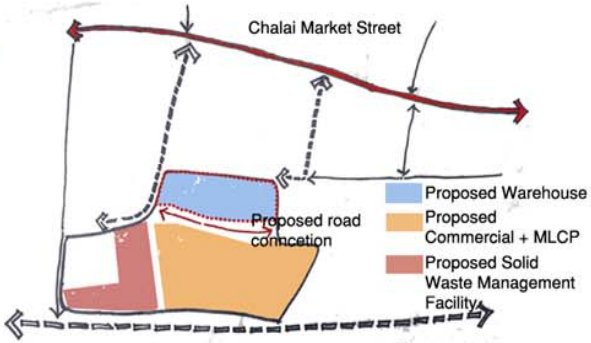
OPEN AIR THEATRE AT THE EXISTING PUTHARIKANDAM MAIDANAM

3.95 acre Maidanam, an OAT proposed to support the existing activities



CHALAI WAREHOUSE & COMMERCIAL COMPLEX

7.58 acre integrated development with IT enables state of art warehouse facility & retail area.

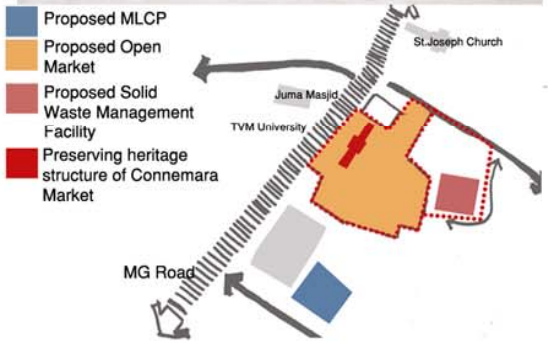


MUTI USE SPACES

Spatial optimization of under used, neglected spaces

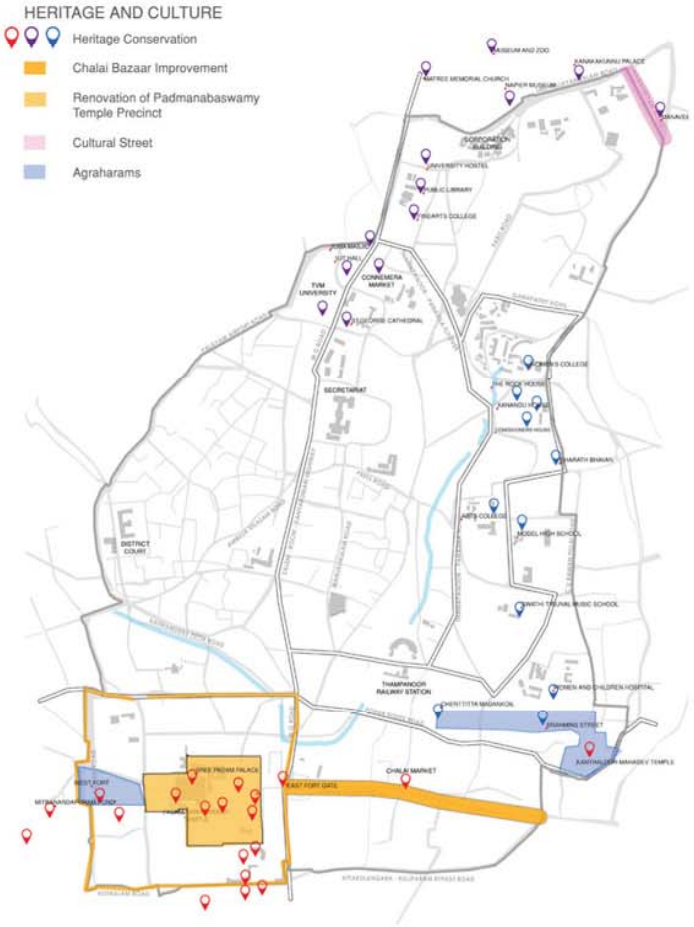
RE-DEVELOPMENT OF PALAYAM MARKET

4 acres redevelopment into a vibrant part open market



ANNEXURE 3.10 CULTURAL IDENTITY & HERITAGE

CELEBRATE & CONSERVING HISTORIC & CULTURAL ASSETS



Trivandrum's cultural heritage, customs, & traditions are a source of pride for the people, contributing to the distinctiveness of the city. They need to be revived & celebrated.

KEY FEATURES

Celebrating & conserving historic & cultural assets

RE-DEVELOPMENT OF ANANTHAPADMANABHA SWAMY TEMPLE PRECINCT

Provision of facilities, renovation of structures, connectivity, pedestrianisation, along the precinct

CHALAI BAZAAR IMPROVEMENT

Improving visual aesthetics (Façade improvement, signage, furniture street-scaping) & pedestrianisation of Chalai Market Road

CULTURAL STREETS

Manayeeyam Vidhi & Charitra Vidhi to be developed to further enhance it as a cultural corridor, and make the area more friendly to existing activities and performances

CONNECTING HERITAGE

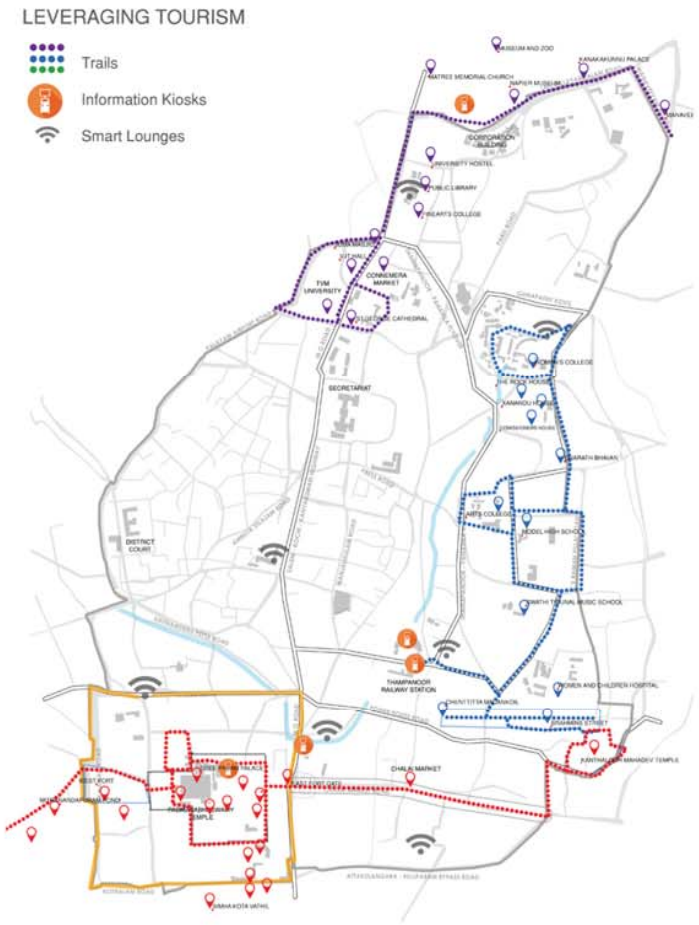
Heritage markers
Interactive Screens
Tourist kiosks & shops

Existing and Proposed view of Shree Ananthapadmanabha Swamy Temple street

Existing and Proposed view of Chalai Market Street

Existing and Proposed view of Manaveeyam Veedhi

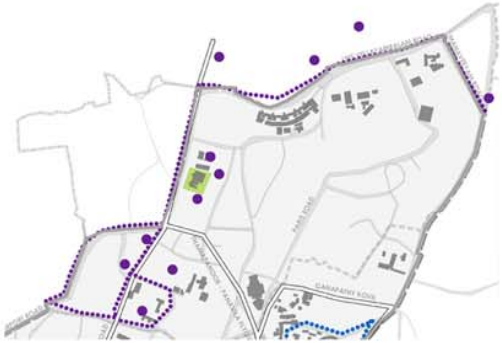
LEVERAGING EDUCATIONAL INSTITUTIONS & TOURISM POTENTIAL



Three key trails are curated to showcase administrative & public buildings (Palayam), historic and religious sites (East Fort & Chalai) & Educational Institutes (Thycaud). Proposal includes façade improvement, provision of street furniture, signage and integration of a digital app with stories and information

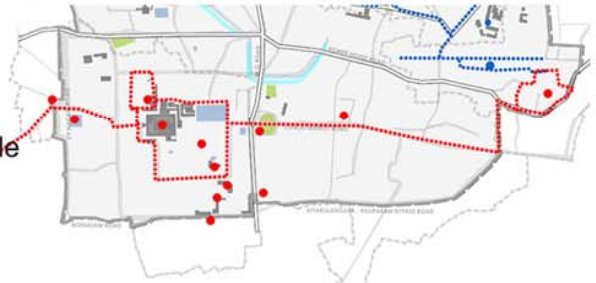
CULTURE & RECREATION TRAIL 3.6KM

Manveeyam Veedhi
Napier Museum & Zoo
Matree Memorial Church
Conemmera Market
Juma Masjid
VT Hall
St.George Cathedral



HERITAGE TRAIL 4.5KM

Ananthapadmanabha Swamy Temple
Sree Padam Palace
Kuthiramalika Palace
Mitranandapuram Temple
East Fort
Chalai Bazaar
Agraharam



UNIVERSITY TRAIL 5.6 KM

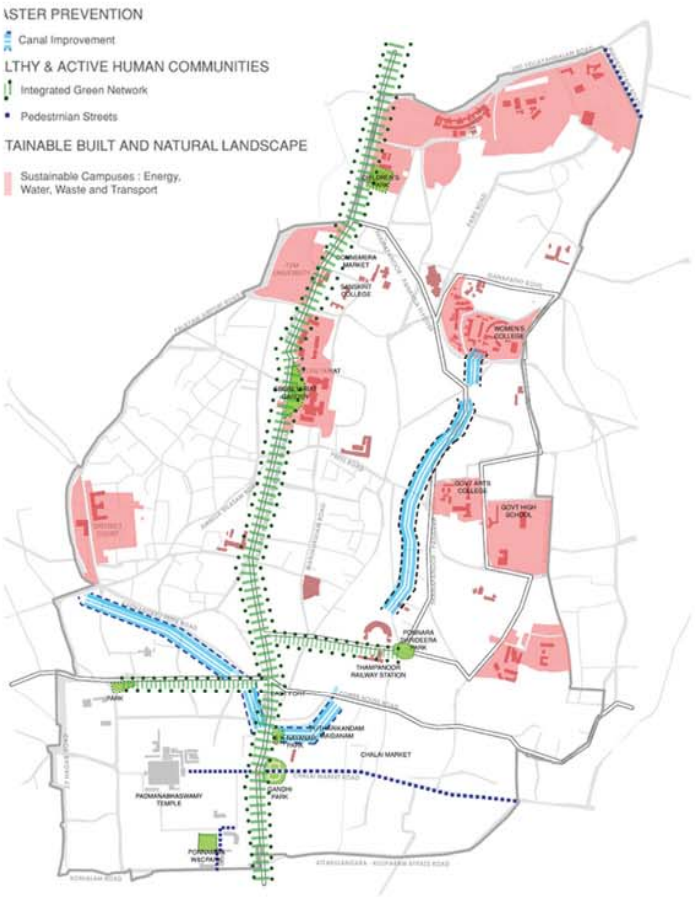
Women & Children Hospital
Model High School
Govt. Arts College
Commissioners's House
Govt. Women's College
Brahmin's Street

MAKING IT INTERACTIVE

Encouraging use of Public Mobile connect with WiFi Embedded QR codes

ANNEXURE 3.12 RESILIENCE & ECO FRIENDLINESS

SUSTAINABLE BUILDING, ACTIVE LIVING & DISASTER MITIGATION



Using density, design, and land use as catalysts for an environmentally sustainable, affordable and a inclusive city. This will result in a more efficient use of urban land and existing infrastructure, improved viability of energy efficient buildings and green energy systems, and more resilient and adaptable communities through a greater diversity of building types and land uses.

INTEGRATED GREEN NETWORK

Upgradation & linking of 6 main parks in the area, making them active exercising spaces that are universally accessible

Dis abled friendly Parks

PEDESTRIAN ZONES

Barrier free pedestrian footpath , integrated street furniture,bollards, timed access to vehicles

SUSTAINABLE CAMPUS (INSTITUTIONAL, PUBLIC & SEMI-PUBLIC)

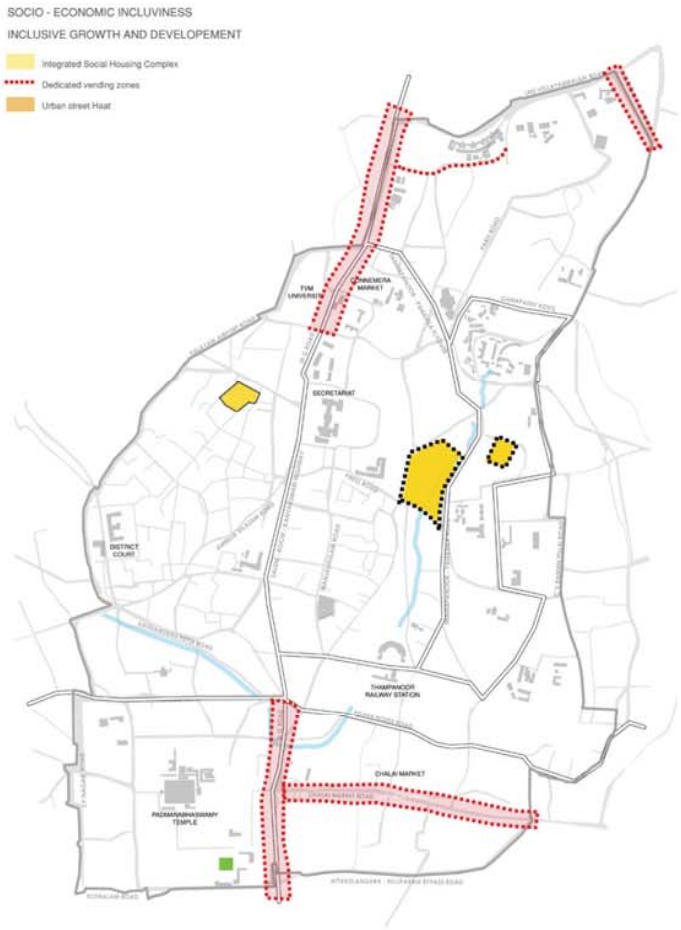
Solar rooftop, rainwater harvesting, green roofs, sustainable transport, re-use of waste water & 'Zero-Waste' Campus.

Solar Roof tops

CANAL IMPROVEMENT

Creation of 5m green buffer along the non-encroached portions of the Canals (~2.5kms).

PROMOTING DIVERSITY & FOSTERING INCLUSIVENESS



The opening up of economic opportunities & housing to previously under-served social groups, is integral to development. If people are given a chance to succeed, they are more likely to participate in the workforce, pursue education, or engage in other activities that lead to economic growth. This, in turn, strengthens the transition process & generates wider public support for economic reforms.

DEDICATED VENDING ZONES

Policy development & spatial allotment along commercial roads – 15 mobile vending zones that are flexible

Dedicated Vending zones for Food stalls proposed along Manaveeyam Veehi

Dedicated Vending zones along for vegetables and other items proposed along MG Road

INTEGRATED HOUSING COMPLEX

Chenkalchoola & Poundakulam

1. INTEGRATED CITY MANAGEMENT CONTROL CENTER (ICMCC)

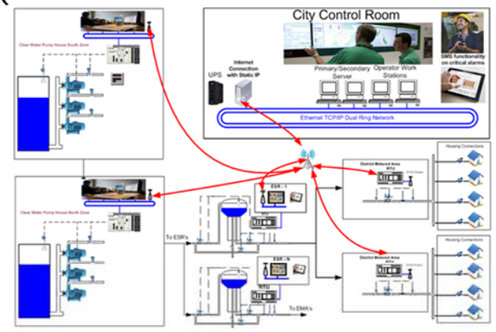
INTEGRATED SYSTEM - OPERATE AND MANAGE MULTIPLE CITY SERVICE OPERATIONS TARGETING TO IMPROVE SERVICES DELIVERY & GOVERNANCE

WATER

- Automatic Meter Readers
- Remote pumping systems
- SCADA for system monitoring & control
- Quality sensors
- Remote manhole status sensing system
- GIS Map with complete asset mapping & on-line payment systems

Smart Water Network

Water distribution Improvement Program



DISASTER MANAGEMENT

- Hardware installation & Calibration
- Alert warning-de warning systems
- Sirens
- Area based SMS Service
- LED Display board
- Fail proof communication system

Early Warning System

MOSQUITO DENSITY

- Sensors, Smart phones, Web applications to detect Mosquito Density

Smart Mosquito Density System

TRANSPORT & MOBILITY

- GIS Map with bus routes
- Bus stops
- Vehicle mounted GPS device
- LED passenger information boards
- Parking management backend software & hardware

Intelligent Public Transport

- Traffic volume cameras
- Wi-fi enabled adaptive controllers
- Solar panels
- Central control software & hardware

Intelligent Traffic Management

- GIS Map with parking lots
- GPRS enabled handheld devices with front-end software
- Public bus transit monitoring

Intelligent Parking System

SWM DATA CENTER

- Web based portal for monitoring the day to day operations

SWM Management

SAFETY & SECURITY

- Solar panels
- LED Lights
- GPRS Enabled controllers
- Backend street light monitoring system & hardware

Smart Street Lighting Monitoring & Management

- CCTV Cameras (with IR)
- PTZ Cameras
- Monitoring screens in the control room
- Survillance software

Intelligent Surveillance System

CENTRALISED CONTROL ROOM

Data Bank, Processing and Analysis
Cross System Monitoring
Planning and Management

2.UNIFIED e-GOVERNANCE PORTAL

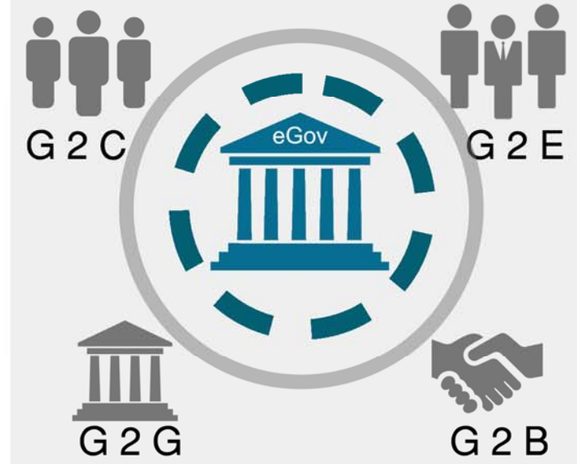
WEB BASED ICT APPLICATION FOR DELIVERING GOVERNMENT SERVICES

G 2 C - Government to Citizen

- Dashboards and Information Dissemination
- Taxes and Grievance redressal

G 2 E - Government to Employee

- Internal Employee work flow, biometrics
- GIS Mapping, MIS & FIS systems
- File tracking / social audits



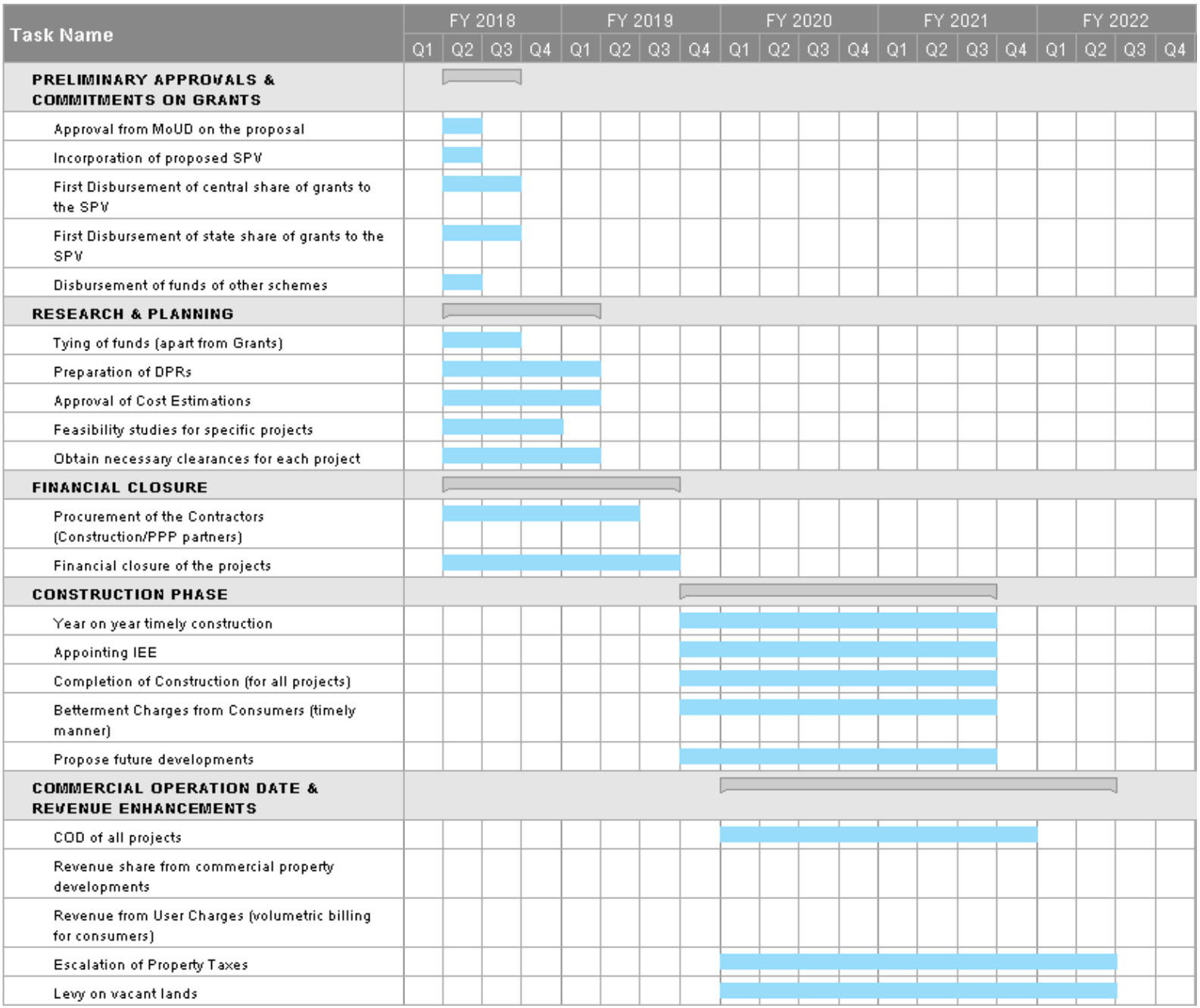
G 2 G - Government to Government

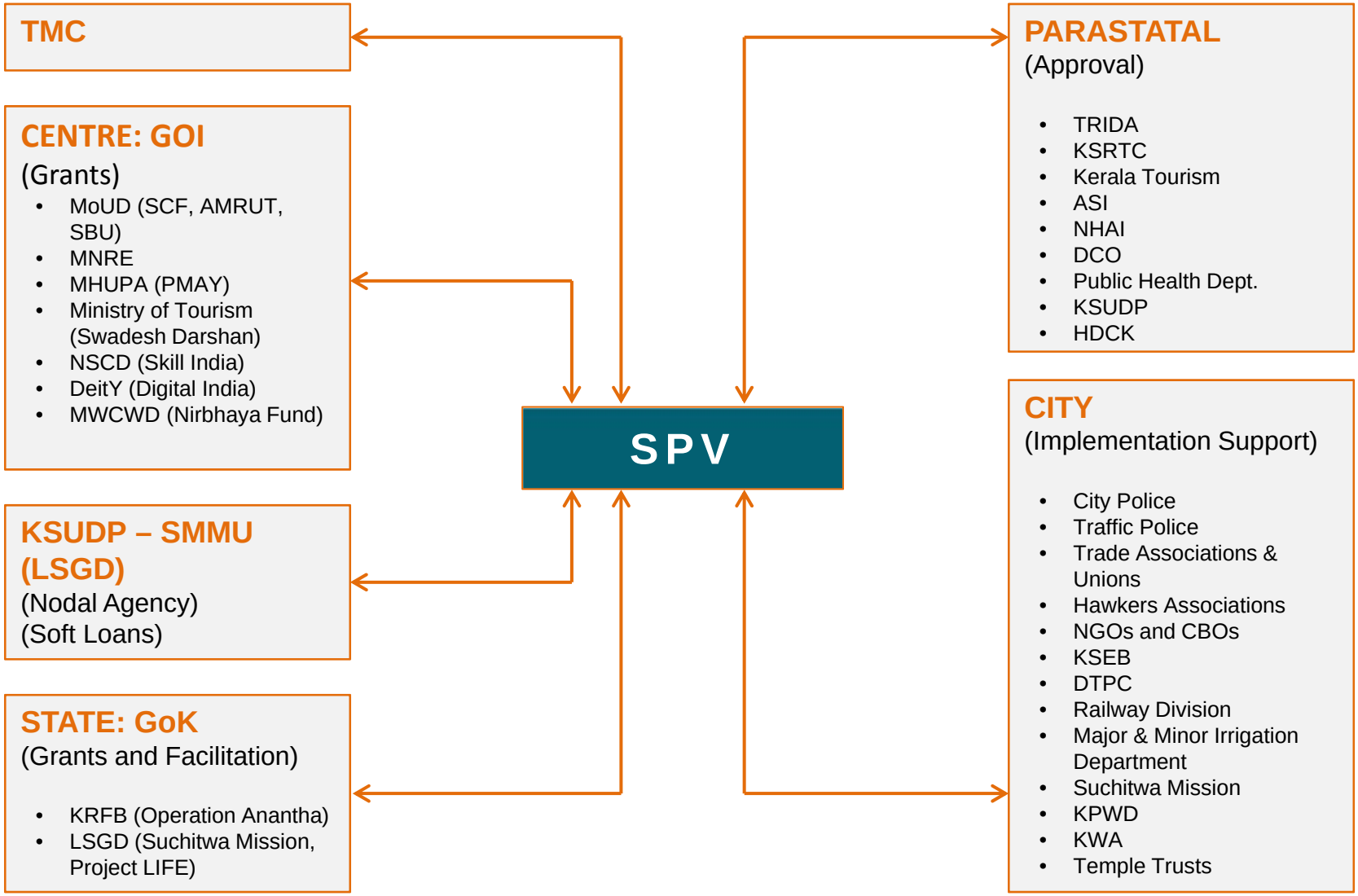
- Database with Web Portal
- Inter - depatmental Co-ordination

G 2 B - Government to Business

- Web based portal for Online building permits
- Licenses and e- payments

ANNEXURE 3.15 PERT CHART AND CPM




TMC
CENTRE: GOI
(Grants)
• MoUD (SCF, AMRUT, SBU)
• MNRE
• MHUPA (PMAY)
• Ministry of Tourism (Swadesh Darshan)
• NSCD (Skill India)
• DeitY (Digital India)
• MWCWD (Nirbhaya Fund)
KSUDP – SMMU (LSGD)
(Nodal Agency)
(Soft Loans)
STATE: GoK
(Grants and Facilitation)
• KRFB (Operation Anantha)
• LSGD (Suchitwa Mission, Project LIFE)
SPV
PARASTATAL
(Approval)
• TRIDA
• KSRTC
• Kerala Tourism
• ASI
• NHAI
• DCO
• Public Health Dept.
• KSUDP
• HDCK
CITY
(Implementation Support)
• City Police
• Traffic Police
• Trade Associations & Unions
• Hawkers Associations
• NGOs and CBOs
• KSEB
• DTPC
• Railway Division
• Major & Minor Irrigation Department
• Suchitwa Mission
• KPWD
• KWA
• Temple Trusts

ANNEXURE 3.17 STAKEHOLDER ORGANOGRAM

PMU Consultants | Developers / Contractors | Vendors | Funding Agencies

CENTRE: GOI

- MoUD
- MNRE
- MHUPA
- Ministry of Tourism
- NSCD
- DeitY
- MWCWD
- ASI
- NHAI

STATE: GoK

KRFB, LSGD, DoT
KSRTC, HDCK
KPWD, KSEB, City Police, TRIDA,
Suchitwa Mission,
Irrigation Dept.

KSUDP – SMMU (LSGD)

TMC

Special Purpose Vehicle (SPV)*

CENTRE: GoI
- Representatives appointed by GoK

STATE: GoK
- **Chairman** (Chief Secretary, GoK)
- **CEO** (Nominee appointed, GoK)

CITY: TMC
- **Mayor**, TMC
- **Secretary**, TMC

INDEPENDENT POSITIONS
- **Independent Directors** (as per Companies Act requirements)
- **Specialist positions:** Urban Planning, Engineering, Environment, Mobility and Urban Finance

** Owned by GoK and TMC with 50%-50% shareholding pattern*

PROJECTS:

AREA BASED DEVELOPMENT

EF 01: Improving Basic Services
EF 02: Creating A Well-connected, Safe & Accessible City Centre
EF 03: Re-densification With Creative Land-use
EF 04: Celebrating & Conserving Historic & Cultural Assets
EF 05: Leveraging Educational Institutions & Tourism Potential
EF 06: Facilitating Sustainable Built & Natural Landscapes
EF 07: Encouraging Active Living & Healthy Communities
EF 08: Enabling Disaster Mitigation
EF 09: Promoting Diversity & Fostering Inclusiveness

PAN-CITY IINITIATIVE

PAN-CITY 1: Integrated City Management Control Centre (ICMCC)

PAN-CITY 2: UNIFIED e-Governance Portal

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KRFB, LSGD, DoT
KSRTC, HDCK
KPWD, KSEB, City Police, TRIDA,
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PAN-CITY IINITIATIVE

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ANNEXURE 3.18 FINANCIAL PLAN

	Project Details		Cost Phasing					Sources of Funds			
	Particulars	Estimated Cost (Rs. In Crs)	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	Grant - Smart City (Centre/State)	Central Schemes	PPP	ULB Own Sources, Ongoing Schemes and Other agencies
	AREA BASED DEVELOPMENT										
A	**URBAN BASIC SERVICES**										
1	Continous Piped Water Supply	22.83	-	6.85	11.42	4.57	-	-	20.55	-	2.28
2	Under Ground Drainage Network	26.57	-	7.97	13.28	5.31	-	-	26.57	-	-
3	Storm Water Drains	47.50	-	14.25	23.75	9.50	-	19.00	28.50	-	-
4	Decentralised Solid Waste Management	2.57	-	2.57	-	-	-	0.64	1.93	-	-
5	Upgradation of Existing Public Toilets	1.41	-	0.42	0.98	-	-	0.35	1.05	-	-
6	Underground Ducting of Utilities	160.30	-	16.03	48.09	80.15	16.03	160.30	-	-	-
7	Drinking Water Fountains	7.32	-	7.32	-	-	-	7.32	-	-	-
8	MLCPs cum Commercial Complexes (4 No.s)	96.68	-	29.00	48.34	19.34	-	83.69	-	12.99	-
9	On-street Parking Lots	1.46	-	1.46	-	-	-	0.73	-	-	0.73
10	Road and Junction Improvement *(Carriageway Improvement, Tree Plantation, Street Lighting and Junction Redesign)*	319.56	-	255.65	63.91	-	-	287.61	-	-	31.96
11	Way Finding Signage and Markers	0.57	-	0.28	0.28	-	-	0.57	-	-	-
12	Redesign of Bus Stops with WiFi Hotspot Facilities	4.10	-	2.05	2.05	-	-	4.10	-	-	-
13	Last Mile Connectivity *(e-autos, taxi stands, bicycle sharing pods)*	1.92	-	1.92				1.92			
14	NMT *(Cycle Tracks and Footpaths Railing, Pavers, Formation, Curb stones)*	77.00	-	23.10	53.90	-	-	58.68	18.32	-	-
15	Non Vehicular Zone	1.72	-	1.72				1.72			
B	**LAND-USE EFFICIENCY**										
16	Tampanoor Railway Commercial Complex	44.38	-	11.09	28.84	4.44	-	13.19	-	31.18	-
17	Redevelopment of Palayam Market	118.22	-	35.47	59.11	23.64	-	82.76	-	35.47	-
18	Integrated Transit node (East Fort Bus stand)	54.51	-	16.35	27.25	10.90	-	43.61	-	10.90	-
19	Warehouse facilities with ancillary activities at Chalai Chalai warehouse with commercial complex	10.82	-	3.25	7.57	-	-	8.11	-	2.70	-
20	OAT at Putharikandam Maidanam	10.07	-	3.02	7.05	-	-	8.86	-	-	1.21
C	**CULTURAL IDENTITY & HERITAGE**										
21	Heritage Trails & Walks - Façade, Wall painting & Floor Marking	3.23	-	0.97	2.26	-	-	3.23	-	-	-
22	Interactive Information Kiosks & Display boards	0.29	-	0.26	0.03	-	-	0.29	-	-	-
23	Heritage Conservation *(Monuments, Tanks, Façade Improvement, Gateways, Clock tower & Statues)*	11.69	-	3.51	8.18	-	-	11.69	-	-	-
24	Chalai Bazaar Improvement *(Streetscaping, signage, furniture, etc.)*	3.60	-	2.16	1.44	-	-	3.60	-	-	-
25	Renovation of Shri Anantha Padmanabhaswamy Temple Precinct *(Facilities, Renovation of structures, connectivity, signage, walkways)*	89.29	-	26.79	62.50	-	-	8.93	80.36	-	-
26	Wi-Fi Lounges	5.62	-	1.69	3.93	-	-	2.81	-	2.81	-
27	Urban Street Haat - (Charitha Veedhi)	4.68	-	4.68				4.68			
28	Cultural streets - (Manveeyam Veedhi)	3.40	-	1.02	2.38	-	-	3.40	-	-	-
29	Heritage settlements (Agraharams)	4.68	-	1.87	2.81	-	-	0.68	-	-	4.00
D	**RESILIENCE & ECO-FRIENDLINESS**										
30	Anantha - Phase II (Disaster Management)	64.60	-	19.38	32.30	12.92	-	-	-	-	64.60
31	Linked Green Activity Zones and Pedestrian Streets *(Shantinagar Park, Children's Park, E K Nayanar park, Ponnara Sreedhar Park, Gandhi Park & Shree Kandeshwaram Park)*	12.85	-	3.85	6.42	2.57	-	9.85	3.00	-	-
32	Sustainable Campuses *(Solar Rooftop, Rainwater harvesting and Public Bike Sharing)*	66.23	-	19.87	46.36	-	-	-	19.87	46.36	-
E	**SOCIO-ECONOMIC INCLUSIVENESS**										
33	Integrated Social Housing Complex - Slum HHs	95.90	-	9.59	23.98	47.95	14.39	31.41	47.95	-	16.54
34	Upgradation of Anganwadis & Public Health Centres	5.27	-	1.05	2.63	1.58	-	2.63			2.63
35	Vending zones	5.27	-	0.53	1.32	2.63	0.79	5.27	-	-	-
	Sub Total	**1,386.12**	**-**	**537.01**	**592.40**	**225.51**	**31.21**	**871.64**	**248.10**	**142.42**	**123.96**
	PAN CITY										
1	**Centralised Command Control Centre**	29.63	-	17.78	11.85	-	-	22.22	7.41	-	-
2	**Smart Water Network**	58.55	-	20.49	32.20	5.85	-	58.55	-	-	-
3	**Traffic & Transportation** *(Intelligent transport, Variable Message Signboards & Smart Parking)*	23.96	-	8.39	11.98	3.59	-	13.30	-	-	10.66
4	**Smart Mosquito Density System**	0.54	-	0.22	0.33	-	-	0.54	-	-	-
5	**SWM Data Centre**	0.12	-	0.04	0.08	-	-	0.10	0.02	-	-
6	**Safety & Security** *(CCTV Camera Surveillance System & Street Lighting with Control System)*	23.74	-	7.12	16.61	-	-	20.18	3.6	-	-
7	**Unified e-GOVERNANCE PORTAL**	5.00	-	1.50	3.00	0.50	-	4.00	1.00		
8	**Disaster management** *(Local Warning cum Response System)*	10.54	-	3.16	5.27	2.11	-	9.48	-	-	1.05
	Sub Total	**152.07**	**-**	**58.69**	**81.32**	**12.06**	**-**	**128.37**	**11.98**	**-**	**11.71**
	GRAND TOTAL	**1,538.19**	**-**	**595.70**	**673.72**	**237.56**	**31.21**	**1,000.0**	**260.1**	**142.4**	**135.7**

17.03.2017–ൽ കൂടിയ കൗൺസിൽ തീരുമാനം നം. 1(1)

E13/138341/15: തിരുവനന്തപുരം നഗരസഭ – സ്മാർട്ട് സിറ്റി പ്രൊപ്പോസൽ അംഗീകരിക്കുന്നത് സംബന്ധിച്ച്.

സ്മാർട്ട് സിറ്റി പ്രൊപ്പോസൽ

തിരുവനന്തപുരം നഗരസഭ കേന്ദ്ര സർക്കാറിന് സമർപ്പിക്കുന്ന സ്മാർട്സിറ്റി പ്രൊപ്പോസൽ കൗൺസിൽ വിശദമായി ചർച്ച ചെയ്യുകയും, 1538.2 കോടി രൂപ അടങ്കൽ വരുന്ന പദ്ധതി നടത്തുന്നതിനായി അംഗീകരിക്കുകയും ചെയ്തു. കൂടാതെ പദ്ധതി നടത്തിപ്പിന് കമ്പനീസ് ആക്ട് 2013 പ്രകാരം ഒരു സ്പെഷ്യൽ പർപ്പസ് വെഹിക്കിൾ രൂപീകരിക്കുന്നതിനും തീരുമാനിച്ചു. പ്രോജക്ട് സമ്മറിയും സ്പെഷ്യൽ പർപ്പസ് വെഹിക്കിളിന്റെ ഘടനയും ചുവടെ ചേർക്കുന്നു.

തിരുവനന്തപുരം സമാർട്ട്സിറ്റി പ്രൊപ്പോസൽ – ഘട്ടം 3

ഏര്യ ബെയ്സ്ഡ് ഡെവലപ്മെന്റ്

നിർദ്ദേശിച്ചിട്ടുള്ള ഏര്യ: തിരുവനന്തപുരത്ത് 1403 ഏക്കറോളം വരുന്ന പൈതൃക കേന്ദ്രവും നഗരഹൃദയ ഭാഗവുമായ പ്രദേശം ആകർഷകവും എല്ലാ വിഭാഗത്തിലുമുള്ള ജനങ്ങളെ ഉൾക്കൊള്ളുന്നതുമാക്കി മാറ്റുന്നതിനാണ് വിഭാവനം ചെയ്യുന്നത്

PARTICULARS	PROPOSED AREA
ആകെ സിബിഡി ഏര്യ (ഏക്കറിൽ)	1403.33
സിറ്റി ഏര്യയുടെ ശതമാനം	2.6%
ഉൾപ്പെടുത്തിയിരിക്കുന്ന വാർഡ് നമ്പരുകൾ	27, 28, 29, 43, 71, 80, 81, 82 and 83
ജനസംഖ്യ (താമസിക്കുന്നവരുടെ)	53,225 (5.6%)
വിനോദ സഞ്ചാരികളുടെ ജനസംഖ്യ (2014)	2.8 Lakhs (Int.), 17 Lakhs (Dom)
ജനസാന്ദ്രത (per sq.km)	9,420

പ്രോജക്ടുകളുടെ ലിസ്റ്റ്:

1 മിശ്രിത ഭൂവിനിയോഗം

- ഉയർന്ന ജനസാന്ദ്രതയും ഫലപ്രദമായ ഭൂവിനിയോഗവും:
    1. പാളയം മാർക്കറ്റിന്റെ പുനർവികസനം
    2. റെയിൽവേ സ്റ്റേഷനു സമീപം വാണിജ്യ സമുച്ചയങ്ങളുടെ വികസനം

3. കിഴക്കേകോട്ട ബസ് സ്റ്റാന്റിന്റെയും ഡിപ്പോകളുടെയും സമഗ്രമായ പുനർ നിർമ്മാണം
4. ചാലയിലെ വ്യാപാരങ്ങൾക്ക് അനുബന്ധ സൗകര്യമായി വെയർഹൗസ്
5. വിവിധ ഉദ്ദേശങ്ങൾക്ക് പ്രയോജനകരമായ സ്ഥലസൗകര്യം
6. പുത്തരിക്കണ്ടത്ത് ഓപ്പൺ എയർ തീയറ്റർ

2 പൈതൃകം, സംസ്ക്കാരം, സവിശേഷത

- **ചരിത്രപരവും സാംസ്ക്കാരികവുമായ ആസ്ഥികകളുടെ സംരക്ഷണം:**
  7. പൈതൃക സംരക്ഷണം
  8. ചാല കമ്പോളത്തിന്റെ വികസനം
  9. പത്മനാഭസ്വാമിക്ഷേത്ര പരിസരത്തിന്റെ പുനരുദ്ധാരണം
  10. സാംസ്ക്കാരിക വീഥികൾ
  11. അഗ്രഹാരങ്ങൾ
- **വിദ്യാഭ്യാസവും വിനോദ സഞ്ചാരവും ശാക്തീകരിക്കൽ:**
  12. സ്മാർട്ട് ലോഞ്ചുകൾ
  13. വിനോദ കേന്ദ്രങ്ങളെ ബന്ധിപ്പിക്കുന്ന നടപ്പാതകൾ
  14. വിവര കിയോസ്ക്കുകൾ

3 സംയുക്ത നഗര സേവനം

- **അടിസ്ഥാന സൗകര്യം മെച്ചപ്പെടുത്തൽ:**
  15. ഭൂഗർഭ പൊതു സേവന ഡക്ട് പൂർത്തീകരിക്കൽ,
  16. 24x7 കുടിവെള്ള വിതരണം, സമഗ്ര ഖര മാലിന്യ നിർമ്മാർജനം
  17. പൊതു ശൗചാലയങ്ങൾ മെച്ചപ്പെടുത്തൽ
  18. വാട്ടർ ഫൗണ്ടെനുകൾ
- **സുരക്ഷിതവും, നല്ല ഗതാഗത ബന്ധവും ഉള്ള നഗര മദ്ധ്യം:**
  19. സംയോജിത പാർക്കിംഗ്
  20. മോട്ടർ-രഹിത ഗതാഗതം (നടപ്പാത, സൈക്കിൾ
  21. ചിഹ്നങ്ങൾ, അടയാള വാക്കുകൾ,
  22. സ്മാർട്ട് ബസ് സ്റ്റോപ്പുകൾ
  23. ഗതാഗത നിലയങ്ങളും ഉൾപ്രദേശങ്ങളും ആയുള്ള ബന്ധം
  24. റോഡ്, ജംഗ്ഷൻ മെച്ചപ്പെടുത്തൽ

4 പരിസ്ഥിതി സൗഹൃദമായ ദൃഢത

- **ദുരന്തം ഒഴിവാക്കുക:**
  25. കനാൽ നവീകരണം
- **സുസ്ഥിരമായ കെട്ടിടങ്ങളും പ്രകൃതി ഭൂഭാഗവും:**
  26. സുസ്ഥിരമായ സമുച്ചയങ്ങൾ: ഊർജം, വെള്ളം, മാലിന്യം മറ്റും ഗതാഗതം
- **ആരോഗ്യകരവും സജീവമമായ സമൂഹം:**
  27. പാർക്കുകളുടെയും തുറസ്സായ സ്ഥലങ്ങളുടെയും സംയോജിതമായ ശൃംഖല നിർമ്മിക്കൽ
  28. കാൽനടക്കാർക്ക് മാത്രമുള്ള വീഥികൾ

5 സാമൂഹ്യവും സാമ്പത്തികവുമായി പിന്നോക്കം നിൽക്കുന്നവരെ ഉൾകൊള്ളിച്ചു കൊണ്ടുള്ള വികസനം

- **പിന്നോക്കം നിൽക്കുന്നവരെ ഉൾകൊള്ളിച്ചു കൊണ്ടുള്ള വളർച്ചയും വികസനവും:**
  29. പ്രത്യകേ തെരുവ് വ്യാപാര മേഖലകൾ
  30. സമഗ്ര സാമൂഹ്യ ഭവന സമുച്ചയം

31. തെരുവോര ചന്തകൾ

പാൻ സിറ്റി പ്രൊപോസൽ

പ്രോജക്ടുകളുടെ ലിസ്റ്റ്:

സമഗ്ര നഗര നിർവഹണ നിയന്ത്രണ കേന്ദ്രം- INTEGRATED CITY MANAGEMENT CONTROL CENTRE (ICMCC):
ഈ സമഗ്ര പദ്ധതി വിവിധ നഗര സേവന പ്രവർത്തനങ്ങളെ സംയോജിപ്പിക്കുകയും, തത്സമയ നിരീക്ഷിക്കുകയും, സേവനങ്ങളും ഭരണനിർവഹണം മെച്ചപ്പെടുത്താനും സഹായിക്കും.

- നഗരസഭയുടെ സേവനങ്ങൽ ഇ-ഗേവണൻസിലൂടെ എല്ലാവർക്കും ലഭ്യമാക്കുക
- സ്മാർട്ട് വാട്ടർ മീറ്ററിംഗ്
- ഇന്റലിജന്റ് ട്രാഫിക് & ഗതാഗത പരിപാലനം
- സിസിടിവി ഉൾപ്പെടെയുള്ളവ ഉപയോഗിച്ചുള്ള പര്യവേഷണ സംവിധാനം
- അടിയന്തിര സാഹചര്യങ്ങളിലെ പ്രതികരണ – ഇടപെടൽ സംവിധാനം
- ഊർജ്ജ ശേഷിയുള്ള സ്ട്രീറ്റ് ലൈറ്റുകൾ

സാമ്പത്തിക പദ്ധതി

Particulars	Area Based Development					Pan City	TOTAL
Component	Diverse & Mixed Land-use	Heritage, Culture and Identity	Integrated Urban Services	Resilient and Environment Friendly	Socio-Economic Inclusiveness	Integrated City Control Room	
Key Components	• Multi-tasking spaces • Re-development of Palayam market, • Integrated Transit node – East fort • Railway commercial complex • Chalai Ware house &commercial • OAT at Puthari-kandamMaidanam	• Temple Precinct Development • Restoration of Agraharams&historic assets • Chalai Bazaar improvement • Cultural streets • Trails& Walks • Interactive information kiosks &Display boards • Wi-Fi lounge	• Public Utilities (WS, UGD & SWD) • Decentralised SWM & Public Toilets • Underground Ducting • Drinking water fountains • MLCPs & Parking Lots • Signage &Markers • Smart Bus Stops • NMT & Last Mile Connectivity • Road & Junction improvement	• Sustainable campuses • Linked green activity zones • Pedestrian streets • Reviving & Re-activating canal fronts • Disaster management	• Flexi vending zones • Integrated social housing complex • Up-gradation of anganwadis& public health centres	**Pan city 1: Centralised Control Room:** - Smart Water Network - Intelligent Traffic &Transportation system - SWM data centres - Smart street lights - CCTV surveillance - Early response system - Smart Mosquito Density system **Pan city 2: Unified e-Governance Portal**	
Total Cost *(Rs. Crores)*	**238.0**	**126.5**	**771.5**	**143.7**	**106.4**	**152.1**	**1538.2**
Smart City Grants *(Centre*	156.5	39.3	626.6	9.8	39.3	128.4	1000.0

& State Share)							
Central Schemes	0.0	80.4	96.9	22.9	48.0	12.0	260.1
PPP	80.3	2.8	13.0	46.4	0.0	0.0	142.4
ULB Own Sources & Other State Schemes	1.2	4.0	35.0	64.6	19.2	11.7	135.7
Convergence	Smart City Grants PPP ULB Own Funds	Smart City Grants SwadeshDarshan KSWCFC	Smart city Grants AMRUT State Agencies ULB Own Sources Swach Bharat PPP	Smart City Grants AMRUT State Budget - KSUDP PPP MNRE Solar City Program	Smart City Grants PMAY Project LIFE State Departments	Smart City Grants Digital India Nirbhaya Fund	

സ്പെഷ്യൽ പർപ്പസ് വെഹിക്കിൾ – ഘടന

ചെയർമാൻ (ചീഫ് സെക്രട്ടറി)
സി.ഇ.ഒ (സംസ്ഥാന സർക്കാർ നിയമിക്കുന്ന വ്യക്തി)
മേയർ, തിരുവനന്തപുരം നഗരസഭ
സെക്രട്ടറി, തിരുവനന്തപുരം മുനിസിപ്പൽ കോർപ്പറേഷൻ
കേന്ദ്രസർക്കാർ നിയമിക്കുന്ന പ്രതിനിധി
സംസ്ഥാന സർക്കാർ നിയമിക്കുന്ന പ്രതിനിധികൾ
കമ്പനി ആക്ട് പ്രകാരം നിയമിക്കുന്ന സ്വതന്ത്ര ഡയറക്ടർമാർ

മേൽപ്പറഞ്ഞ പ്രൊപ്പോസലും സ്പെഷ്യൽ പർപ്പസ് വെഹിക്കിൾ ഘടനയും അംഗീകരിക്കുന്നതിനും കേന്ദ്ര സർക്കാറിന് സമർപ്പിക്കുന്നതിനും തീരുമാനിച്ചു.

(ഒപ്പ്)
മേയർ

// ശരിപ്പകർപ്പ് //

കൗൺസിൽ സെക്രട്ടറി

CORPORATION OF THIRUVANANTHAPURAM

SECRETARY
Thiruvananthapuram Corporation

Council Resolution No. 1 (1) – Dated 13/03/2017

The Thiruvananthapuram Municipal Corporation discussed the Smart City Proposal in detail and the Council approved the Project with a total estimate cost of Rs. 1,538.2 Crores and also agreed to incorporate the Special Purpose Vehicle (SPV) as per the Companies Act 2013 to implement the Projects proposed under the Smart City Proposal. The Project summary and structure of SPV is shown below.

THIRUVANANTHAPURAM SMART CITY PROPOSAL: ROUND 3

VISION STATEMENT: "A VIBRANT & ALLURING Capital city that is INCLUSIVE, SAFE & ACCESSIBLE; and which respects its NATURAL ENVIRONMENT & celebrates its HERITAGE & CULTURE."

AREA BASED PROPOSAL

Thiruvananthapuram aims to transform 1403.33 acres (2.6% of city area) of its CBD area into a well-connected, inclusive, vibrant and engaging city centre through **RETROFITTING development approach.**

PARTICULARS	PROPOSED AREA
Total CBD Area (in acres)	1403.33 (2.6%)
Ward names & nos.	Thampanoor **(81),**Vanchiyoor**(82),** Fort **(80),** Chalai **(71),** Valiyasala **(43),** Palayam **(27),**Thycaud **(28),** Vazhuthacaud **(29)**, Sreekandeswaram**(83)**
Population (Residential)	53,225 (5.6%)
Tourist Population (2014)	2.8 lakhs (Int.), 17.0 lakhs (Dom)
Population Density	9,420 per sq.km

LIST OF PROPOSED PROJECTS IN ABD AREA

#1 URBAN BASIC SERVICES:

- **Improving Basic Services:**24X7 water supply, storm water drains, UGD network, decentralised solid waste, underground ducting , up-gradation of existing toilets,drinking water fountains, ICT based services & governance
- **Creating A Well-Connected, Safe & Accessible City Centre:** Road & junction improvement, Integrated parking (MLCP & on-street), smart bus stops, Way finding signage & markers, Last Mile Connectivity (e-autos, taxi stands, bicycle sharing pods), Smart street lights & CCTV surveillance

#2 LAND-USE EFFICIENCY

- **Re-Densification With Creative Land-Use:** Multi-tasking spaces, Re-development of Palayam market, Integrated Transit node (East Fort Bus stand), Tampanoor railway commercial complex, Chalai warehouse & commercial complex, OAT at PutharikandamMaidanam

#3 CULTURAL IDENTITY & HERITAGE

- **Celebrating & Conserving Historic & Cultural Assets:** Renovation of ShriAnanthaPadmanabhaswamy Temple Precinct, Chalai Bazaar improvement, Cultural streets (ManveeyamVeedhi&CharithaVeedhi), Conserving historic assets, Heritage settlements (agraharams)
- **Leveraging Educational Institutions& Tourism Potential:**Trails& walks, Interactive info. kiosks &Display boards, Wi-Fi lounge

#4 RESILIENCE & ECO-FRIENDLINESS

- **Facilitating Sustainable built & natural landscape:**Sustainable campuses (energy, water, waste & transport)
- **Encouraging Active Living & Healthy Communities:**Linked green activity zones and pedestrian streets
- **Enabling Disaster Mitigation:**Reviving& Re-activating canal fronts, Disaster management

#5 SOCIO-ECONOMIC INCLUSIVENESS

- **Promoting Diversity & Fostering Inclusiveness:**Flexi vending zones, Integrated social housing complex,Upgradation of anganwadis& public health centres

PAN CITY PROPOSAL

LIST OF PROJECTS:

PAN CITY-1: INTEGRATED CITY MANAGEMENT CONTROL CENTRE (ICMCC)

The ICMCC will be an integrated system that will operate & manage multiple city service operations including real time monitoring & help in improving services delivery & governance.

- Smart Water Network
- Intelligent Traffic & Transportation system (intelligent parking, intelligent signalling, intelligent PT system)
- SWM data centres
- Street-light monitoring and management system
- CCTV surveillance
- Early warning system
- Smart Mosquito Density system

PAN CITY-2: Unified e-GOVERNANCE PORTAL

- G2C: Dashboards & information dissemination, taxes and grievance re-addressal
- G2E: Internal employee related services/ work flows, biometric devices, GIS mapping software, MIS & FIS systems,file tracking system, social audits, etc.
- G2G: Database with Web based portal, inter-department database, etc.
- G2B: Web based portal for online building permits, licenses and e-payments

FINANCIAL PLAN(next page)

Particulars	Area Based Development					Pan City	TOTAL
Component	**Diverse & Mixed Land-use**	**Heritage, Culture and Identity**	**Integrated Urban Services**	**Resilient and Environment Friendly**	**Socio-Economic Inclusiveness**	**Integrated City Control Room**	
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Structure of Special Purpose Vehicle (SPV)

- Chairman (Chief Secretary)
- C.E.O. (Nominee from State Government)
- Mayor, Thiruvananthapuram Municipal Corporation
- Secretary, Thiruvananthapuram Municipal Corporation
- Central Government nominee, appointed by MoUD
- Representatives appointed by GoK
- Independent Directors as per Companies Act requirements

sd/-
Mayor

// True Copy //

Council Secretary

CORPORATION OF THIRUVANANTHAPURAM

SECRETARY
Thiruvananthapuram Corporation

Minutes of the 10th State Level High Powered Steering Committee (HPSC) chaired by the Chief Secretary held on 22nd March 2017 at 3.00 pm in the Committee room of Chief Secretary, Government of Kerala.

Members Present:

1. *Adv V K Prasanth, Worshipful Mayor, Corporation of Thiruvananthapuram*
2. *Smt. Soumini Jain, Worshipful Mayor, Corporation of Kochi*
3. *Dr K M Abraham IA S, Additional Chief Secretary, Finance Department*
4. *Sri T K Jose I A S, Principal Secretary , LSGD*
5. *Dr K Vasuki IAS, Director Urban Affairs & ED, Suchitwa Mission*
6. *Dr. Narasimhugari TL Reddy IAS, Municipal Secretary, CoT*
7. *Sri P A Sajikumar, Chief Engineer, LSGD*
8. *Sri. Shaji Joseph, Chief Town Planner(Planning), LSGD*
9. *Sri Ravindran , Technical Member, Kerala Water Authority*
10. *Sri Binu Francis, Programme Officer, Kudumbashree*
11. *Sri D Rajkuamr Finance Officer, Urban Affairs*

The 10th meeting of the State Level High Powered Steering Committee (HPSC) chaired by the Chief Secretary, Government of Kerala, commenced at 3.00 pm in the Committee Room.

1. **Approval of Minutes of the Previous meeting**

The Committee approved the minutes of 9th meeting of SHPSC held on 25th January 2017.

2. **Action Taken Report of the previous meeting**

The Committee took note of the following actions taken as per the decision of 9thSHPSC held on 25thJanuary 2017.

S.N	Agenda Items & decisions	Action Taken
I	Selection of Project Management Consultant (PMC) to implement Area Based Development- Smart City Kochi. The SHPSC has decided to seek the approval of government to waive the e-procurement process in selection of PMC.	*The technical committee has completed the evaluation process for selection of PMC and submitted its recommendation to the Mission Director on 28th January 2017. As per the decision of 9th SHPSC, the file is submitted to the government on 13th February 2017 to waive the e-procurement process in selection of PMC.*

3. Additional fund to CSML for the year 2016-17

In the State budget for the financial year 2016-17, allocations for Smart Cities Mission in Kochi is Rs 318 Cr (40 % State share).Though the guidelines of Smart Cities Mission envisages an equal amount (in the ratio of 50:50), to be contributed by the State/Kochi Municipal Corporation, the State government has truncated the State share from 50% to 40%, which is contrary to the financial architecture of the Smart Cities Mission. A request for the same was submitted to Finance Department on 23.11.2016 via letter no. CSML/GOKCorr/2016. GOK has sanctioned to release of Rs. 318 Cr to CSML (Rs 90 Cr via GO(Rt) No. 2365/2016/LSGD dated 5.08.2016 and Rs 228 Cr via GO(Rt) No.704/2017/LSGD dated 15.3.2017), being Central share Rs 190.80 Cr and State share Rs 127.20 Cr. State has to release balance of Rs 76 Cr:- Central share of Rs 3.20 Cr and State share of Rs 72.80 Cr.

SHPSC discussed the matter in detail, the Additional Chief Secretary (Finance) suggested to the Principal Secretary (LSGD) to submit a request to allocate additional fund of Rs 76 Cr to CSML so as to maintain the ratio of 50:50 between Central and State funding as per the Mission Guideline.

Action by	Time Limit	Monitoring by
Principal Secretary (LSGD)	23/03/2017	Chief Secretary

4. Review of Smart City Proposal of Thiruvananthapuram

The Ministry of Urban Development (MoUD), Government of India, launched the prestigious ***Smart Cities Mission*** in 2015. Thiruvananthapuram, being the state capital OM K-1506/185/2015-SC-I dated 25th May 2016 from MOUD nominated to participate in the 3rd round of national level Smart Cities Challenge.

Vide OM K-1506/185/2015-SC-I dated 14th March 2017, the MoUD has asked to submit Smart City Proposal (SCP) in the prescribed template issued by MoUD before 31st March 2017. The Corporation of Thiruvananthapuram has prepared SCP with the support of M/s IDeCK Bangalore& CMD Thiruvananthapuram. The draft SCP is placed in SHPSC for its consideration.

4.1 Secretary CoT briefed the approach and methodology adopted for the preparation of SCP in Thiruvananthapuram. Further, the consultant presented the major themes of the projects proposed in the SCP. The highlights of the projects are as follows.

The proposal has adopted retrofitting strategy for Area Based Development in 1403 Acres (5.6% of the city area) of its Heritage and Central City Area. The strategic Directions in the proposal are:

a. Improving Basic Services
b. Creating A Well-Connected, Safe and Accessible City Centre
c. Re-densification with Creative Land-Use
d. Conservation of Historic and Cultural Asset
e. Leveraging Educational Institutions and Tourism Potential
f. Facilitating Sustainable built and natural landscape
g. Encouraging Active Living and Healthy Communities
h. Disaster Prevention
i. Promoting Diversity & Fostering Inclusiveness

SHPSC discussed various projects in detail and made following decisions.

4.2. Area finalization:

It is observed that only 45% of the area is under residential category and around 40% is under institutions that functions only between10 am to 6pm .Hence the Committee suggested to seek the possibility of the increasing the geographical coverage to maximise the percentage residential population into the smart city area. However the Mayor informed that the area selection is finalised and approved by the Corporation Council.

4.3. Flood Prevention and Mitigation

The region identified for ABD has an undulating topography and vulnerable to floods. Hence SHPSC decided to include proposal for the improvement of canals as well as to have a comprehensive plan for flood prevention and mitigation.

4.4. Plan for Total Inclusion

SHPSC decided that a well-structured plan for total inclusion should be an integral part of the Smart Cities Mission both in Kochi and Thiruvananthapuram. Corporations of Thiruvananthapuram and Kochi may decide whether the inclusion plan to be limited to the ABD area or for the entire city. It is decided that the following elements would form part of the inclusion plan :

a. A participatory vulnerability analysis to be conducted.
b. Asraya Scheme to be revamped with a resurvey and revised plan..
c. Universalization of BUDS school.
d. Palliative care should be universalized. Individual care plan should be prepared for persons from vulnerable groups who are suffering from life threatening diseases/conditions and extreme disabilities.
e. All families should have access to different social entitlements including ration card, land titles, electricity and water connections, welfare pensions

4.5. Pan City Proposals : Government to Citizen Services and E-Governance

The two major projects proposed under pan city solutions are Integrated City Management Control Centre (ICMCC) and e-governance portal. The ICMCC will be an integrated system that will operate & manage multiple city service operations including real time monitoring & help in improving services delivery & governance.

It is decided that the e-governance proposal for service delivery should include the following :

a. The entire list of citizen services
b. Issuance of Building permit and licenses, Grievance Redressal system, tax collection, Social Security pensions, file tracking must be mandatory services to be delivered online.
c. Proactive disclosures as stipulated through RTI should be promoted.
d. Social Audit to be conducted through participatory approach
e. Citizen's charter to be published.
f. Corporation of Thiruvananthapuram to evolve as a paperless office in the next 3 years.

4.6. Special Purpose Vehicle

It is decided that SPV to follow the same structure as adopted in Cochin Smart Mission Limited and suggested CoT to initiate the preparation of AoA and MoA for the incorporation of Trivandrum Smart Mission Limited.

4.7. Project Cost

It is decided that CoT to consider following projects with an approximate project cost of Rs 2000 Cr under convergence.

a. Redevelopment of Secretariat
b. Revamping of Central Stadium
c. Light Metro Proposal
d. Skywalk connecting Thampanoor KSRTC bus station, Railway Station and the Fort Bus station proposed by NATPAC into SCP.
e. Beneficiary led improvement of Chalai market and Strategies for prevention and mitigation of fire.
f. Improvement of market near/ vending zone the Fire Station Road (Chenkalchoola)

Try to re-validate the viability of projects proposed along the MG road in the context of proposed light metro project.

4.8. Project Share of the Corporation

SHPSC felt that both the Corporation of Kochi and Thiruvananthapuram do not have additional resources to support the Smart Cities mission as the major project component is limited to a selected region. However, it is decided to allocate Rs 50 Cr as the ULB's contribution towards Smart Cities Mission over a period of 5 years at the rate of Rs 10Cr per annum. The committee decided to seek the consent of Government in this regard.

4.9. It is also decided that the final SCP documents to include the following details as annexures

- Location map with boundary details of region under ABD
- List of all proposed projects and costing
- Project Phasing plan
- Responsibility matrix
- Financial Plans

4.10. Approval and Recommendation

The SHPSC approved the Smart City Proposal prepared by the Corporation of Thiruvananthapuram and recommend the same to the Ministry of Urban Development (MoUD) to participate in the second stage of the Smart City Challenge.

The committee entrusted the Secretary, CoT to make necessary corrections in the SCP document and submit the document for the consideration of MoUD.

Action	Time Limit	Monitoring
Secretary, CoT	29th March 2017	Mission Director

28/3/2017

Principal Secretary (LSGD)&
Mission Director, Smart Cities Mission

T.K.JOSE. IAS
Principal Secretary to Government
Local Self Government Department
Government Secretariat
Thiruvananthapuram 695 001

Chief Secretary &
Chairman –SHPSC

28/3/17

S.M. VIJAYANAND
Chief Secretary

OFFICE OF THE CHIEF SECRETARY TO GOVERNMENT OF KERALA

Government of India
Ministry of Tourism
(Swadesh Darshan Division)

Transport Bhawan
1, Parliament Street
New Delhi-110001

Dated: 19.09.2016

File No. 5(04)/2016-SD

The Pay and Accounts Officer
Ministry of Tourism
C-I, Hutments, Dalhousie Road
New Delhi – 110 0011.

Subject: Development of Sree Padmanabha Aranmula Sabarimala as a Spiritual Circuit in Kerala under Swadesh Darshan Scheme.

Sir,

I am directed to refer to letter No. P3-16565/2015(1) dated 18.5.2016 received from Director (T) Government of Kerala and to convey the administrative and financial sanction of the President of India for 'Development of Sree Padmanabha Aranmula Sabarimala as a Spiritual Circuit' in Kerala under Swadesh Darshan Scheme, with Central Financial Assistance of Rs.9244.26 Lakh (Rupees Ninety Two Crore Forty Four Lakh and Twenty Six Thousands only) for the under mentioned components:

(Rs. in lakh)

S. No.	Name of the Component	Amount
	Sree Padmanabaswamy Temple	
A	**East Nada**	
1.	Construction of tourist Information centre	3.08
2.	Construction of Bio Toilet (2No.)	50.00
3.	Construction of drinking water Fountain (2 Nos)	7.05
4.	Restoration of padmatheerthakulam	700.09
5.	Construction of bathing complex-east nada	65.01
6.	Storm water drain	153.19
7.	Heritage Walk Footpath	750.07
8.	Last mile connectivity	45.78
9.	Construction of Bus stop, toilets, cloak room, waiting hall.	500.00
10	Electrical works	411.80
11	Electrification works for street lighting	273.06
12	Signage	65.63
13	Dustbins	3.05
	Sub Total	**3027.81**
B	**West Nada**	
1.	Construction of drinking water fountain (1 Nos)	3.53
2.	Providing granite paving for Nambhi Nada and temple entrance pathways	147.30

3.	Storm water drain	159.69
4.	Heritage Walk Footpath	103.71
5.	Last Mile Connectivity	59.12
6.	Electrical Works	411.80
7.	Electrification works for street lighting	126.18
8.	Signage	49.22
9.	Dustbins	3.05
	Sub Total	**1063.60**
C	**North Nada**	
1.	Construction of drinking water fountain (1 Nos)	3.53
2.	Storm water drain	146.70
3.	Heritage Walk Footpath	200.02
4.	Last Mile Connectivity	174.05
5.	Electrical Works	411.80
6.	Electrification works for street lighting	139.34
7.	Signage	65.63
8.	Dustbins	3.05
9.	Hardware provision for security service-CCTV cameras, security systems.	200.00
10	Software components for the digital museum and security services @ 2% of the hardware cost.	4.00
	Sub Total	**1348.12**
D	**South Nada**	
1.	Construction of drinking water fountain (1 Nos)	3.53
2.	Construction of Bio Toilet (1No.)	25.00
3.	Storm water drain	153.85
4.	Heritage Walk Footpath	351.98
5.	Last Mile Connectivity	152.90
6.	Electrical Works	411.80
7	Electrification works for street lighting	136.40
8.	Signage	65.63
9.	Dustbins	3.05
10	Solar paneling works	549.36
11	Restoration works for the fort gates and wall	333.38
	Sub Total	**2186.88**
E	**Aranmula**	
1.	Construction of Retaining Wall	171.20
2.	Construction of canopy for VIP gallery	165.90
3.	Construction of Bathing Ghat	28.56
4.	Construction of Toilet	26.32
5.	Construction of dining hall to perform Valla Sadhya	85.57
6.	Provision for solar powered street lights and solar farms	50.00
7.	Provision of signage boards and uniform name boards	19.57
8.	Provision of drinking water fountain	7.05
9.	Providing dustbins around the complex	3.48

10	Construction of display dock for the Thiruvonathoni	20.00
	Sub Total	**577.65**
F.	**Sabrimala**	
1.	Construction of Waiting Hall, Cloak Rooms, Shower room and toilet	100.00
2.	Development of parking facilities @ Nilackal	100.00
3.	Construction of a pedestrian bridge at Pampa next to the existing vehicular bridge	150.00
4.	Construction of a pedestrian bridge at Pampa next to the existing pedestrian bridge connecting the parking lot to the trekking path.	250.00
	Sub Total	**600.00**
	Total	**8804.06**
	Add Contingencies @ 3%	264.12
	Architectural consultancy fees @ 2%	176.08
	Grand Total	**9244.26**

2. The sanction of the President of India is also accorded to the release of Rs.1848.85 Lakh (Rupees eighteen crore forty eight lakh and eighty five thousand only) i.e. 20% of CFA as first instalment in advance for starting the work to Kerala Tourism Developemnt Corporation Limited. The payment will be arranged by Drawing and Disbursing Officer of the Ministry of Tourism by presenting a bill to Pay and Accounts Officer, Ministry of Tourism for electronic transfer of funds in favour of Kerala Tourism Developemnt Corporation Limited, Bank: State Bank of India, Account No.10347391392, IFSC Code: SBIN0007898.

3. The State Government of Kerala shall make land for the project available free of cost and also render all possible assistance for completion of the project on time. No portion of the sanctioned project should be executed/implemented on land/property owned by private individual or trust.

4. The Principal Secretary (Tourism) Govt. Of Kerala will be the nodal officer for implementation and monitoring of the project. The State Government shall set up a Monitoring Committee headed by Principal Secretary (Tourism) Kerala with a Member from the Ministry of Tourism and the Implementing agency to monitor physical and financial progress of the sanctioned project and submit the progress report to Ministry of Tourism on quarterly basis.

5. The executing agency shall put in place the mandatory facilities for barrier free access by physically disabled persons.

6. The State Government would get the work executed through Kerala Tourism Development Corporation Ltd. (KTDC) and shall have the work started immediately to ensure timely utilization of funds and to avoid escalation of cost. The project should be completed and commissioned within 36 months and any cost escalation on account of delay etc. would be met by the State Government of Kerala and no reimbursement will be made by the Central Government on this account.

7. The Central Financial Assistance will be utilized for the purpose for which funds are released. The State Government/executing agency shall not rent/lease or transfer the property without the permission of the Ministry of Tourism Government of India.

8. The State Government/KTDC would undertake the responsibility for maintenance and management of facilities for which the funds are released and no reimbursement on account of losses incurred, if any, would be made by the Central Government.

9. The State Government/KTDC shall follow PWD Schedule of rates and also follow all codal formalities while executing the project. The State Government/executing agency would take all necessary clearances which are required as per prevailing rules and regulations including relating to environment, forest & pollution control before undertaking this project.

10. The second/final instalment of CFA will be released on receipt of utilization certificate of 1st instalment of central financial assistance released for the project.

11. The Government of Kerala shall regularly furnish the monthly statement of progress of work and expenditure incurred to the Central Govt., Ministry of Tourism. The final installment will be released in the form of reimbursement on receipt of Utilization Certificate for the total amount of Central financial assistance sanctioned for the project, details of contribution made by the State Government towards State component, Completion/Commissioning Certificate to the effect that the project has been completed as per the original plan, drawing, blue print etc., approved by the Central Government and the State Government has followed all the codal formalities while executing the project, Management Agreement for proper upkeep, maintenance and operation of the asset created and Undertaking that the facility and the land on which the project has been constructed out of Central financial assistance will not be transferred/sold/alienated without the approval of the Ministry of Tourism, Government of India.

12. The executing agency will not keep the amount released by Central Government unutilized for more than six months. In case the funds cannot be utilized by such time the same will have to be surrendered to Central Government with interest or their formal approval should be taken to transfer/adjust the amount against other Central financially assisted projects.

13. Commercial Quotes etc. furnished along with the project proposal should not be deemed as accepted by Government of India. The Executing Agency/State Government shall follow the codal procedures of inviting tenders etc. while actually awarding the work for execution.

14. The assets acquired wholly or substantially out of CFA except those declared as obsolete and unserviceable or condemned in accordance with the procedure laid down in GFR shall not be disposed of without obtaining the prior approval of the authority which sanctioned the Central Financial Assistance.

15. The State Government/executing agency will maintain subsidiary account of the Government grant and furnish to the Accounts Officer a set of audited statement of accounts. These audited statement of accounts are required to be furnished after utilization of the grants-in-aid or whenever called for.

16. The accounts of all grantee Institutions or Organizations shall be open to inspection by the sanctioning Authority and audit, both by the Comptroller and Auditor-General of India under the provision of CAG (DPC) Act 1971 and internal audit by the Principal Accounts Office of the Ministry or Department.

17. The expenditure involved is debitable to Demand No.88-Tourism; 3452-Tourism (Major Head), 01-Tourist Infrastructure (Sub-Major Head), 01-101-Tourist Centres (Minor Head), 14-Swadesh Darshan – Integrated Development of Theme-Based Tourist Circuit, 14.00.31 Grants in Aid General for the year 2016-17 (Plan).

18. The State Government of Kerala has certified that no utilization certificate is pending from them in respect of grant in aid released by the Central Government in respect of all the schemes/projects/programs of Ministry of Tourism.

19. This issues with the concurrence of IF vide their U.O. No.817 dated 16.09.2016.

20. It is certified that this sanction order has not been operated earlier. This is the first installment; hence no UC/CC is required for this project at this stage.

21. This sanction is noted at Serial No. 17, Page no.09 in the Register of Grants being maintained by the Swadesh Darshan Division of Ministry of Tourism.

Yours faithfully,

Raja Kar

(Raja Kar)
Under Secretary to the Govt. of India

Copy to:-

1. The Principal Secretary (Tourism), Government of Kerala, Trivandrum.
2. MD, Kerala Tourism Development Corporation Ltd. Trivandrum.
2. Liaison Officer, Kerala Tourism, New Delhi.
3. The Pr. Pay & Accounts Officer, Ministry of Civil Aviation and Tourism, Safdarjung Airport, New Delhi
4. Integrated Finance, Ministry of Tourism, Transport Bhavan, 1, Parliament Street, New Delhi w.r.t. UO. mentioned above
5. Pr. Dte of Audit, CW&M ,N.Delhi/A. General (AE), Govt. of Kerala, Trivandrum.
6. PS to Minister (T), Transport Bhawan, 1, Parliament Street, New Delhi.
7. Regional Director, India Tourism, Chennai.
8. Asstt. DG (P&C)/DDO/AO(B&A) Ministry of Tourism, New Delhi.
9. Sanction File.

(A. S. Saxena)
Assistant Director (SD)

F.No.K-16015/35/2016-AMRUT-II
Government of India
Ministry of Urban Development
AMRUT Division

Nirman Bhawan, New Delhi
Dated: 28th September, 2016

To,

The Pay & Account Officer (Sectt.)
Ministry of Urban Development
Nirman Bhawan, New Delhi.

Subject: Release of first instalment of Central Assistance (CA) amounting Rs.77,28,00,000 /- (20% of the approved Central Share towards project fund of Rs.386.40 crore) to Govt. of Kerala under Atal Mission for Rejuvenation and Urban Transformation (AMRUT).

I am directed to convey the sanction of the Competent Authority for the release of an amount of Rs 77,28,00,000/- (Rupees Seventy Seven Crore and Twenty Eight Lakh only) to the State Government of Kerala. This amount is being released as 1st instalment being 20% of the approved Central Assistance towards project fund of Rs.386.40 crore under Atal Mission for Rejuvenation and Urban Transformation (AMRUT) for implementation of projects related to Water Supply, Sewerage, Drainage, Urban Transport (Non-motorised) and Parks approved in SAAP 2016-17. The total approved size of State Annual Action Plan (SAAP) of Kerala is Rs.796.06 crore for 2016-17.

2. The first instalment is being released on the basis of estimated project cost and any excess or shortfall in the first instalment shall be adjusted while releasing the second instalment of Central Assistance based on approved cost.

3. Diversion of Central Grants for purposes other than the Mission projects is not allowed and shall entail levy of penal interest on the amount and any other action by the Apex Committee and may include adverse effect on release of grants.

4. As per the provision of the Mission's Guidelines State Government is required to release the Central Assistance funds along with State share to the ULBs within seven working days of release of Central share by the Ministry otherwise interest at the rate specified by the Ministry of Finance shall be levied on the State for delay and appropriate deductions made from future instalments.

5. This release will be governed in terms of provisions of GFR. The amount of Central Assistance should be kept in separate account and be open to inspection/Audit as per provisions.

Contd.....

6. State Govt may take necessary action in respect of observations/ comments made by Apex Committee and recorded in the Minutes of 13th meeting of Apex Committee.

7. Atal Mission for Rejuvenation and Urban Transformation (AMRUT) is a new Mission and presently no utilization certificate is pending from the State under the Mission.

8. The sanction has been enter at Sl.No. 25 of the sanction register.

9. The expenditure involved is debitable to the Major Head 3601 - Urban Development, 04 - grants for Centrally Sponsored Plan Scheme, 315- Other Urban Development Scheme- Assistance to Local Bodies, Corporations, Urban Development Authorities, Town Improvement Boards etc., 04 Urban Rejuvenation Mission- 500 Habitations, 04.00.35-Grants for creation of capital assets under grant No. 95 -Ministry of Urban Development of the year 2016-17 (Plan).

10. The amount of Rs.77,28,00,000/- will be credited to the State Government's account to RBI as per procedure laid down by Ministry of Finance, Department Expenditure vide OM No.F-II (45/76/SC) dated 22.02.1977.

11. This issues with the concurrence of Integrated Finance Division vide their Dy. No. 1724/IFD/2016 dated 28.09.2016.

Yours faithfully

(R.P. Singh)
Under Secretary to the Government of India

Copy to:-

1. Principal Secretary, Local Self Government Department, Govt of Kerala. The amount released be utilised for the purpose for which it has been sanctioned and utilization status be furnished within six months.
2. Budget and Account Section, Ministry of Urban Development.
3. Integrated Finance Division, MoUD
4. Guard File of the Section.

(R.P. Singh),
Under Secretary to the Government of India

07.02.2017-ൽ കൂടിയ കൗൺസിൽ തീരുമാനം നം. 1

UPA3/149851/2016: പ്രധാനമന്ത്രി ആവാസ് യോജന പദ്ധതിപ്രകാരമുള്ള ഭവന നിർമ്മാണ ധനസഹായത്തിനുള്ള വിശദമായ പദ്ധതി റിപ്പോർട്ട് (DPR) തിരുവനന്തപുരം നഗരസഭ തയ്യാറാക്കിയിട്ടുണ്ട്. ജനറൽ വിഭാഗത്തിൽ 1175 ഗുണഭോക്താക്കളെയും, പട്ടികജാതി വിഭാഗത്തിൽ 218 ഗുണഭോക്താക്കളേയും, പട്ടികവർഗ്ഗ വിഭാഗത്തിൽ 4 ഗുണഭോക്താക്കളേയുമാണ് വാർഡ് കമ്മിറ്റികൾ തെരഞ്ഞെടുത്തിട്ടുള്ളത്. ടി പദ്ധതിയ്ക്കായി വേണ്ടിവരുന്ന ഫണ്ട് വിവരം ചുവടെ ചേർക്കുന്നു.

ഗുണ ഭോക്താക്കൾ	കേന്ദ്ര സർക്കാർ വിഹിതം	സംസ്ഥാന സർക്കാർ വിഹിതം	നഗരസഭ വിഹിതം	ഗുണഭോക്തൃ വിഹിതം	ആകെ
ജനറൽ - 1175	17,62,50,000	5,87,50,000	5,87,50,000	5,87,50,000	35,25,00,000
പട്ടികജാതി - 218	3,27,00,000	1,09,00,000	1,52,60,000	65,40,000	6,54,00,000
പട്ടികവർഗ്ഗം - 4	6,00,000	2,00,000	3,04,000	96,000	12,00,000
ആകെ	**20,95,50,000**	**6,98,50,000**	**7,43,14,000**	**6,53,86,000**	**41,91,00,000**

മേൽ പറഞ്ഞതിൽ നഗരസഭ വിഹിതമായി ഒടുക്കേണ്ട തുക 7,43,14,000/- രൂപ നഗരസഭാ പദ്ധതി വിഹിതത്തിലുൾപ്പെടുത്തി ഒടുക്കുന്നതിന് തീരുമാനിച്ചിട്ടുണ്ട്.

1397 പേരുള്ള ഗുണഭോക്തൃ പട്ടികയും, ഡി.പി.ആറും അംഗീകരിച്ച് സംസ്ഥാന, കേന്ദ്ര സർക്കാരുകൾക്ക് സമർപ്പിക്കുന്ന വിഷയം അംഗീകരിക്കുന്നതിന് തീരുമാനിച്ചു.

(ഒപ്പ്)
മേയർ

// ശരിപ്പകർപ്പ് //

കൗൺസിൽ സെക്രട്ടറി

PMAY

Ward No	Ward Name	No houses included in 1st phase DPR (PMAY)	Total Amount	ULB Share
27	Palayam	4	1200000	220000
28	Thycaud	8	2400000	500000
29	Vazhuthacud	5	1500000	290000
43	Valiyasala	8	2400000	400000
71	Chalai	6	1800000	360000
82	Vanchiyoor	12	3600000	660000
83	Sreekandeswaram	5	1500000	250000

List of Selected Solar Cities under "Development of Solar Cities Programme"

Sr. No	State	Approved Solar Cities	Status of Master Plan	Status of Solar City Cell
1	Andhra Pradesh	1. Vijayawada*	Prepared	Yes
		2. Narsapur Town	--	--
		3. Kakinada	--	--
2	Assam	4. Guwahati	Prepared	No
		5. Jorhat	Prepared	Yes
3	Arunachal Pradesh	6. Itanagar	Prepared	Yes
4	Bihar	7. Gaya	--	--
5	Chandigarh	8. Chandigarh**	Prepared	Yes
6	Chhattisgarh	9. Bilaspur	Prepared	Yes
		10. Raipur	Prepared	Yes
7	Gujarat	11. Rajkot*	Prepared	Yes
		12. Gandhinagar**	Prepared	Yes
		13. Surat	Prepared	Yes
8	Goa	14. Panaji City	Prepared	No
9	Haryana	15. Gurgaon	Prepared	No
		16. Faridabad*	Prepared	Yes
10	Himachal Pradesh	17. Shimla*	Prepared	Yes
		18. Hamirpur	Prepared	Yes
11	Karnataka	19. Mysore**	Prepared	Yes
		20. Hubli-Dharwad	Prepared	No
12	Kerala	21. Thiruvananthapuram	Prepared	No.
		22. Kochi	Prepared	Yes
13	Maharashtra	23. Nagpur**	Prepared	Yes
		24. Thane*	Prepared	Yes
		25. Kalyan-Dombivli	Prepared	Yes
		26. Aurangabad	Prepared	No
		27. Nanded	Prepared	No
		28. Shirdi*	Prepared	Yes
		29. Pune	--	--
14	Madhya Pradesh	30. Indore	Prepared	
		31. Gwalior	Prepared	Yes
		32. Bhopal	Prepared	--
		33. Rewa*	Prepared	Yes
		34. Jabalpur	--	--
15	Manipur	35. Imphal	Prepared	Yes
16	Mizoram	36. Aizawl*	Prepared	Yes
17	Nagaland	37. Kohima	Prepared	Yes
		38. Dimapur	Prepared	No

GOVERNMENT OF KERALA

Abstract

Public Works Department - Kerala Rapid Transit Corporation Limited - Implementation of Light Metro Rail System in Thiruvananthapuram and Kozhikode - Administrative Sanction accorded - Orders issued.

==========

PUBLIC WORKS (H) DEPARTMENT

G. O. (MS) No.74/2015/PWD Dated, Thiruvananthapuram 11.09.2015.

==========

Read:- 1) G.O.(MS) No. 72/12/PWD dt: 09.10.2012.

2) G.O.(MS) No. 78/12/PWD dt: 22.10.2012.

3) G.O.(MS)No. 44/13/PWD dt, 30.05.2013

4) G.O.(MS) No. 50/13/PWD dt: 14.06.2013.

5) G.O.(MS) No. 56/15/PWD dt: 09.01.2015

6) Letter No.66/KMCL/13/375& 463 dt: 31.10.2014 and 23.02.2015 from the Managing Director, KMCL, Thiruvananthapuram.

ORDER

Government of Kerala have decided to introduce Mass Rapid Transit System (MRTS) in Thiruvananthapuram and Kozhikode cities. M/s Delhi Metro Rail Corporation Limited (DMRC) was engaged to prepare the Detailed Project Report (DPR) for Monorail projects for both the cities. As per G. O. read as 1st and 3rd paper above Administrative Sanction were accorded for implementing Kozhikode and Thiruvananthapuram Monorail projects. As per the G.O. read as 2nd paper above, Government constituted a Special Purpose Vehicle, namely, Kerala Monorail Corporation Ltd. (KMCL) for implementing both the monorail projects.

2. As per G.O.read as 4th paper above, DMRC was appointed as the General Consultant for the implementation of these projects on a Consultancy fee @ 3.25 % of the total estimated cost. The General Consultancy Agreement between DMRC and KMCL was also signed.

3. When tenders were invited globally for both the projects, only a single bid from M/s Bombardier Transportation Consortium was received. On re-tender

also only a single bid was received from the very same firm quoting Rs.14588.08 Crore as against the estimated cost of Rs. 4500 Crore. DMRC examined the financial bid in detail. As there was only one bidder and as the quoted figure was so high, DMRC did not recommend the bid for consideration.

4. In the circumstances, DMRC put forth the following 3 options before the Board of Directors of KMCL.

i) Negotiate with the bidder
ii) Retender the monorail project
iii) Go for an alternative MRTS

5. Since the 1st and 2nd options were found not viable, the Board has decided to go for the 3rd option, ie, alternative MRTS. As an alternative, DMRC suggested the adoption of a Light Metro Rail system and pointed out the following merits of the Light Metro System:-

" The corridor selected for introduction of MRTS do not have sufficient Peak Hour Peak Direction Traffic (PHPDT) to qualify for a normal Metro. Further on these corridors, there are sharp curves upto a radius of 60 metre and gradients as steep as 6%. Light Metro has the capability to negotiate sharp curves of 60 metre radius and steep gradients of 6%. Since there are more number of players in the field of Light Metro, the chances of getting more competition while tendering is high. Moreover, the Metro technology is already available in the country. Therefore implementation of Light Metro at a comparatively lower cost is possible. It is possible to have separate tenders for rolling stock, civil works, signal systems etc. which will lead to savings in the total cost of the project compared to a single bidding process as in the case of the Monorail Project. Apart from all these, moving dimensions of the Light Metro Train will not need extensive widening and hence large scale acquisition of land and demolition of building can be avoided."

6. The Board meeting of KMCL held on 28.08.2014 considered the options putforth by DMRC and resolved to drop the Monorail project and to explore the possibilities of Light Metro Rail System as an alternative. It was also decided to entrust the preparation of a DPR for lighter version of Metro Rail System with DMRC. Accordingly DMRC prepared and submitted DPR for Light Metro Rail Project System in Thiruvananthapuram and Kozhikode.

7. The salient features of the Light Metro Project at Thiruvananthapuram and Kozhikode as per the DPR are as follows :

Light Metro Project			
		Thiruvananthapuram	**Kozhikode**
a)	Route length	21.821 Kms.	13.33 Kms
b)	No. of Stations	19	14
c)	Land Requirement		
	Government land	8.92 Hect	8.554 Hect
	Railway Land	-	0.518 Hect
	Private land	3.04 Hect	1.582 Hect
	Total	11.96 Hect.	10.654 Hect
d)	Estimated cost (Sept 2014 prices)		
	Without taxes	3024 Cr	1820 Cr
	With Central taxes	3453 Cr	2057 Cr
e)	Completion cost with Central taxes only (by the year 2020)	4219 Cr	2509 Cr
f)	Financial Indices		
	a) FIRR - without property development	2.07%	2.74%
	with property development	8.09%	8.02%
	b) EIRR	17.99 %	17.39 %
g)	Estimated Completion Period	5 years	4 years

8. As per the Detailed Project Reports, the projects would be taken up as a Joint Venture by the State and Central Governments, with 20% funding by Government of Kerala, 20% by Government of India and the balance 60% from domestic and external borrowings as done in Kochi Metro Project.

9. The Managing Director, KMCL as per letter above, reported that the 11th Board meeting of KMCL held on 24.10.2014 resolved to change the name of the Company from Kerala Monorail Corporation Limited to Kerala Rapid Transit Corporation Limited and also to recommend the DPRs for the Light Metro Projects

in Thiruvananthapuram and Kozhikode prepared by DMRC for the approval of Government.

10. Accordingly, as per Government Order read as 5th paper above, sanction was accorded to change the name of Kerala Monorail Corporation Limited to Kerala Rapid Transit Corporation Limited (KRTL).

11. Government have examined the DPR in detail and are pleased to accord Administrative Sanction for the implementation of Light Metro Rail System in Thiruvananthapuram and Kozhikode at a total estimated cost of Rs. 5510 Crore and Project Completion cost of Rs.6728 Crore.

12. Sanction is also accorded for taking up this matter with Government of India for seeking in-principle sanction for the implementation of these projects.

By Order of the Governor,

A P M MOHAMMED HANISH
Secretary to Government

To

The Managing Director, KRTL, Thiruvananthapuram
The Accountant General (Audit) ,Kerala, Thrissur
The Accountant General (A&E) ,Kerala, Thiruvananthapuram
Finance Department (vide U. O No.42440/Ind&PW B3/2015/Fin dt: 03.06.2015)
General Administration (SC) Department (vide item No. .....)
Planning & Economic Affairs Department (vide U. O No. 18438/A2/2014/Plg)
Director of Public Informations
SF/OC

Forwarded/By Order

Section Officer

GOVERNMENT OF KERALA

Abstract

PWD – Monorail Project at Kozhikode – Detailed Project Report approved – Administrative Sanction for Phase I accorded – Orders issued.

PUBLIC WORKS (H) DEPARTMENT

G.O.(Ms)No.72/2012/PWD Dated, Thiruvananthapuram, 09.10.2012.

Read:- 1. Letter No. 1966/KRFB/2012 dated 20.06.2012 from the Chief Executive Officer, Kerala Road Fund Board.
2. G.O.(Rt)No.1755/2011/PWD dated 15.12.2011.

ORDER

The present public transport system in Kozhikode is inadequate to address the needs of the public. Hence government decided to set up a Mass Rapid Transport System (MRTS) in the city. The Kerala Road Fund Board was tasked to conduct a feasibility study of introducing such a System. Kerala Road Fund Board engaged M/s Wilbur Smith Associates to conduct a feasibility study, which was completed in December 2010. The consultant proposed a monorail system from Medical College Junction to Ramanattukara for a length of 23 Kms and recommended to take up the 13 Kms from Medical College Junction to Meenchanda with 14 stations as Phase I of the project. As per G.O. (Rt)No.1755/2011/PWD, dated 15.12.2011, Kerala Road Fund Board was entrusted with the implementation of the Project in Kozhikode City.

2. Kerala Road Fund Board entrusted the task of preparation of Detailed Project Report (DPR) for the first phase of Monorail Project to Delhi Metro Rail Corporation (DMRC). Accordingly, DMRC prepared the DPR for the project from Medical College junction to Meenchanda touching Kozhikode railway station. It was also proposed that the depot of the project would be shifted to the vacant land near the Pain and Palliative Clinic of the Medical College. The length of the proposed monorail extends to 14.2 Kms with the following 15 stations:-

1. MC Hostel
2. Medical College
3. Chevayur
4. Thondayad
5. Kottuli
6. New Bus Stand
7. KSRTC
8. Mananchira

9. Palayam
10. Railway Station
11. Pushpa
12. Kallayi
13. Panniyankara
14. Vattakkinar
15. Meenchanda

3. The alignment of the Monorail will be along the middle of the PWD roads and will be fully elevated. Stations and platforms will be above the road. All stations will have elavators and the stations at Medical College, Mananchira and Railway Station will have escalators. The trains will consist of 3 cars with a carrying capacity of 525 passengers. The trains will be driverless but may also be operated with drivers.

4. DMRC has estimated a requirement of 10.654 hectares of land for implementing the project, out of which only 1.582 hectares are private land. The balance 8.554 hectares are Government land and 0.518 hectares, Railway land.

5. The total power supply needed for the project is 5 MVA. Traction voltage will be 750 V (DC). There will be two receiving substations, one at the Depot and the other at Meenchanda.

6. The rolling stock, signalling, telecommunication, traction, turnouts and workshop facilities would be combined into a single contract package and global tenders invited for procurement. The project cost is estimated at Rs.1991 crores with taxes and duties, for completion by September 2015.

7. The Internal Rate of Return (IRR) of the project is 1.42% at a cost of Rs. 1991/- crores. The Economic Rate of Return (ERR) of the project is 15.92%.

8. Government examined the matter in detail and are pleased to accord Administrative Sanction for Phase I of the Kozhikode Monorail Project at an estimated cost of Rs. 1991 crores. The DPR for Phase I of the project is approved subject to the following conditions:-

i) There will be a common Special Purpose Vehicle (SPV), namely KERALA MONORAIL CORPORATION for the implementation of Kozhikode and Thiruvananthapuram monorail Projects, with the following members in the Board of Directors:-

Chief Minister	Chairman
Minister (Works)	Vice Chairman
Minister (Industries & IT)	Director
Minister (Power & Transport)	"
Minister (Finance, Law & Housing)	"

Minister (Urban Affairs, Minority Welfare)	Director
Minister (Panchayat & Social Welfare)	"
Minister (Health & Devaswom)	"
Principal Secretary (Works)	"
Additional Chief Secretary (Transport)	"
Chief Executive Officer, Kerala Road Fund Board	"

i(a). Chief Executive Officer, Kerala Road Fund Board will be in charge of the Managing Director of the Kerala Mono Rail Corporation. A Chief Executive Officer will be appointed for managing the day today affairs of the Corporation later.

i(b). In addition, a Technical Expert in the field will also be inducted into the Board in due course.

ii). The administrative, financial and technical matters of the project will be decided by the Board of Directors. However, prior sanction of Government will be obtained for major policy decisions.

iii). The project will be structured in two stages. The first stage will consist of Land Acquisition and civil construction as a government initiative on the lines of "Vizhinjam Port" model. The second stage consisting of procurement of roiling stock, signalling, telecommunications, operation and maintenance will be implemented in Public-Private-Partnership (PPP) mode.

iv). The entire project, including civil construction works (Stage 1) and the selection of concessionaire for the PPP mode (Stage 2) will be executed through international competitive bidding.

v). DMRC may be engaged directly as a turn key consultant for the implementation of the project in a transparent manner. The SPV constituted for implementing the project will negotiate with DMRC, the detailed terms of referencce covering scope of works, terms and conditions, deliverables and fee for executing the project as a turrn key consultant. As mentioned earlier, the Board of Directors of the SPV will take all decisions on the administrative, financial and technical matters of the project, except those involving policy matters for which prior sanction from the Government will be obtained.

vi). The options of raising funds through bonds, domestic or foreign loans, Viability Gap Funding (VGF) or a combination of them will be explored for implementing the project.

vii). Government of India will be addressed to exempt the project from all Central Taxes and duties for a period of 3 years.

viii). If no exemption is granted as proposed above, then Government of India will be addrssed to sanction a grant equivalent to 50% of t.. Central Taxes and duties applicable to the project. The balance 50% will be borne by the State Government.

9. Orders will be issued separately for the following:

a). To impose 5% surcharge on fuel sold in Kerala for a period of 10 years for financing Mass Rapid Transport Projects.

b). To exempt the project from all State Taxes and Duties.

(By order of the Governor),

R. KRISHNAKUMAR
Special Secretary to Government
(In charge of Principal Secretary)

To

1. The Chief Engineer (R & B), PWD, Thiruvananthapuram.
2. The Chief Executive Officer, Kerala Road Fund Board, T.C.4/1654, Mayooram No.7, Belhaven Gardens, Thiruvananthapuram – 695 003.
3. The Managing Director, Kerala Monorail Corporation Limited.
4. The Principal Accountant General (A & E), Kerala, Thiruvananthapuram.
5. The Principal Accountant General (Audit), Karunakaran Nambiar Road, Thrissur.
6. General Administration (SC) Department
7. Finance Department
   (Vide U.O.No.56800/Ind&PW.B1/12/Fin, dated 28. 06.2012)
8. Planning & Economic Affairs Department
   (Vide U.O.No.11544/A2/12/Plg dated 06.08.2012)
9. The Director of Information & Public Relations Department
10. The Additional Chief Secretary, Transport
11. The Principal Advisor, DMRC Camp Office, Perumbavayil House, Kuttikkad P.O., Ponnani, Malappuram
12. Office copy/Stock File

Forwarded/By Order

Section Officer

നം. 102/A/2017/KSWCFC

Samunnathi

15-03-2017

മാനേജിംഗ് ഡയറക്ടർ

അഡ്വ. വി.കെ.പ്രശാന്ത്,
ബഹു. മേയർ,
മുൻസിപ്പൽ കോർപ്പറേഷൻ,
തിരുവനന്തപുരം

സർ,

വിഷയം : KSWCFC- സ്മാർട്ട്സിറ്റി പദ്ധതി - വിവരങ്ങൾ ലഭ്യമാക്കുന്നത്- സംബന്ധിച്ച്.

സൂചന : താങ്കളുടെ 07-03-2017 ലെ E13/138341/15 നമ്പർ കത്ത്.

സൂചനയിലേയ്ക്ക് ശ്രദ്ധ ക്ഷണിക്കുന്നു. സംസ്ഥാന സർക്കാർ കേരള സംസ്ഥാന മുന്നാക്ക സമുദായ ക്ഷേമ കോർപ്പറേഷൻ മുഖേന നടപ്പിലാക്കി വരുന്ന ഭവനസമുന്നതി- അഗ്രഹാരങ്ങളുടെ നവീകരണ പദ്ധതിയുടെ കീഴിൽ അഗ്രഹാരങ്ങളുടെ നവീകരണപ്രവർത്തനങ്ങൾക്കായി 2016-17 സാമ്പത്തിക വർഷം സംസ്ഥാന സർക്കാർ 3 കോടി രൂപ അനുവദിക്കുകയുണ്ടായി (ഉത്തരവിന്റെ പകർപ്പ ഉള്ളടക്കം ചെയ്യുന്നു). ടി പദ്ധതി പ്രകാരം തെരെഞ്ഞടുക്കപ്പെട്ട ഗുണഭോക്താക്കളുടെ പട്ടിക സംബന്ധിച്ച ഉത്തരവ് ഉള്ളടക്കം ചെയ്യുന്നു. കൂടാതെ ഭവനസമുന്നതി- അഗ്രഹാരങ്ങളുടെ നവീകരണ പദ്ധതിയുടെ രണ്ടാം ഘട്ടത്തിന്റെ ഭാഗമായി തിരുവനന്തപുരം കോർപ്പറേഷൻ പരിധിയിൽ വരുന്ന 20- ഓളം അപേക്ഷരെ കൂടി പരിഗണിച്ചു വരിക യാണെന്ന വിവരം അറിയിക്കുന്നു.

വിശ്വസ്തതയോടെ,
ശോഭ. വി
ജനറൽ മാനേജർ
മാനേജിംഗ് ഡയറക്ടർക്കുവേണ്ടി

അംഗീകാരത്തോടെ,

അസിസ്റ്റന്റ് മാനേജർ

Kerala State Welfare Corporation for Forward Communities Ltd.
T.C.9/476, L2, Kuleena, Jawahar Nagar, Kowdiar P.O., Thiruvananthapuram - 3
Phone : 0471 2726599, Fax : 0471 2311215, Email : kswcfc@gmail.com, md.ksacdc@gmail.com, Web : www.kswcfc.org

GOVERNMENT OF KERALA
Abstract

General Administration – Kerala State Welfare Corporation for Forward Communities Ltd – Proposal for 'Renovation of Dilapidated Agraharas' - Administrative Sanction accorded - orders issued.

GENERAL ADMINISTRATION (CO-ORDINATION) DEPARTMENT

G.O.(Rt) No.3207/2016/GAD Dated, Thiruvananthapuram, 20.05.2016.

Read:- 1) Letter No.70/MD/2016/KSWCFC dated 01.03.2016 from Managing Director, Kerala State Welfare Corporation for Forward Communities Ltd, Thiruvananthapuram.
2) Minutes of the Departmental Working Group meeting held on 05.03.2016.

ORDER

The Managing Director, Kerala State Welfare Corporation for Forward Communities Ltd, vide letter read as 1st paper above has submitted a proposal on 'Repair and Restoration of Dilapidated Agraharas' by utilising the current year's budget allocation of ₹ 300 lakhs under the head of account '2235-02-190-97-34-OC(P)' for renovating 150 units of houses in agraharas belonging to the people whose annual income is less than ₹ 2 lakhs at Palakkad and Thiruvananthapuram districts. The Corporation will provide ₹ 2 lakhs for each unit for it's renovation.

2) The proposal was placed before the Departmental Working Group held on 05.03.2016 for its consideration and the Working Group approved the proposal for issue of administrative sanction with the following recommendations.

- The term 'repair and restoration' may be avoided and only the term 'renovation' may be coined for the name of the Scheme.
- The administrative sanction should be issued only on or after 01.04.2016. Before issuing administrative sanction, clearance from Chief Electoral Officer may be sought.
- 1/3 of the total budget provision only should be incurred during the Vote on Account period.
- Expenditure should be incurred only in the financial year 2016-17.

3) The proposal has been forwarded to the Chief Electoral Officer for getting approval but the Chief Electoral Officer deferred the proposal till the completion of General Election of 2016 to Kerala Legislative Assembly is over. As the General Election is over, Government have examined the proposal and the recommendations of the Departmental Working Group in detail and are pleased to accord Administrative Sanction to the proposal of 'Renovation of Dilapidated Agraharas' submitted by the Managing Director, Kerala State Welfare

Corporation for Forward Communities Ltd for an estimated cost of ₹ 300 lakhs to be met from the current year's allocation under the head of account '2235-02-190-97-34-OC (P)' subject to the above recommendations of the Departmental Working Group.

(By order of the Governor)

K. R. JYOTHILAL
Secretary to Government

To

The Managing Director, Kerala State Welfare Corporation for Forward Communities Ltd, L.2, Kuleena, Jawahar Nagar, Kawdiar, Thiruvananthapuram
The Accountant General (A&E)/(Audit), Kerala, Thiruvananthapuram
Finance (PUC) Department (for information)
The Member Secretary, State Planning Board, Pattom, Thiruvananthapuram.
Planning & Economic Affairs Department. (for information)
The Information & Public Relations Department. (for wide publicity through media)
Web & New Media, Information & Public Relations Department, Government Secretariat. (for publishing in the Government website)
Stock File / Office Copy.

Forwarded/By order

Section Officer

Copy to:

The Private Secretary to the Hon'ble Chief Minister.
Additional Secretary to Chief Secretary.
PA to Secretary, GAD.
CA to Additional Secretary, GAD.

KERALA STATE WELFARE CORPORATION FOR FORWARD COMMUNITIES Ltd
PROCEEDINGS OF THE MANAGING DIRECTOR
(Present : Dr. K Ampady IIS)

No: 70/MD/2016/KSWCFC Thiruvananthapuram, dated: 03-08-2016

Sub: KSWCFC –Bhavana Samunnathi- Renovation of dilapidated Agraharas – Beneficiaries selected – Approval of estimates & disbursal of financial assistance – Sanction accorded- Proceedings issued- reg.

Read: 1. Proceedings of even No: dated 05.02.2016
2. G.O.(Rt) No: 3207/2016/GAD dated 20.05.2016.
3. G.O.(Rt) No: 4846/2016/GAD dated 28.07.2016.

1. Government have accorded sanction for the scheme, "Renovation of Dilapidated Agraharas" for the year 2016-17 and has provided Rs.300 lakh under the head of account "2235-02-190-97-34 OC(P)" in the current year's budget , vide G.O read as 1st paper above. Government have released Rs. 50 lakh for the implementation of first phase of the scheme, vide G.O. read as 3rd paper above.
2. The Selection Committee has selected the 45 beneficiaries (39 beneficiaries in Palakkad and 6 beneficiaries in Thiruvananthapuram) as per the proceeding read above.
3. The designated engineer of the technical consultant viz, Kerala State Coastal Area Development Corporation Limited has prepared and submitted the estimates in respect of each of the beneficiaries, as detailed below.

Estimate in respect of Beneficiaries in Palakkad District

Sl. No	Name	Address	Estimate Amount	1st Instalment (50%)	2nd Instalment (25%)	3rd Instalment (25%)
1	K.S. Gomathy	2/144, New Street, New Village, Kollamkode, Kollamkode- 1, Chittur Taluk, Palakkad.	₹ 75,000	₹ 37,500	₹ 18,750	₹ 18,750
2	A.S.Thailambal	9/127, Aalampallam, Vadavannur, Kollamkode, Chittur.P.O	₹ 1,80,000	₹ 90,000	₹ 45,000	₹ 45,000
3	R. V. Balakrishnan	10/88, Ramanathapuram, Alampallam, Kollamkode, Vadavannur, Chittur, Palakkad	₹ 2,00,000	₹ 1,00,000	₹ 50,000	₹ 50,000

4	V.Krishnamani Iyar	14/119, Thennilapuram Gramam, Thennilapuram .P.O Anchumoorthi(via), Kavasseri Village II, Alathur, Palakkad-678682.	₹ 25,000	₹ 12,500	₹ 6,250	₹ 6,250
5	Venkidachalapathi. A.V	1/504, Chathapuram, Kalpathi, Palakkad-678003.	₹ 1,00,000	₹ 50,000	₹ 25,000	₹ 25,000
6	Smt. Rema Subramanyan	V.N.Puram, 6/244, Palakkad.	₹ 75,000	₹ 37,500	₹ 18,750	₹ 18,750
7	Sundaram A. S	9/162, Alampallam, Pazhaya Gramam, Vadavannur, Chittur, Palakkad- 678506.	₹ 2,00,000	₹ 1,00,000	₹ 50,000	₹ 50,000
8	Sankara Narayanan	9/50, Alampallam, Kollengode, Vadavannur, Chittur, Palakkad- 678506.	₹ 1,00,000	₹ 50,000	₹ 25,000	₹ 25,000
9	S.Adhimoorthi	37/230, NGS.105, R.N.Puram, Nurani Village, Palakkad	₹ 1,00,000	₹ 50,000	₹ 25,000	₹ 25,000
10	Balambal	5/136, G.R.Puram, Ambikapuram.P.O, Alathur, Palakkad	₹ 2,00,000	₹ 1,00,000	₹ 50,000	₹ 50,000
11	Subramannian. T.S	8/205, Thrithamara Gramam, Paruthipully, Peringottukurussu Village I, Alathur Taluk, Palakkad-678573.	₹ 1,00,000	₹ 50,000	₹ 25,000	₹ 25,000
12	A.R.Narayanan	9/144, Aalampallam (Old), Kollencode .P.O, Vaduvanur,Chittur Taluk, Palakkad.	₹ 2,00,000	₹ 1,00,000	₹ 50,000	₹ 50,000
13	Krishnamoorthy	10/33, Perumal Kovil, Alampallam, Kollemkode, Chittur Taluk, Palakkad.	₹ 1,00,000	₹ 50,000	₹ 25,000	₹ 25,000
14	Lakshmi. K	9/57, Alampallam, Kollengode P.O, Vadavannur, Chittur Taluk, Palakkad-678506	₹ 50,000	₹ 25,000	₹ 12,500	₹ 12,500

	M.P. Srikumar	9/153, Alampallam Pazhaya Gramam, Kollamkode. P.O., Vadavannur, Chittoor Taluk, Palakkad-678506.	₹ 1,45,000	₹ 72,500	₹ 36,250	₹ 36,250
16	T.M.Ananthalekshmi	39/195, T.G.S-16, Thondikulam Village, Nurani.P.O,Palakkad-678004.	₹ 90,000	₹ 45,000	₹ 22,500	₹ 22,500
17	Ananthalekshmi Ammal	Thennilapuram Gramam, Thennilapuram P.O, Anjumoorthi, Mangalam (via) Alathur- 678682.	₹ 1,70,000	₹ 85,000	₹ 42,500	₹ 42,500
18	T.S.Lekshmiammal	1/531, Chathapuram Village, Kalpathi. P.O, Palakkad- 678003.	₹ 2,00,000	₹ 1,00,000	₹ 50,000	₹ 50,000
19	Ananthammal. T.S	Gowri Nilayam, Thennilapuram Gramam, Anjumoorthi. P.O, Alathur, Palakkad-678682.	₹ 20,000	₹ 10,000	₹ 5,000	₹ 5,000
20	K.S.Subramanian	Near Lekshmi Narayana Temple, Kuzhalmannam Agraharam, Kuzhalmannam. P.O, Palakkad- 678702.	₹ 1,80,000	₹ 90,000	₹ 45,000	₹ 45,000
21	Seetha Lekshmi R	Kuzhalmannam Agraharam, Kuzhalmannam. P. O, Alathur, Palakkad-678702.	₹ 85,000	₹ 42,500	₹ 21,250	₹ 21,250
22	K.R.Balan	No.5/353, New Kalpathy Village, Palakkad- 678003.	₹ 1,80,000	₹ 90,000	₹ 45,000	₹ 45,000
23	P.M.Radha	Kuzhalmannam Agraharam, 94, Kuzhalmannam P O, Alathur, Palakkad-678702.	₹ 1,85,000	₹ 92,500	₹ 46,250	₹ 46,250
24	R. Narayani	Shivakripa,13/538, Irattatheruvu Gramam, Vadakkancherry, Alathur, Palakkad-678683.	₹ 40,000	₹ 20,000	₹ 10,000	₹ 10,000

Sivaraman G S	6/829, Puthiya Kalpathy,Palakkad-678003.	₹ 85,000	₹ 42,500	₹ 21,250	₹ 21,250
K.V.Sankara Narayanan	1/519, Chathapuram, Kalpathy.P.O., Palakkad- 678003.	₹ 1,00,000	₹ 50,000	₹ 25,000	₹ 25,000
Lekshmiammal	Ayilam Gramam, Lalitha Nilayam, Varode.P.O, Kottayi, Palakkad- 678572.	₹ 1,25,000	₹ 62,500	₹ 31,250	₹ 31,250
G.K.Meenakshi	5/106, Govindarajapuram, Ambikapuram. P.O., Palakkad- 678011.	₹ 1,30,000	₹ 65,000	₹ 32,500	₹ 32,500
Madhurameenakshi K R	Old No.1/728, New No.5/670, Old Kalpathy, Palakkad.	₹ 2,00,000	₹ 1,00,000	₹ 50,000	₹ 50,000
P.M. Ramachandran	22/267, Thirunellai Village, Thirunellai. P.O.Palakkad-678004.	₹ 90,000	₹ 45,000	₹ 22,500	₹ 22,500
A.N.Ramanathan	1/614,Old Kalpathy.P.O, Palakkad - 678 003	₹ 1,30,000	₹ 65,000	₹ 32,500	₹ 32,500
L.R.Gopala Krishnan	7/712, L. N Puram, Puthur Village, Palakkad.	₹ 2,00,000	₹ 1,00,000	₹ 50,000	₹ 50,000
N.S.Viswanathan	NGS 150, Single Street, Nurani, Palakkad- 678004.	₹ 2,00,000	₹ 1,00,000	₹ 50,000	₹ 50,000
Soundaryavally	24/5, Muthukulam, Nurani. P.O., Palakkad-678 004	₹ 2,00,000	₹ 1,00,000	₹ 50,000	₹ 50,000
T.K.Devarajan	Old No. 22/169, New No. 35/692, Thirunellai Village, Thirunellai. P.O., Palakkad - 4	₹ 1,20,000	₹ 60,000	₹ 30,000	₹ 30,000
K.N.Lakshmy	24/162-1, Lekshmi Nivas, NGS 116, R. N. Puram, Nurani , Palakkad.	₹ 1,90,000	₹ 95,000	₹ 47,500	₹ 47,500
S.Jayalakshmy	24/153, R N Puram Street, Nurani, Palakkad.	₹ 1,70,000	₹ 85,000	₹ 42,500	₹ 42,500
C.A.Viswanathan	C S Puram Village, Parli Thaluk, Palakkad - 678 611.	₹ 1,30,000	₹ 65,000	₹ 32,500	₹ 32,500

Krishnamoorthy G D	2/316, Govindarajapuram,Jadavallabar House, Ambikapuram.P.O., Palakkad.	₹ 1,00,000	₹ 50,000	₹ 25,000	₹ 25,000

Estimate in respect of Beneficiaries in Thiruvananthapuram District

Name	Address	Estimate Amount	1st Instalment (50%)	2nd Instalment (25%)	3rd Instalment (25%)
S. Seetha	Sree Padmanabha, TC 37/1824, WSRA-27, Mithranandapuram, West Street, Fort P.O, Thiruvananthapuram	₹ 60,000	₹ 30,000	₹ 15,000	₹ 15,000
N. Rajagopalan Potty	TC. 37/1022, ASRA 20, Tippu Street, Fort, Trivandrum- 23	₹ 1,10,000	₹ 55,000	₹ 27,500	₹ 27,500
Meena Bhaskaran	TC 28/1999 Ramaswamy Kovil Theruv, Fort P.O, Vanchiyoor Village, Thiruvananthapuram- 23.	₹ 1,00,000	₹ 50,000	₹ 25,000	₹ 25,000
R Kumar	TC. 37/1171, Dheeshithar Theruv, Fort,Thiruvananthapuram	₹ 80,000	₹ 40,000	₹ 20,000	₹ 20,000
S Subramani	TC-37/1032 ASRA -30 Ayyavadhyar Street, fort, Vanchiyoor Village Thiruvananthapuram	₹ 1,20,000	₹ 60,000	₹ 30,000	₹ 30,000
R. Krishnamoorthi	TC 37/1737, S.P Lane, West fort, Trivandrum-23, Vanchiyoor Village	₹ 1,30,000	₹ 65,000	₹ 32,500	₹ 32,500
Total		**₹ 57,70,000**	**₹ 28,85,000**	**₹ 14,42,500**	**₹ 14,42,500**

The mode of disbursement of estimate amount to the beneficiaries will be as follows:

Instalment	% of estimate amount to be disbursed	Conditions
1st	50%	As advance on selection
2nd	25%	On production of certificate regarding completion of 50% of work as per the approved estimate.
3rd	25%	On production of certificate regarding completion of entire work as per the approved estimate.

5. The estimates in respect of the aforesaid 45 beneficiaries amounting to ₹ 57,70,000 (Rupees Fifty seven lakh and seventy thousand only) in total is hereby approved.
6. Sanction is also accorded for the disbursement of the 1st instalment, being 50% of the cost of the approved estimates, amounting to ₹ 28,85,000 (Rupees Twenty eight lakh and eighty five thousand only) in total to the 45 beneficiaries.

Managing Director
Kerala State Welfare Corporation
for Forward Communities Limited.

To
1. Managing Director, Kerala State Coastal Area Development Corporation Limited (KSCADC)
2. Stock file
3. Office Copy

Forwarded/By order

Assistant Manager

10 R

GOVERNMENT OF KERALA

Abstract

Implementation of "Operation Anantha", flood control programme at Thiruvananthapuram under the Disaster Management Action Plan - Constitution of Cabinet Committee to monitor the project - Designation of KRFB as the nodal agency - Orders Issued.

DISASTER MANAGEMENT(REVENUE-K) DEPARTMENT

G.O.(Rt)No. 2893/2015/DMD. Dated, Thiruvananthapuram, 05th June, 2015

Read: 1. Meeting conducted by the Hon. Chief Minister on 18.05.2015
2. Minutes of the meeting conducted by Secretary, Public Works Department on 19.05.2015

ORDER

(1) Thiruvananthapuram City has been experiencing severe floods particularly at East Fort and Thampanoor even during a moderate rain. Despite repeated attempts involving various types of engineering intervention, the areas still face the menace of flooding and this causes significant loss to public and private properties. Despite spending crores of rupees by various agencies under the State Government the flooding situation has become routine affecting the normal life of the people. The major reason for the frequent floods are manifold some of which are given below:-

- Large scale encroachments which have occupied the entire drain in certain areas.
- Narrowing of the drains due to encroachments from either side.
- Criss crossing of cables/utility pipelines etc. across the canals causing obstruction to the free flow of water.
- Filling up of ponds and conversion of ponds for other purposes (parks/playgrounds/buildings etc.)
- Silt depositions in canals.
- Dumping of solid waste directly into canals by both individuals and institutions.

(2) Even during the recent summer rain of April - May of 2015 East Fort and Thampanoor got flooded, affecting the normal life and it was apprehended that there would be an impending disaster during the monsoon. The District Administration was asked to intervene aggressively to manage the flooding situation. Hence, it was decided that the emergency powers be vested upon the District Collector as Chairman of District Disaster Management Authority invoking Kerala State Disaster Management Rules, 2007 under Chapter VI of the Disaster Management Act 2005 (DM Act, 2005) to ensure an immediate solution to tackle this threatening situation to life and public property.

(3) Accordingly short and long term action plans were prepared for implementation by various organizations under the State Government like PWD (Roads), Minor Irrigation, Major Irrigation, KSUDP, KRFB, KWA (Sewerage), KWA (Water Supply), Thiruvananthapuram Corporation, KSEB, BSNL etc. to mitigate the disastrous effect of flooding during the monsoon of 2015. The action plan named as "Operation Anantha" attaches top priority to clearing the encroachments and obstructions in the existing drains in and around East Fort and Thampanoor. The progress of action taken as per the action plan is being reviewed at the level of the Chief Secretary, Principal Secretary, District Collector and other senior officers of the respective departments. An amount of Rs. 10 Crore has also been sanctioned for the above works.

(4) Multiple agencies doing the flood eradication works often reduce its effectiveness and cause confusion. It was therefore suggested that a single nodal agency that can co-ordinate with all the stake holders would be a better solution to implement the project in a more effective way.

(5) Government have examined the case in detail and are pleased to order as follows:-

(a) A Cabinet Sub Committee consisting of the following Ministers is constituted to monitor and oversee the various programs of flood control taken up under "Operation Anantha":-

1. Sri. P.J.Joseph, Hon'ble Minister for Water Resources
2. Sri. V.K.Ebrahim Kunju, Hon'ble Minister for Public Works Department
3. Shri Manjalamkuzhi Ali , Minister for Urban Affairs & Minority Welfare
4. Shri V.S. Sivakumar, Minister for Health & Dewasom
5. Shri Adoor Prakash, Minister for Revenue and Coir

(b) A District Level Co-ordination Committee with District Collector as Chairman, Sub Collector as Convenor and officers of the various departments/organizations at the level of Executive Engineers shall also be constituted to oversee the progress of daily activities.

(c) Kerala Road Fund Board (KRFB) shall be designated as the nodal agency for planning and co-ordinating the project for this monsoon (short term). A separate wing will be created in KRFB with professionals posted on working arrangement from various organizations, who are presently executing the works of "Operation Anantha". This wing will have the responsibility to plan, co-ordinate and monitor the works on a war footing under fast-track mode under Disaster Management Action Plan. All the encroachments affecting the smooth and normal flow of the existing rains in the city will be demolished and cleared. Drains will be constructed wherever necessary including through private properties in which case adequate compensation will be given to the owners, wherever eligible as per rules.

(d) The wing constituted in KRFB for the purpose of "Operation Anantha" will contain the following officers on a working arrangement basis.

1. Executive Engineer, PWD (Roads)
2. Asst. Executive Engineer, (Major & Minor Irrigation)
3. Asst. Executive Engineer, KWA (sewerage)
4. Asst. Executive Engineer, Thiruvananthapuram Corporation
5. Assistant Engineer PWD (NH)
6. Assistant Engineer, PWD (Bldgs)
7. Assistant Engineer, KWA (PH)
8. Assistant Engineer KSEB
9. Assistant Engineer, Inland Navigation
10. Representative from KSUDP
11. Representative from NATPAC

(e) The Empowered Committee chaired by the Chief Secretary will sanction works (both Administrative Sanction and Technical Sanction) costing more than Rs. 25 lakhs and the District Level Committee chaired by the District Collector will sanction works below Rs. 25 lakhs.

(f) The District Collector, Thiruvananthapuram shall continue to arrange for eviction of encroachments into the existing drains in the city.

(g)The concerned departments shall arrange for clearing, widening, reconstructing and maintenance of the drains.

(h) Nodal agency shall finalize a uniform design and style for the work. There should be effective co-ordination among the various agencies.

(i) Estimates for clearing/maintenance/widening/reconstruction etc of the drains shall be prepared by the concerned organizations.

(j) Works can be entrusted with contractors empanelled by the respective departments deviating from the tender formalities, considering the emergency, based on the AS & TS issued by Empowered Committee to avoid delays.

(k) Supervision of works and scrutiny of bills shall be done by concerned departments.

(l) Payments are to be made by the District Collector and Chairman of Disaster Management Action Plan based on the completion certificates issued by the competent officials of the concerned departments.

(m) Execution of works already undertaken by the concerned departments with own funds shall be continued as such and expedited. The same need not be clubbed with "Operation Anantha".

(n) The expenditure for existing emergency works already started by Revenue Department shall be met by the District Collector on receipt of bills duly certified by the concerned duty officer of Revenue Department. KSUDP shall provide necessary technical assistance for the scrutiny.

(o) Shifting of utilities, cables etc., that is hindering the smooth flow of water in the canals should be ensured by the utility agencies along with the drain works.

This order will supersede all previous orders.

(By Order of the Governor)
JIJI THOMSON
Chief Secretary

To

All Secretaries to Government
All Departments in the Secretariat
Dr. R.K.Dave, Head, Information Technology Research Academy,
Media Lab Asia, Department of Electronic and Information Technology,
Government of India, New Delhi.
The Secretary, State Disaster Management Authority, Revenue Complex,
Public Office Building, Thiruvananthapuram
The District Collector, Thiruvananthapuram
Dr.Sekhar L.Kuriakose, Head(Scientist), State Emergency Operations Centre ,
ILDM, PTP Nagar,Thiruvananthapuram
The Principal Accountant General (Audit) Kerala, Thiruvananthapuram
The Accountant General (A&E) Kerala, Thiruvananthapuram
The Managing Director, KWA, Thiruvananthapuram
The Project Director, KSUDP, Thiruvananthapuram
The Chief Engineer (R&B, NH, Building, Administration etc.), PWD
The Chief Engineer, (Irrigation)
The Chief Engineer, Water Authority (Southern Region)
The Director, Inland Navigation
The Secretary, KSEB
The Secretary, Thiruvananthapuram Corporation
The Principal General Manager, Thiruvananthapuram (With C/L)
The Local Self Government Department
The Local Self Government(Urban Affairs) Department
The Home (Vigilance) Department
Water Resources Department
The Public Works Department (U.O. (f) No.12839/H1/15/PWD
The Finance Department
The Transport Department

Copy to:

PS to Hon'ble Chief Minister
PS to Minister (Revenue & Coir)
PS to Minister (Urban Affairs & Minority Welfare)
PS to Minister(Health & Devaswom)
PS to Minister (Water Resources)
PS to Minister (PWD)
Additional Secretary to Chief Secretary
PS to Principal Secretary (Revenue & DM)
Stock File/Office Copy
The Information Officer, Web & New Media, I&PRD

Forwarded/By Order

Section Officer

सत्यमेव जयते

व्यापार प्रारंभ करने का प्रमाण-पत्र

कम्पनी अधिनियम 1956 की धारा 149(3) के अनुसरण में

कॉर्पोरेट पहचान संख्या : U60210KL2012SGC032836

मैं एतदद्वारा सत्यापित करता हूँ कि मैसर्स
Kerala Monorail Corporation Limited

जिसका निगमन, कम्पनी अधिनियम, 1956(1956 का 1) के अंतर्गत दिनांक पांच दिसम्बर दो हजार बारह को किया गया था और जिसने निर्धारित प्रपत्र में घोषणा प्रस्तुत की है या विधिवत सत्यापित किया है कि उक्त कम्पनी ने, अधिनियम की धारा 149(2) (क) से (ग) तक की शर्तो का अनुपालन कर लिया है और व्यापार करने के लिए हकदार है।

यह प्रमाण-पत्र आज दिनांक चार अप्रेल दो हजार तेरह को इरणाकुलम में जारी किया जाता है।

Certificate for Commencement of Business

Pursuant of Section 149(3) of the Companies Act, 1956

Corporate Identity Number : U60210KL2012SGC032836

I hereby certify that the Kerala Monorail Corporation Limited which was incorporated under the Companies Act, 1956(No. 1 of 1956) on the Fifth day of December Two Thousand Twelve , and which has this day filed or duly verified declaration in the prescribed form that the conditions of the Section 149(2)(a) to (c) of the said act, have been complied with and is entitled to commence business.

Given at Ernakulam this Fourth day of April Two Thousand Thirteen.

Registrar of Companies, Kerala and Lakshadweep
कम्पनी रजिस्ट्रार, केरल एवं लक्षद्वीप

*Note: The corresponding form has been approved by V E JOSEKUTTY, Deputy Registrar of Companies and this certificate has been digitally signed by the Registrar through a system generated digital signature under rule 5(2) of the Companies (Electronic Filing and Authentication of Documents) Rules, 2006.
The digitally signed certificate can be verified at the Ministry website (www.mca.gov.in).

कम्पनी रजिस्ट्रार के कार्यालय अभिलेख में उपलब्ध पत्राचार का पता :
Mailing Address as per record available in Registrar of Companies office:

Kerala Monorail Corporation Limited
Mayooram ,Belhaven Gardens, Kowdiyar,
Trivandrum - 695003,
Kerala, INDIA

GOVERNMENT OF INDIA
MINISTRY OF CORPORATE AFFAIRS
Registrar of Companies, Ernakulam
1st Floor , Company Law Bhawan , BMC Road , Thrikkakara (PO) Ernakulam - 682021, Kerala, INDIA

Certificate of Incorporation pursuant to change of name

[Pursuant to rule 29 of the Companies (Incorporation) Rules, 2014]

Corporate Identification Number (CIN): : U60210KL2012SGC032836

I hereby certify that the name of the company has been changed from Kerala Monorail Corporation Limited to KERALA RAPID TRANSIT CORPORATION LIMITED with effect from the date of this certificate and that the company is limited by shares.

Company was originally incorporated with the name Kerala Monorail Corporation Limited

Given under my hand at Ernakulam this Thirtieth day of June Two Thousand Fifteen.

Signature Not Verified
Digitally Signed by Ministry of Corporate Affairs - Govt of India
Date: 2015.06.30 18:27:31 GMT+05:30

A SEHAR PONRAJ
Registrar of Companies
Registrar of Companies
Ernakulam

Mailing Address as per record available in Registrar of Companies office:

KERALA RAPID TRANSIT CORPORATION LIMITED
Mayooram ,Belhaven Gardens, Kowdiyar,
Trivandrum - 695003,
Kerala, INDIA

VENKATESAPATHY S. IAS
District Collector &
District Magistrate

COLLECTORATE, CIVIL STATION
KUDAPPANAKUNNU
THIRUVANANTHAPURAM
KERALA, INDIA

Phone
Direct : +91 471-2731177
Fax : +91 471-2731166
Res : +91 471-2318746
Cell No. : 9447700222

E-mail : dctvm.ker@nic.in
dctvpm14@gmail.com

The Mission Director
Smart Cities Mission
Ministry of Urban Development

Roc No. H1-33275/15

Dated 18.03.2017

Dear Sir,

Sub: Smart City – District Collector, Thiruvananthapuram – Letter of support towards co-ordinating and delivering the Pan City and Area Based Initiatives under the Smart City Mission – Regarding.

Ref: Letter from the Hon'ble Mayor, Thiruvananthapuram Corporation

It gives me great pleasure to note that Thiruvananthapuram City Municipal Corporation has been short listed to participate in the Smart City Challenge. As part of the Smart City initiative, we hope to undertake host of projects under Pan City and Area Based components.

We understand that our Department falls under the ambit of Smart City and the District Collector, Thiruvananthapuram assures to extend its co-operation in implementation of the Project and support the newly set up Special purpose vehicle.

Yours faithfully,

District Collector

E-mail: md@kwa.kerala.gov.in
Website:http://www.kwa.kerala.gov.in

Fax: 91-0471-2324903
Tel: 0471-2328654

KERALA WATER AUTHORITY

JALABHAVAN
THIRUVANANTHAPURAM – 695 033
KERALA –SOUTH INDIA

Roc No.

Dated 17-03-2017

From

The Deputy Chief Engineer (Planning)
Kerala Water Authority
Jalabhavan
Thiruvananthapuram

To

The Mission Director
Smart Cities Mission
Ministry of Urban Development

Dear Sir,

Sub: Smart City – Kerala Water Authority– Letter of support towards co-ordinating and delivering the Pan City and Area Based Initiatives under the Smart City Mission – Regarding.

Ref: E-mail dated 17-03-2017 from the Mayor, Thiruvananthapuram Municipal Corporation.

It gives me great pleasure to note that Thiruvananthapuram City Municipal Corporation has been short listed to participate in the Smart City Challenge. As part of the Smart City initiative, we hope to undertake host of projects under Pan City and Area Based components.

We understand that our department falls under the ambit of Smart City and Kerala Water Authority assures to extend its cooperation in implementation of the Project and support the newly set up Special purpose vehicle.

Yours faithfully

E V RAJAGOPALAN
Deputy Chief Engineer (Planning)

Deputy Chief Engineer (P&M)
Jalabhavan
Kerala Water Authority
Thiruvananthapuram-33

KERALA STATE ELECTRICITY BOARD LTD.
(Incorporated under Indian Companies Act, 1956)
Regd. Office Vydyuthi Bhavanam, Pattom, Tvpm;
Web Site: www.kseb.in ;CIN:U40100KL2011SGC027424
Office of the Chief Engineer (IT& CR), Cabin No.856,
Phone: 0471-2514610, e-mail: ceit@kseb.in

CE(IT)/RITU/SmartCity/ Dated 17.03.2017

From
Sri.V.Kesavadas
Chief Engineer(IT&CR)
Vydyuthi Bhavanam\
Thiruvanathapuram

To

The Mission Director
Smart Cities Mission
Ministry of Urban Development

Dear Sir,

Sub: Smart City -Thiruvananthapuram- Kerala State Electricity Board Limited-
Letter of Support towards co-ordinating and delivering the Pan City and Area Based Initiatives under the Smart City Mission-Regarding.

Ref: Letter from the Mayor, Trivandrum Corporation dated 15th March 2017

It gives me great pleasure to note that Thiruvananthapuram City Municipal Corporation has been short listed to participate in the Smart City Challenge. As part of the Smart City initiative ,we hope to undertake host of projects under Pan City and Area Based components

We understand that our Department falls under the ambit of Smart City and KSEBL assures to extend its co-operation in implementation of the Project and support the newly set up Special purpose Vehicle.

Chief Engineeer (IT&CR)

KERALA STATE ROAD TRANSPORT CORPORATION

TRANSPORT BHAVAN, FORT, THIRUVANANTHAPURAM-695023

Phone: 0471-2471011, 2462829 Fax : 0471-2462679

E-mail: mdkeralartc@yahoo.com,cmd@kerala.gov.in, Website : www.keralartc.com

Roc No.TR1 – 000017/2017.

Dated, 18-03-2017

From

The Chairman & Managing Director
Kerala State Road Transport Corporation.
Transport Bhavan, Fort,
Thiruvananthapuram – 695023.

To

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

Dear Sir,

Sub: Smart City – Kerala State Road Transport Corporation, Thiruvananthapuram – Letter of support towards co-ordinating and delivering the Pan City and Area Based Initiatives under the Smart City Mission – Regarding.

Ref: e-mail from the Mayor, Thiruvananthapuram Municipal Corporation, Dated, 18-03-2017

It gives me great pleasure to note that Thiruvananthapuram City Municipal Corporation has been short listed to participate in the Smart City Challenge. As part of the Smart City initiative, we hope to undertake host of projects under Pan City and Area Based components.

We understand that our department falls under the ambit of Smart City and Kerala State Road Transport Corporation assures to extend its cooperation in implementation of the Project and support the newly set up Special purpose vehicle.

Yours faithfully,

CHAIRMAN & MANAGING DIRECTOR

SUCHITWA MISSION
Local Self Government Department
Government of Kerala

No. 3719/D1/2015/SM

Date: 17/03/20167

From

Executive Director

To

The Mission Director
Smart Cities Mission
Ministry of Urban Development

Sir,

Sub:- Smart City-Thiruvananthapuram Municipal corporation-Letter of Support towards co-ordinating and delivering the Pan City and Area Based Initiatives under the Smart City Mission-reg

Ref:- Letter from the Mayor,Thiruvananthapuram Municipal Corporation dated 17/3/2017.

It gives me great pleasure to note that Thiruvananthapuram City Municipal Corporation has been short listed to participate in the Smart City Challenge. As part of the Smart City initiative, we hope to undertake host of projects under Pan City and Area based components.

We understand that our department falls under the ambit of Smart City and Suchitwa Mission assures to extend its co-operation in implementation of the Project and support the newly set up Special purpose vehicle.

Yours faithfully,

Executive Director

Swaraj Bhavan, Basement Floor (-1), Nanthencode, Kowdiar P.O., . Thiruvananthapuram- 695 003
Ph: 0471-2316730, 2312730 Fax0471 – 2312730, E-mail :sanitationkerala@gmail.com

Department of Tourism
Park View, Thiruvananthapuram, 695 033,
Kerala, India, Fax: 0471-2322279
Phone-0471-2326812, 2321132,
E-Mail: info@Keralatourism.org
http://www.keralatourism.org
Date: 17-03-2017

From,
Director

To
The Mission Director
Smart Cities Mission
Ministry of Urban Development

Dear Sir,

Sub: Smart City – Department of Touris, Thiruvananthapuram– Letter of support towards co-ordinating and delivering the Pan City and Area Based Initiatives under the Smart City Mission – Regarding.
Ref: Mailed letter dated 17.03.2017 from the Mayor, Thiruvananthapuram Corporation

It gives me great pleasure to note that Thiruvananthapuram City Municipal Corporation has been short listed to participate in the Smart City Challenge. As part of the Smart City initiative, we hope to undertake host of projects under Pan City and Area Based components.

We understand that our department falls under the ambit of Smart City and Department of Tourism assures to extend its cooperation in implementation of the Project and support the newly set up Special purpose vehicle.

DEPARTMENT OF TOURISM
PARK VIEW
THIRUVANANTHAPURAM
695 033
GOVT OF KERALA

Director

No.D3-1230 /SE/ISC/2015

Office of the Superintending Engineer,
Irrigation South Circle,
Thiruvananthapuram
Dated:- 20 /03/2017

From

The Superintending Engineer.

To

The Mission Director
Smart Cities Mission
Thiruvananthapuram

Sir,

Sub: Smart City -Thiruvananthapuram –Co ordinating and delivering the Pan City and Area Based Initiatives under the Smart City Mission - reg:

Ref : E mail sent to the Chief Engineer, Irrigation and Administration, Thiruvananthapuram

With reference to the E mail sent, the Chief Engineer, Irrigation and Administration has authorized this office to accordthis office department's consent for implementing the above said project.

While according a general consent , it may be informed that on receipt of funds to this department from the Mission Director ,the work could be undertaken by this department.

Yours faithfully,

Pl to SE

Superintending Engineer.

Copy submit to Chief Engineer(I&A) Thiruvananthapuram
for information . This is with respect to that office Letter No W3/10767/2017/DB3 dtd:18 /03/2017

OFFICE OF THE SUPERINTENDING ENGINEER
PMG JUNCTION
THIRUVANANTHAPURAM
PIN: 695 004
SOUTH CIRCLE

From

The Director
Department of Archaeology
Sundaravilasam Palace, Fort P.O.
Thiruvananthapuram – 23.

To

The Mission Director
Smart Cities Mission
Ministry of Urban Development

Roc No.

Date: 23/03/2017

Dear Sir,

Sub: Smart City – Thiruvananthapuram – Department of Archaeology – Letter of support towards co-ordinating and delivering the Pan City and Area Based Initiatives under the Smart City Mission – Regarding.

Ref: e-mail message from Mayor, Thiruvananthapuram Corporation.

It gives me great pleasure to note that Thiruvananthapuram City Municipal Corporation has been short listed to participate in the Smart City Challenge. As part of the Smart City initiative, we hope to undertake host of projects under Pan City and Area Based components.

We understand that our department falls under the ambit of Smart City and Department of Archaeology assures to extend its cooperation in implementation of the Project and support the newly set up Special purpose vehicle.

പുരാവസ്തു വകുപ്പദ്ധ്യക്ഷ കാര്യാലയം
തിരുവനന്തപുരം-23
ഫോർട്ട് പി.ഒ.

Director

No. 67/Camp/CP/2017-TC
Office of the District Police Chief
Thiruvananthapuram City
Dated 17.03.2017

From

District Police Chief
Thiruvananthapuram city

To

The Mission Director
Smart Cities Mission
Ministry of Urban Development

Dear Sir,

Sub: Smart City – Thiruvananthapuram City Police – Letter of support towards co-ordinating and delivering the Pan City and Area Based Initiatives under the Smart City Mission – Regarding.

Ref: Email dated 15.03.2017 from the Mayor, Thiruvananthapuram Municipal Corporation.

It gives me great pleasure to note that Thiruvananthapuram City Municipal Corporation has been short listed to participate in the Smart City Challenge. As part of the Smart City initiative, we hope to undertake host of projects under Pan City and Area Based components.

We understand that our Department falls under the ambit of Smart City and Thiruvananthapuram city police assures to extend its co-operation in implementation of the Project and support the newly set up Special purpose vehicle.

Office of the DIG & District Police Chief ★ Thiruvananthapuram City ★

Yours faithfully

District Police Chief,
Thiruvananthapuram city.

TIRUVANANTHAPURAM DEVELOPMENT AUTHORITY

From

The Secretary,
TRIDA,
Thiruvananthapuram

To

The Mission Director
Smart Cities Mission
Ministry of Urban Development

Letter No.E1/583/2017/TRIDA dtd 18/03/2017

Dear Sir,

Sub: Smart City – Thiruvananthapuram -TRIDA – Letter of support towards co-ordinating and delivering the Pan City and Area Based Initiatives under the Smart City Mission – Regarding.

Ref: Letter from the Hon'ble Mayor, Thiruvananthapuram Corporation by e-mail received on 17/03/2017.

It gives me great pleasure to note that Thiruvananthapuram City Municipal Corporation has been short listed to participate in the Smart City Challenge. As part of the Smart City initiative, we hope to undertake host of projects under Pan City and Area Based components.

We understand that our department falls under the ambit of Smart City and TRIDA assures to extend its cooperation in implementation of the Project and support the newly set up Special purpose vehicle.

Yours Faithfully

Secretary

SECRETARY
Thiruvananthapuram Development Authority

SREE PADMANABHA SWAMY TEMPLE

Mathilakam Office, West Nada, Fort, Thiruvananthapuram - 695 023, Phone : 0471-2450233, 2575550,
Fax : 0471-2450233, Website : www.sreepadmanabhaswamytemple.org.,
E-mail : info@sreepadmanabhaswamytemple.org

A.81/2017/SPST

Date: 29.03.2017

To

The Mission Director
Smart Cities Mission
Ministry of Urban Development

Roc No.

Dear Sir,

Sub: Smart City – Thiruvananthapuram – Sree Padmanabha Swamy Temple - Letter of support towards co-ordinating and delivering the Pan City and Area Based Initiatives under the Smart City Mission – Regarding.

Ref: Email from Mayor, Thiruvananthapuram Municipal Corporation

It gives me great pleasure to note that Thiruvananthapuram City Municipal Corporation has been short listed to participate in the Smart City Challenge. As part of the Smart City initiative, we hope to undertake host of projects under Pan City and Area Based components.

We understand that our department falls under the ambit of Smart City and Sree Padmanabha Swamy Temple assures to extend its cooperation in implementation of the Project and support the newly set up Special purpose vehicle.

SREE PADMANABHASWAMY TEMPLE

Yours faithfully,

Manager
For Executive Officer

No. CE/BL/Gl/A1/2586/2017

Office of the Chief Engineer
PWD, Buildings
Thiruvananthapuram
Dated : 27.03.2017

From

The Chief Engineer

To

Adv. V.K.Prasanth
Hon'ble Mayor
Thiruvananthapuram Corporation

Sir,

Sub:- **PWD (Buildings) Smart City – Thiruvananthapuram - letter of Support towards co-ordinating and delivering the pan city and area based initiatives under the Smart City Mission – Reg.**

Ref:- That office letter No. E 13-138341/15 dated 20.03.2017

.....

It gives me great pleasure to note that Thiruvananthapuram city Municipal Corporation has been short listed to participate in the Smart City Challenge. It is learnt that as part of the smart City initiative, Thiruvananthapuram Corporation is planning to undertake host of projects under pan city and area based components.

We understand that our department falls under the ambit of smart city and Kerala Public Works Department assures to extend its co-operation to implementation of the project and support the newly set up special purpose vehicle.

Yours faithfully,

CHIEF ENGINEER

Svs 29.03.2017

No. CE/R&B/3313/2017/Tvm.

Phone: 0471 2322346
Fax : 0471 2322346
Mob (O) : 80 86 39 5025
E mail: ceroads.pwd@kerala.gov.in
Office of the Chief Engineer,
PWD Roads & Bridges,
Public Office, Museum P.O.,
Thiruvananthapuram,
Dated 21/03/2017.

From

The Chief Engineer.

To

Adv. V.K. Prasanth,
Hon'ble Mayor,
Thiruvananthapuram Corporation.

Sir,

Sub:- PWD (R&B) – Smart City – Thiruvananthapuram – Letter of support towards co-ordinating and delivering the Pan City and Area Based initiatives under the Smart City Mission – reg.

Ref:- That office Letter No. E13-138341/15. Dated 20/03/2017

It gives me great pleasure to note that Thiruvananthapuram City Municipal Corporation has been short listed to participate in the Smart City challenge. As part of the Smart City Initiative, we hope to undertake host of projects under Pan City and Area Based Components.

We understand that our department falls under the ambit of Smart City and Kerala Public Works Department assures to extend its co-operation to implementation of the Project and support the newly set up Special Purpose vehicle.

Yours faithfully,

CHIEF ENGINEER

No.A6.2193/17/DC

DIRECTORATE OF CULTURE
THYCAUD
THIRUVANANTHAPURAM.

FROM,

DIRECTOR

TO,

The Mission Director
Smart Cities Mission
Ministry of Urban Development

Dear Sir,

Sub: Smart City - Directorate of Culture, Thiruvananthapuram - Letter of support towards co -ordinating and delivering the Pan City and Area Based Initiatives under the Smart City Mission - Regarding.

Ref: Mailed letter dated 17.03.2017 from the Mayor, Thiruvananthapuram Corporation.

It gives me great pleasure to note that Thiruvananthapuram City Muncipal Corporation has been short listed to participate in the Smart City Challenge. As part of the smart City initiative, we hope to undertake host of projects under Pan City and Area Based components.

We understand that our department falls under the ambit of Smart City and directorate of Culture assures to extend its cooperation in implementation of the Project and support the newly set up Special purpose vehicle.

DIRECTOR

V. R. RADHAKRISHNAN
DIRECTOR OF CULTURE
(Additional Secretary to Government)
Thiruvananthapuram-695014
Kerala

Thycaud
29/03/2017.

0471-2328193

Delhi, Mumbai not the best in urban governance, Thiruvananthapuram first

Thiruvananthapuram, Pune and Kolkata have emerged as the top three Indian cities that were tested on various urban governance parameters, according to a 21-city survey by Bengaluru-based advocacy group Janaagraha Centre for Citizenship and Democracy.

According to the fourth edition of the Annual Survey of India's City Systems 2016, Delhi that has a population of about 18 million has been ranked at a distant 9, behind much smaller cities such as Bhopal and Kanpur.

The national capital, which was ranked 6 in the 2015 survey, fared poorly on three aspects of urban governance --- urban capacities and resources of municipalities to undertake reform; empowered and legitimate political representation; transparency, accountability and participation. Delhi, however, topped the chart in the urban planning and design category with a score of 3.7 --- ahead of Mumbai and Bengaluru, among others.

Chandigarh, perceived to be a planned city, and Jaipur finds mention at the bottom of the list.

"Our cities have continued to score low indicating that progress, on fixing city-systems, has been slow," Srikanth Viswanathan, Janaagraha CEO, said.

Mumbai and Ahmedabad with a score of 4.4 top the list of cities that have invested adequate funds in public infrastructure and services. A majority of the cities rely heavily on government grants.

The survey found that the 21 cities generate just 37% of the amount they spend on average, with Patna raising only 17% on its own. Only Mumbai, Delhi, Hyderabad and Pune generate over 50% of the amount they spend from their own revenue.

While Thiruvananthapuram's per capita spend on capital expenditure is Rs 8,389, it is as low as Rs 418 in Patna.

Irrespective of the rankings, none of the Indian cities match up to London and New York, which top the global benchmarks.

All the 21 cities scored between 2.1 and 4.4 out of 10 on all the indicators as against 9.4 and 9.7 scored by the two global cities, implying how grossly under-prepared Indian cities in terms of delivering a high quality of life that is sustainable in the long term.

The survey says none of the Indian cities, for instance, have effective policies to deter plan violations, which is evident from the mushrooming slums and unauthorised colonies across states. All the 21 cities scored zero on this parameter as compared to 9.1 to 10 for London and New York.

CITY	OVERALL SCORE	2016 RANK	2015 RANK
Thiruvananthapuram	4.4	1	1
Pune	4.2	2	4
Kolkata	4.1	3	3
Mumbai	4.1	4	2
Hyderabad	3.9	5	6
Bhopal	3.7	6	5
Kanpur	3.6	7	9
Chennai	3.6	8	8
DELHI	3.6	**9**	**7**
Bhubaneshwar	3.5	10	18

WHERE DO INTERNATIONAL CITIES STAND

CITY	AVERAGE SCORE
London	9.3
New York	9.8

BOTTOM FIVE INDIAN CITIES

CITY	OVERALL SCORE	2016 RANK	2015 RANK
Chandigarh	2.1	21	21
Jaipur	2.7	20	20
Ludhiana	3.0	19	19
Dehradun	3.1	18	17
Surat	3.2	17	15

**governance: urban planning and design; urban capacities and resources; empowered and legitimate political representation; transparency, accountability and participation.

The report quotes a survey done by Bangalore Municipal Corporation in 2014 where out of 400 buildings that were inspected only three conformed to rules.

"Our cities singularly lack in municipal capacities running on outdated systems. Municipalities are the closest governance system to citizens directly impacting their lives. They are responsible for improving the quality of life in our cities," KT Ravindran, dean emeritus at the RICS School of Built Environment, said.

"If we are serious about improving our cities, we need to invest in municipal capacities, training staff, etc," Ravindran, who is the former chairperson of Delhi Urban Arts Commission, added.

Most of the Indian town and country planning acts date back to last century. India has one planner per four lakh citizens as against 48 in the United States and 148 in the United Kingdom.

And poor urban planning can cost a country 3% of its GDP, the survey says.

However, the findings also reveal silver linings and aspects where Indian cities can learn a lot from each other.

"Rajasthan ushering in urban land titling reforms and Odisha's efforts to increase municipal capacities by constituting municipal cadres are excellent examples from this year of how we can move forward and help our cities serve their citizens better," the survey notes.

GOVERNMENT OF KERALA

Abstract

Local Self Government Department - JNNURM - Automobile Parking Policy for the towns and Cities in the State of Kerala - orders issued.

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LOCAL SELF GOVERNMENT (DC) DEPARTMENT

G.O.(MS.)No.62 /2011/LSGD. Dated, Thiruvananthapuram, 26-2-2011.

==========

ORDER

Government are pleased to approve the Automobile Parking Policy for the towns and cities in the State of Kerala appended herewith as envisaged in the Reforms under JNNURM.

By order of the Governor,

M.Unnikrishnan,
Addl. Secretary to Government.

To

All Mayors, Corporation of Thiruvananthapuram/Kollam/Kochi/ Thrissur/Kozhikode.
The Director of Urban affairs, Thiruvananthapuram.
The Project Director, Kerala Sustainable Urban development Project.
All Secretaries, Corporation of Thiruvananthapuram/Kollam/Kochi/ Thrissur/Kozhikode.
All Chairmen of Municipalities (Through Director of Urban Affairs)
All Secretaries of Municipalities (Through Director of Urban Affairs).
The Secretary, Ministry of Urban Development, Government of India (with C/L)
PWD/Transport/Finance Department.
The Chief Engineer, Local self Government Department.
The Chief Town Planner, Thiruvananthapuram.
The Principal Accountant General (Audit) Kerala, Thiruvananthapuram.
The Accountant General (A&E) Kerala, Thiruvananthapuram.
The Director, Information and Public Relations Department.
Stock File/Office Copy.

Copy to:- PS to Minister (LSGD).
PA to Addl. Chief Secretary, LSGD.
PA to Secretary, LSGD.

Forwarded/By order,

Section Officer.

VEHICLE PARKING POLICY FOR THE TOWNS AND CITIES IN THE STATE OF KERALA

Introduction

The State of Kerala has been experiencing astounding annual growth in the number of vehicles during the last two decades. Such increase in the number of vehicles (passenger and goods vehicles) increase the traffic volume much beyond the capacity of the roads in the State. Though all the motorable roads, irrespective of urban or rural, are affected by this increasing traffic volume, the urban roads suffer most due to the convergence of traffic. The State has been spending substantial funds on widening and improvement of the roads for increasing the carrying capacity of the roads; though the expected benefits do not result. Urban Planning practices prove that widening of the roads in proportion to the increasing traffic volume is not the only option in traffic planning. However, it is seen that even when roads are widened, the expected reduction of traffic congestion does not happen. Traffic Studies in some of our towns show that one of the major factors contributing to traffic congestion is on-street parking of vehicles. Precious carriage way is used for parking vehicles, which reduces the width of the motorable way. 4 lane roads behave as two lane roads since outer lanes on either side are used for parking. Traffic movement on 2 lane roads are blocked /slowed down when vehicles are parked on the side of the carriage way. This private enjoyment of the public road is discouraged in traffic planning.

Urban Traffic has become a very important aspect in urban planning and development. The State hitherto did not have any policy on parking. Study by experts point out serious issues with regard to parking of vehicles in the towns and cities of the State. A number of agencies/stakeholders are responsible for construction and maintenance of roads and for traffic management. The State Public Works Department (Roads & Bridges and National Highways), the Urban Local Bodies and the State Police have direct roles and responsibilities as far as roads in the urban areas are concerned. It is necessary to coordinate these agencies and their actions. Considering these the State finds it necessary to bring out a Parking Policy for towns and cities in the State of Kerala.

Parking Issues

1. Roads are meant to be used for movement of people and goods. Roads are the main intra-city connecting links between various activity areas. Such connectivity upholds the economy of the urban area and facilitates better quality of life in that urban area. No action from any public agency or any private interest shall be allowed to obstruct movement of pedestrian and vehicular traffic on the roads.

2. The State/any responsible agency of Government or any ULB has not yet prepared Parking Plan for the city/town, which designates road margin or areas where vehicle parking can be allowed, road stretches which can be allowed for orderly on-street parking of vehicles, designation of bus bays off the carriageway, provision for off street parking facilities etc. Whatever action in this regard taken in any city/town is only based on ad-hoc arrangements.

3. Since on-street parking arrangements are made in a planned manner, vehicles are parked perpendicular to the road (at right angles to the carriageway), diagonally (angular parking at 45 or 60 degrees), parallel parking (parallel to the carriageway) or haphazardly. In all such cases (except in the case of parallel parking) the vehicles are reversed into the carriage way to drive into the moving stream. Such parking not only eats into the precious road space, but such parking also affects the traffic movement - often blocking the traffic when reversing the vehicles (often causing accidents).

4. It is seen that in some road stretches especially in busy commercial streets/market roads vehicles are 'double parked' (two vehicles are parked side by side parallel to the road) when more than two third of the road width is occupied by parking vehicles. (Ex: Chalai Bazaar in Thiruvananthapuram). Hardly one lane width of road space is left free for vehicular movements and pedestrian movements. It is seen that at the cost of road usage such practices escape enforcement.

5. Mass transport and intermediate public transport modes (buses, mini passenger & goods carriages-vans, trucks, and three wheelers) make intermediate halts for alighting or boarding of passengers or for loading /unloading of goods by stopping the vehicles right in the middle of the carriageway without caring for the movement of other vehicles. Bus bays and lay-bys are not provided by any conscious efforts, though any available road margin may at times be used for the purpose (mostly hindering pedestrian movement).

6. Many drivers of vehicles consider it a right for parking on the carriageway – unmindful of the traffic problems they cause.

7. Even when 'No-Parking' signs are put up (though based on ad-hoc decisions) at specified locations/stretches of roads, in the absence of enforcement people (sometimes even the enforcement officers) ignore such mandatory signs.

8. No city/town has taken any conscious effort to designate places / locations for stationing hired vehicles (taxis/auto-rickshaws-three wheelers /vans /small goods

vehicles/omnibuses etc.). As a result of this drivers of these vehicles themselves designate locations – many often at road junctions – causing road /traffic blocks, hindering vision lines (visibility) at junctions etc.

9. Movement of incoming and outgoing goods is essential for the economic life of any town/city. Many of the towns and cities in the State have active market/bazaar areas and industrial areas. But towns/cities have most often failed to provide designated areas for truck parking with ancillary facilities. As a result of this, trucks are parked right on the roads hindering traffic movements (*the resultant sanitation problems etc. are not discussed here*). Even National Highways near the industrial cities /towns are choked by parking of trucks. This situation is caused by the inaction of the local governments in these areas to provide parking facilities for trucks.

10. Many of the towns and cities have omni buses operating to major cities within the State and in other states. Without designated bus parking and boarding facilities, these buses are parked on the roads causing traffic blocks. Master Plans of these cities and towns have to address these issues to designate locations where such operations can be accommodated.

11. Regular bus terminals of the KSRTC and private buses in many towns and cities are also located on the roads without terminals located off the road spaces. Traffic congestion in locations like East Fort area in Thiruvananthapuram is mainly attributed to bus terminals on the road.

12. Though stipulations exist in the Kerala Municipal Building Rules for providing parking spaces for vehicles for buildings requiring parking spaces, unauthorized conversion of such plot level parking spaces in full or in part and/or inaccessible & inadequate parking spaces provided in the plans and/or non-provision of parking spaces for the number of vehicles reaching the building, result in parking on the roads. Though the KMBR stipulates only the minimum required parking facility it is for the owners/designers of such buildings to estimate the anticipated parking requirements and to provide for that requirement, this is often not adhered to. They get away with meager provisions resulting in road side parking unmindful of the traffic problems they cause.

13. Major cities in other States have adopted the policy of 'pay and park' even for on-street parking. The revenue earned is used for creating parking facilities for vehicles. This system of pay to park is yet to take off in Kerala, though it is high time that we think on those lines in view of the fact that

i. The State has great difficulty in acquiring land for widening of the roads, so that the existing road space has to be optimally utilised for movement of vehicles and pedestrians,

ii. The ULBs are not financially sound to acquire and develop land for creating off street parking facilities,

iii. Paid parking facilities may result in designation of parking spaces, designation of no-parking areas and result in road discipline

iv. Revenue generated from the paid parking facilities can be ploughed back to maintain (and sometimes) develop parking areas.

14. Roads within the town /cities are constructed and maintained by the State PWD (MDRs and ODRs) or the National Highway Department (Highways) or the ULB (ODRs and Local Roads). Traffic signs are provided by the respective agency, but traffic management is enforced through the police. Therefore not much attention is given for coordinated road network planning, except in cases where Master Plans are prepared, which partially address this issue. Because many agencies are responsible for different roads, no single agency has attempted to prepare city/town level parking plans, designate parking areas and impose 'pay and park' facilities. A single agency responsibility for this task is required.

Legal Provisions

The First Schedule of the Kerala Municipality Act which lists the Functions of the Municipality includes "Providing parking spaces for vehicles" as one of the Mandatory Functions of the Municipality. Section 472 of the Kerala Municipality Act, 1994 provides for establishment of public cart stands etc. It says that a Municipality may subject to such guidelines as the Government may issue in this behalf, construct or provide public landing places, halting places and cart stands and may levy fee for the use of the same. A Cart Stand include a Bus Stand, Taxi Stand, Auto-rickshaw Stand, Lorry Stand and Stand for other vehicles.

It is noticed that in many States in India, provision of parking spaces is provided as a Municipal function. Bihar Municipality Act, 2007 not only makes 'provision of parking spaces' as a responsibility of the Municipalities, but also provides in Sn. 128 of the Act that " The Municipality may levy user charges for ..... parking of different types of vehicles in different areas and for different periods..."

It is the duty of every Urban Local Body to establish parking areas at appropriate locations within the town /city. Establishment and/or maintenance expenses of such public vehicle

parking arrangements may be met by levying differential charges under the practice of 'Pay and Park'. Alternatively, the ULB may also rope in a private partner for establishing and maintaining public vehicle parking facilities under suitable Public Private Partnership (PPP) arrangements.

Recommended Policies

1. The State of Kerala decides that cities and towns should address the issue of 'Traffic in Towns' as a major subject in urban planning and management. Though every city or town should go for adoption of Master Plan, whether a Master Plan is in place or not, traffic management shall be discussed at the town level with the participation of all the stakeholders and traffic management policies shall be arrived at for implementation. The ULB shall coordinate such activities.

2. Vehicle parking facilities in the town/city shall be a priority in urban traffic management. Even before the urban traffic management policies are finalized, it is imperative to adopt strategies to mitigate vehicle parking problems.

3. Though different agencies are responsible for construction and maintenance of different categories of urban roads, the State considers it necessary to entrust the responsibility for implementation of vehicle parking policies at the town/city level to a single agency. This responsibility is assigned to the Municipality/Municipal Corporation, as the case may be. The Municipality/Municipal Corporation shall plan for it and implement the proposals by coordinating with the other stakeholders.

4. The Standing Committee dealing with Town Planning in the Municipality/Municipal Corporation shall also be responsible for developing vehicle parking proposals in the town/city in consultation with the Department of Town and Country Planning, NATPAC or experts in the field and for initiating actions for participatory implementation.

5. For the purpose of Property Tax assessment the towns/cities are identifying and declaring 'primary and secondary zones'. Based on the same, every town/city shall in the first phase subject

   (i) The declared 'primary zone (zones)'
   (ii) Major market areas and/or
   (iii) Major institution areas for parking studies, to plan for vehicle parking facilities and to adopt parking are development strategies and for parking area regulations. Awaiting detailed studies and finalization of proposals with regard to vehicle

parking, the Municipality/Municipal Corporation shall review the parking issues along with the officers of the Department of Town and Country Planning, State PWD and the NH Department having jurisdiction in the town/city, prepare an interim plan and adopt the Plan for implementation.

6. The State feels that use of public land (roads, road margins or public vacant land) for private facility of parking of vehicles shall be on 'pay and park' principle. The methods, the parking charges, the methods for developing parking facilities and the operation & maintenance parts may be worked out as part of the Parking Plan adopted by the Municipality/Municipal Corporation.

7. Differential parking charges at the rates adopted by the Council differently for short duration parking and long duration parking shall be prescribed and notified. The parking fee collected by the ULB shall be separately accounted for and shall be ploughed back together additional ULB level funding for developing parking facilities at more locations in the town/city.

8. Management including maintenance and fee collection can be arranged through private operators under the general supervision of a Municipal level Committee.

9. The Municipality shall also identify and designate parking areas for taxis and auto rickshaws. Such locations shall be notified and boards to that effect shall be erected at such locations. Such parking stands for taxi cars/vans, commercial light goods carriage vehicles, auto rickshaws etc. shall not be located at road junctions and shall be off the carriageway at a minimum distance of 75 metres.

10. Towns and Cities shall assess requirement of truck parking facilities in their respective areas and shall provide for truck parking facilities on pay & park basis (together with facilities for truck drivers and helpers) preferably in the peripheral areas of the towns/ cities.

11. Locations of the existing taxi stands, auto rickshaw stands, lorry /van stands, stands for omnibuses etc. shall be reviewed and re-designated and notified with the consent of the Regional Transport Authority, if required. Such locations shall be in conformity with accepted norms and standards. The number of vehicles allowed to be parked in each of the designated stands shall also be stipulated. Overspill into the roads shall be regulated.

12. Automobile workshops which function utilizing the adjacent roads for parking and repairing of vehicles shall be prohibited from doing so, with due notices to shift such

parking on roads and to provide parking within the premises or to shift to new locations. Such notices shall specify time allowed to carry out implementation of the directions given in the orders/notice.

13. Vehicle parking facilities may be provided through the following methods based on the gravity of problem, width of carriageway and right of way of roads, land availability, project feasibility etc.

(i) **On street parking facilities for small vehicles**: On-street parking facility shall be resorted to only when there are no other options. On street parking can be provided only on selected road stretches provided the on street parking facility shall not obstruct traffic movement along the road. On street parking areas may be identified and provided for separately for two wheelers and four wheelers (small vehicles).

Specific site studies shall be carried out before deciding to use any road side margin for parking of vehicles to ensure that the proposed parking provision would not obstruct pedestrian and vehicular traffic. Large off street parking lots shall preferably be installed with surveillance cameras.

On-street vehicle parking arrangement may be designed subject to the width of land available at the specific location as:

- Diagonal parking facility;

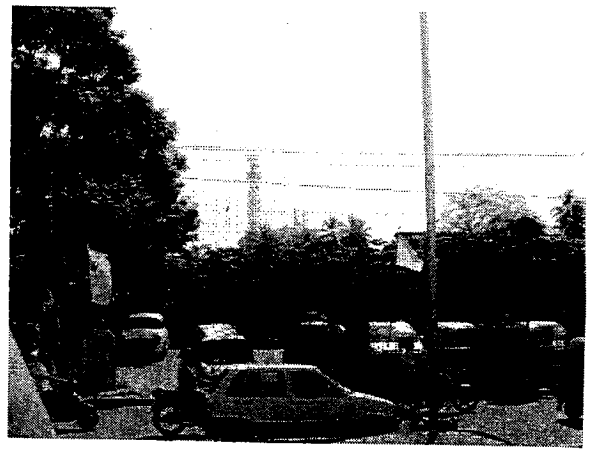
- Parallel parking facility;

- Perpendicular (right angle) parking facility

Parking bays (separately for 2 wheelers and 4 wheelers) shall be marked with road marking lines and parking shall be regulated (restricted) only within the designated areas.

(ii) **Off street parking areas for small vehicles**:

Off-street parking facility means parking area not within the 'right of way' (land area within the confines of the side boundaries) of roads. Off street vehicle parking facility is an ideal solution since traffic on the roads would not be disturbed due to parking of vehicles. Such off street parking facilities shall have to be developed at such selected locations where due to congregation of people in large numbers for shopping, to avail services from various institutions and/or to participate in various events, vehicles get regularly parked on the roads causing hindrances to regular /routine traffic movement. The Municipality shall identify such locations and decide on off street vehicle parking facility based on the severity of issue.



Off- street vehicle parking facility can be developed in public land and also in private land, based on some benefit sharing arrangement and agreement with the private land owner.

Off- street vehicle parking facility can be developed in one of the two methods:

(a) At grade – at the ground level only; or

(b) At more than one level – (multi-grade) parking arrangement in more than one floor level: though the multi level parking plaza can accommodate more number of vehicles in a unit area of land, the cost is high in developing such an arrangement. This higher cost of parking area development may reflect in the parking fee that would be proposed. However, in city locations where land cost is high and the parking demand is high, it is recommended that multi-level parking arrangement may be developed since the economics of the scheme may make the scheme viable. Multilevel parking arrangement is also suitable when the terrain of the land justifies such an arrangement. When the available land is at a lower level than the road, one level of parking can be brought to the access level from the road and the lower level at the level of the ground can be accessed through a drive down ramp.

(c) At locations where parking demand is very high and where the land value is at a premium, a three level ramp up solution may be a good option. However, such options may be adopted only after a model study. Such a techno-economic feasibility study would reveal: (i) whether it is technically feasible to construct a multi level parking arrangement with driving ramp within the available piece of land (after leaving necessary/mandatory open spaces around and providing parking bays and maneuvering spaces as per KMBR) ; (ii) whether the cost of investment would justify such a development; (iii) whether the expected returns from the parking fee (either run directly by the Municipality or contracted out to agencies) would be sufficient to meet operation and maintenance (O&M) expenses and/or would recover capital expenditure at least partly.

(d) At major city locations where parking demand is very high (Especially short duration parking) as in central city commercial areas where it is difficult to procure land for providing 'at grade' parking spaces, it is also possible to provide multi level parking arrangement in small parcels of land with vertical lift with parking attendants or through computer controlled systems. However, such facility has three major defects (i) capital cost of such

development is high, which would be justified only by a higher rate of parking fee and high parking demand; (ii) O&M Cost is very high (also to be supported by standby power generator to work when electrical supply fails); and (iii) due to the employment of sophisticated electrically operated equipments, skilled manpower is required to operate the system.

Public Private Partnership (PPP) Programmes for Developing and Operating Parking Arrangements

It is not always easy for Municipal Councils to develop on-street and off-street parking facilities due to various reasons. A few of the reasons are noted below:

- When on-street parking spaces are designated, wherever adequate road margins are available, the action has to be necessarily followed up with 'no parking' regulation on the road (carriage way) stretch. But enforcement of this can be effected only with the help of police force.

- When on-street parking is provided with parking lane markings, sign boards etc., this has to be continuously maintained and disciplined parking within the designated bay has to be ensured. Once the facility is created, Municipal Councils fail to follow up with further actions, with the result that the facility is rendered useless and/or the land is encroached upon by unauthorized bunks.

- In case public land is available beyond the carriageway to provide for off-street parking spaces, Municipal Councils are not able to decide to use the land for off-street parking facility considering the commercial potential of the high value property.

- The Municipal Councils are not able to pool in technical expertise to develop a feasible parking facility proposal or structure the proposal to exploit commercial returns.

- In view of high land value in the towns and cities, Municipal Councils are not able to acquire land to be utilized for vehicle parking facilities

In view of the above, it is necessary for the Municipal Councils to adopt solutions to the parking problems appropriate to each of the locations. One of the solutions is to rope in partnership with the private sector. Many options for partnership with private sector can be worked out to suit specific needs. A few of them are indicated below.

(1) When wide public land is available by the road side in possession of the Municipality depending on the demand for parking at that part of the town/city, this land can be developed as vehicle parking facility (for two wheeler or four wheeler, based on demand and availability of width). This 'pay & park' facility can be developed by the Municipality and entrusted through auction / public tender to a private agency for collecting parking fee and to maintain the facility in good condition for a specified number of years. (Occasional verification by the Standing Committee on Town Planning is necessary to see that the operator does not charge more than the specified amount and that the premises are maintained in good condition.

(2) In the above case, the traders' association can be permitted to operate and maintain.

(3) A few cities have also permitted the traders' associations to develop such parking facility in the road side public land close to the commercial centres and to operate and maintain the facility for a specified number of years, subject to conditions stated in the PPP agreement.

(4) Municipality may also move the Department of Revenue to entrust development right on available revenue puramboke land at specific locations to the Municipality to develop parking centres

(5) Similarly, the Municipality may give develop right of a Municipal land to a private agency/individual through duly approved processes to develop and operate vehicle parking facility through a clearly drawn up agreement, specifying all necessary conditions.

(6) A private land owner can be allowed by the Municipality to develop public parking facility (only vehicle parking facility or public parking facility in combination with commercial spaces) and operate the same based on mutual agreement and subject to verification by the Municipality to ascertain that such facility is continually made available for public parking as per agreed terms. *(It may be noted that in such cases relaxed conditions are permissible in the KMBR 1999)*

It may be noted that many such options for PPP can be worked out depending on the situation. However, it is to be borne in mind that Private participation with the Municipality for providing public parking facility does not mean 'no role' for Municipalities, but that the private sector would take care of everything. The Municipalities have to lay down ground rules for the same, facilitate such partnership and development, draft the TOR (terms of reference) and Agreement, grant necessary approvals and monitor implementation.

Related Actions to be taken by the Municipal Councils

(1) Once parking development plan is prepared for any location, necessary consent from the stakeholder agencies should be obtained. If on-street parking arrangement is proposed on a road being maintained by the PWD, consent of the Executive Engineer having jurisdiction over the road should be obtained. The Revenue and Police authorities shall be informed of such a proposals and once the facility is established and comes into operation, the Police and PWD shall be informed and the road stretch shall be declared as 'no parking zone'. The police shall be requested to enforce the regulation.

(2) Establishment of parking space and rates of parking fees shall be notified by the Urban Local Body as per the provisions contained in Section 524 of the Kerala Municipality Act, 1994. Wide publicity must be given regarding the provision for parking spaces and information boards shall be fixed.

(3) After the identification of parking areas, Urban Local Bodies shall fix the fees to be charged. A variable pricing based on the location of the parking - parking in the centre of the city will be costlier than parking in the periphery. Variable pricing based on hourly basis during peak hours and lower prices during the off peak periods can be considered. Variable pricing can be fixed on size and type of vehicle also. Adequate Council Resolution shall be taken for the establishment of parking areas and fixing the parking fees. Urban Local Bodies can engage the collection of fees on contract basis.

(4) Urban Local Bodies shall prohibit footpath parking and encroachments especially by Street Vendors.

(5) Urban Local Bodies shall prohibit the parking of vehicles by workshops on roadsides and public land.

(6) Conversion of parking areas to commercial and other uses, by the building owners should be prevented. Basement floor, which are meant for parking, are put to other use and the shopkeepers and customers are forced to park vehicles on roads. Strict monitoring and actions should be taken from the part of Urban Local Bodies for preventing the conversion of parking areas for other uses.

(7) Urban Local Bodies can promote PPP initiatives for establishing public parking facility. Unused land can be converted for parking on interim parking location until the desired development. Urban Local Bodies can take these lands on lease for a specific period.

GOVERNMENT OF KERALA

Date.....

ABSTRACT

Power Department - Kerala Solar Energy Policy 2013 - Approved - Orders issued.

POWER (PS) DEPARTMENT

G.O(P) No. 49/2013/PD Dated, Thiruvananthapuram, 25/11/2013

Read: 1) Minutes of the meeting held on 29.06.2012, under the Chairmanship of Hon'ble Minister (Power and Transport).
2) GO(Rt)160/2012/PD dated 04.08.2012.

ORD E R

The State has substantial sources of renewable energy, viz, Solar, Wind, Small Hydro Power, etc. The potential of Solar Power in the State is yet to be exploited. In order to tap the vast potential of Solar Power in the State, Government as per the minutes read as first paper above have decided to formulate a Solar Policy for the development of Solar Power in the State. Based on the decision at the above meeting, a Committee was constituted vide order read as 2nd paper above for formulating the draft Solar Policy in the State.

2. Accordingly the Draft Solar Policy submitted by the Committee was put on the website of ANERT calling for comments and suggestions. Based on the comments from the Public, the members of the Committee and other expert in the field, certain modifications were made in the draft policy.

3. Government have examined the draft Solar Policy so prepared in detail and are pleased to approve the 'Kerala Solar Energy Policy 2013' as appended to this Order.

(By Order of Governor)
NIVEDITA P HARAN
Additional Chief Secretary

To,

All Heads of Department's / PSU's
The Chairman, KSEB, Thiruvananthapuram'
The Director, ANERT, Thiruvananthapuram
The Director, EMC, Thiruvananthapuram
The Secretary, KSERC, Thiruvananthapuram
The Secretary, Kerala Legislature, Thiruvananthapuram
The Principal Accountant General (Audit), Thiruvananthapuram
The Accountant General (A&E), Thiruvananthapuram
The General Administration (SC) Department
The I and PR (Web and New Media) Department (For vide publicity)
The Stock file / Office copy.

Forwarded / By Order

Section Officer

KERALA SOLAR ENERGY POLICY 2013

Preamble

A forward looking Government needs to have a structured approach to seriously evaluate the possibilities of harnessing renewable energy sources and accord due weightage in a realistic manner for such sources to be integrated into its overall energy generation strategies. There is a popular perception that solar energy could be a key part of the solution to the energy crisis in the State. To promote the systematic tapping of the Solar Energy potential to the maximum, an appropriate policy framework is essential. This policy seeks to evaluate, in a realistic manner, the possibilities of harnessing solar energy to optimal levels and to put in place the necessary framework.

Low maturity level and high cost of the technology, non-compatibility of transmission and distribution infrastructure, limitations on land availability, inadequacy of fiscal incentives and entry of unscrupulous elements into the field have been the reasons behind the very low penetration of solar energy in the mainstream life of Kerala. The lack of easy off- the- shelf availability of solar powered equipments with standardised quality and pricing is another reason for its very low presence.

Solar energy is one of the major sources of renewable energy. As improved technology becomes available and at a reasonable cost, the use of Solar energy will gain acceptance. The negative impact that the actions of the imposters and fly-by-night operators out to make illegal gains, has to be strongly counter-acted by the governmental agencies working in the field of renewable energy.

However at a macro level, Electricity Act 2003 promotes absorption of renewable energy and mandates for specified consumption from renewable sources in the area of every distribution utility. Accordingly Renewable Purchase Obligation (RPO) and more specifically solar purchase obligations have become mandatory recently. This at present is fixed at 3% of the total consumption for RPO and out of which 0.25% shall be from the solar sources alone, with annual escalation at 10% till the quantum from renewable reaches 10% of total purchase.

2. Vision

Vision is to mainstream the use of solar energy in the energy mix of Kerala in an inclusive manner to ensure optimal usage of the available solar potential in this region.

3. Mission

The Mission is to:

i. Increase the installed capacity of the solar sector in the State to 500MW by 2017 and 2500 MW by 2030;
ii. Contribute to long term energy security of the State of Kerala as well as ecological security by reduction in carbon emission;

iii. Define end users who can adapt solar in a big way and target them;
iv. Adopt a multi-pronged approach in targeting different groups of consumers;
v Deploy package of incentives and disincentives for identified groups;
vi Adapt solar to trigger a paradigm shift in the usage of energy at the micro and macro levels;
vii Generate large direct and indirect employment opportunities in solar and allied industries;
viii Create skilled and semi-skilled man power resources for installation and maintenance of the solar systems through promotion of technical and other related training facilities;
ix Promote entrepreneurs / startups industries / institutions in the State that are engaged in the development of innovative solar based systems;
x Create an R&D hub by establishment of institutional collaborations with educational institutions, research centres, industries, utility, etc. for working towards applied research and commercialization of nascent technologies to accelerate deployment of various combinations of solar power technologies and solar- based hybrid co-generation technologies which will focus on improving efficiency in existing systems, reducing cost of balance of system.

4. Title and enforcement:

a. This Policy will be known as Kerala Solar Energy Policy, 2013
b. The Policy will come into operation with effect from the date of publication and will remain in force until superseded or modified by another Policy.
c. State Government may undertake review of this Policy as and when the need arises in view of any technological breakthrough or to remove any inconsistency with Electricity Act 2003, Rules & Regulation made thereof or any Government of India Policy/State Electricity Regulatory Commission's order.

5. Strategy of implementation

The strategies to achieve the policy objectives are outlined as below:

1. Supply side interventions

1.1 Off-grid roof top systems at demand points / consumer premises like solar inverter installations, solar powered cellular towers, display boards/ hoardings, etc.
1.2 Promoting conversion of existing inverter installations to solar power by way of providing suitable incentive schemes.
1.3 Grid connected systems partly meeting requirements at demand points and feeding to the grid.

1.4 Off site generation at locations like canals, reservoirs (floatovoltaic), waste lands, quarries, etc.

1.5 Off shore generating plants - primarily solar-thermal systems.

1.6 The off-grid solar applications shall be promoted for replacement of diesel-based generator sets. Guidelines and incentives issued by MNRE from time to time shall be followed in the State for promotion of decentralized and off-grid solar applications.

1.7 Empanelment of Suppliers / system integrators as per the guidelines in force for implementation of the solar systems envisaged in the policy.

1.8 Standards for grid connectivity at LT level will be notified for the State to promote decentralized solar power generation, which will remain applicable until national standards are notified and adopted by the State.

1.9 Since large scale absorption of solar electricity into the system is impossible without sufficient storage, a program for exploring and developing Pumped Storage schemes in the state shall be promoted as part of the Solar Policy.

1.10 Since developing Balance Of Supply (BoS) plants is essential to tap the employment opportunities presented by Solar to the fullest measure, the state will promote public sector enterprises like Keltron etc to manufacture BoS plants.

2. Promotion of Solar Thermal Collectors:

2.1 Solar Water Heating System (SWHS):

The State will promote Solar Water heating system by adopting the key strategy of making necessary policy changes for mandatory use of solar water heating system (SWHS) in the following potential categories:-

a) All Industrial buildings where hot water is required for processing.
b) All Government/Private Hospitals and Nursing homes.
c) All Hotels, Resorts, Motels, Banquet halls, Catering Units and Industrial Canteens.
d) Individual Residential buildings with an area of 3000 sq feet and above within the limits of Municipality/Panchayat/Corporations including Housing Complexes set up by Group Housing Societies/Housing Boards.
e) Hostels in educational institutions/Pvt. Hostels, Testing Labs/Laboratories of Educational Institutes/Hospitals
f) Barracks of Police, Paramilitary Forces and Jails.
g) Private/Government Guest Houses, Govt. Tourist Hotels, Inspection Bungalow, Circuit House and retiring rooms of Railways.
h) Health Centres, Sports Complex.
i) All weather swimming pools.

2.2 Solar Steam Systems:

The State will promote the use of solar steam systems for wider applications such as

a) Community cooking in residential institutions/ industrial mess/Hotels /Barracks/ Mid day meal program/Hospitals etc.
b) Industrial application of steam in process industries such as Textile/Food industry etc.
c) Laundries

2.3 Industrial Applications:

The State will promote the use of Solar Water Heating System (SWHS), Solar Steam Systems etc. for Industrial applications such as:

a) Process requirements of hot water.
b) Process requirements of steam.
c) Pre-heating applications in variety of Industries.
d) Drying applications.
e) Steam press and laundry units
f) Solar steam cooking applications in industrial mess/hotels etc.

3. Financing the projects

3.1 For off-grid systems the policy seeks to ensure bank finance at attractive rates and provide generation based incentives rather than capital subsidies to ensure that the systems are installed, maintained and continue to remain functional. The existing capital subsidies shall be restructured appropriately for the same.

3.2 For grid- connected systems Government itself by way of setting an example would initiate a programme by which all public buildings are provided with generation facilities using appropriate technology options. Here also rather than an EPC mode of implementation, a design, build, operate and transfer scheme with annuity payments shall be preferred. As the Load cycle of the government offices match with that of the solar plants, they are fitting cases for solar application. Policy urges all the concerned to make use of the roof top and premises to install solar plants to match maximum demand of the concerned office, within a period of 2 years time. A panel of implementing agencies and pro-rata costs per kilo watt shall be prepared and each office/department can choose a developer for implementing this scheme.

3.3 For grid - connected systems in non-Government buildings / premises the incentives shall be on the basis of net metering, feed-in tariff and Renewable Energy Certificate mechanism, the appropriate tariff system being decided by following due procedure.

3.4 Grid - connected systems will be promoted for domestic consumers in a phased manner after formulating grid connection standards for LT distribution in line with this policy. In this regard cluster wise installations will be given suitable incentives on a conditional basis for adopting solar installations.

3.5 Regarding floatovoltaic and public place installations a wider community ownership model with direct financial stake by the public shall be encouraged.

3.6 For logistically difficult and technically challenging options like off-shore generating plants, projects shall be structured on the basis of competitive bidding in IPP mode.

4. Building Transmission and Distribution Infrastructure.

4.1 Safety / quality protocols for all such installations shall be worked out in detail at international standards. For this the capability of academic institutions both within and outside the country shall be leveraged.

4.2 This whole initiative would also be structured to improve the quality of the grid in general with specific focus on evolving nano / community grids working on smart grid principles.

4.3 Evolving standards for grid connectivity at different voltage levels.

4.4 Notifying User Manual / guidelines on solar application – leveraging Internet Communication Technologies (ICT), Social media etc., for propagation.

4.5 Integrating with no load shedding campaign.

4.6 Creation of mechanisms like Battery banks, centralized banking of energy etc for decentralized distributed generation of infirm energy.

5. Industry tie-ups

In the case of grid-tie systems, only components complying with national or international standards as approved by CEA can be used. But in the case of non-subsidised off-grid systems, there are currently no such regulations. It is proposed to bring about licensing for all solar photovoltaic systems and manufactures to be installed in Kerala. A certification and testing facility would be set up. Industries based in Kerala, including system integrators will have to obtain licensing from designated authority (Chief Electrical Inspectorate) to be eligible to install systems and components meeting approved specifications or standards. For industries from outside the State, channel-partner status or recognition of MNRE (Govt. of India) would be mandatory.

6. Legal and regulatory framework

6.1 Support the formulation of regulatory environment encouraging the common man more towards solar applications

6.2 Legally enforcing use of electricity from solar source in specified sectors of energy use.

6.3 A tariff incentive for consumers opting for solar generation shall be offered with respect to non-solar consumption subject to prefixed levels of usage.

6.4 Incentive for people's representatives / panchayats for promoting solar installations and street light optimization.

6.5 Incentive schemes for conversion of existing inverter installations to solar based ones.

6.6 Solar Procurement Obligation (SPO) will be mandated for Commercial consumers with more than 20kVA connected load, LT Industrial with more than 50kVA connected load and for all HT & EHT consumers in a phased manner. All HT/EHT consumers shall have to procure 0.25% of their energy consumed through SPO till March 2015 with 10% increase every year. From April 2015 onwards the same shall be applicable for commercial consumers and LT industrial as per the criteria mentioned above. The same shall be made applicable for high consuming domestic consumers i.e. more than 500 units per month at a later stage.

The above obligated consumers may fulfill their SPO by

- Buying equivalent to or more than their SPO from third party developers of Solar Power projects in the State of Kerala.
- Buying RECs generated by Solar Power projects in the State equivalent to or more than their SPO.
- Purchasing power from KSEB at Solar Tariff
- Consumers desirous of availing SPO exemption by captive solar generation shall necessarily install separate meters to measure captive generation.

6.7 All new domestic buildings having a floor area in between 2000 sq.ft to 3000 sq.ft should install at least 100 litres solar water heater and 500W solar PV system. All the buildings above 3000 sq.ft should install 100 litre solar water heater and at least 1000W solar PV system.

6.8 In the case of residential flats/ apartments 5% of the energy usage for common amenities should be from Solar

6.9 In the potential categories to be notified like star hotels, hospitals, residential complexes, with more than 50 kVA total connected load, the use of solar water heating system shall be made mandatory.

7. 'Feed-in-Tariff', 'Net Metering' and Pooled Cost of Energy' of the utility applicable to Solar energy.

Kerala State Electricity Regulatory Commission (KSERC) will notify the normative Feed-in-Tariff of solar power for procurement by KSEB in case of off-site commercial installations. For all agencies that consume grid power and have installed solar installations with some form of Government subsidy only net metering shall be applicable. However for consumers with monthly consumption of 30 units and below efforts shall be made involving welfare departments of Government and LSGIs to solar enable them and in such cases a special feed-in-tariff scheme shall be notified.

KSERC will also annually notify the Pooled Cost of Power Purchase of the utility as applicable to solar power sector, as required under CERC (Terms and Conditions for Recognition and Issuance of REC for Renewable Energy Generation) Regulations 2010, to facilitate investors tap the Renewable Energy Certificate market.

8. Request for connectivity

Plants requiring grid connectivity shall make application to the utility as per the standards in place and the utility shall provide connectivity if found feasible as per the interconnection standards in practice, after collecting a processing fee.

9. Procurement Policy on grid connected solar plant

KSEB will have first right of refusal for the power from the plants established in private lands / premises, except in cases of self/captive use. In such cases the sale of power to KSEB shall be as at a tariff decided by KSERC or at the pooled cost of the power purchase of the utility or net metering.

10. Reservation of land for the renewable project

The prime responsibility for identifying the land for renewable energy shall be with the developer. Government shall endeavor to assess clearly the land suitable for the development of solar installations in the possession of either Government, private or tribal individuals. For tribal lands, in addition to the lease rentals, a revenue (not profit) sharing mechanism for the land owner is envisaged as follows.

- The willingness of the land owner is mandatory.
- The land ownership rights shall continue to fully vest with the original owner. The developer shall have only rights to setup and operate the project. The land owner will have the right to use land for agricultural purpose.
- Revenue (not profit) sharing based on the power generated, possibly in the range not below of 5% is envisaged.
- The payment of share of revenue shall be made directly to the bank account of the land owner. For this purpose a tripartite agreement has to be entered into among the developer , the land owner and the KSEB.

Only lands which do not have an immediate productive use shall be thus identified/ permitted.

11. Settlement of Energy charges

All settlement associated with the energy charges for the grid connected plant between the developer and the utility shall be settled on a monthly basis.

12. Incentives and facilities under this policy

a. Evacuation facility

KSEB shall create necessary evacuation facility beyond the pooling station for the projects with capacity less than or equal to 10MW. For higher capacity plants, KSEB shall construct the evacuation facility on deposit work basis.

b. Open access Charges

There shall be no open access charges for solar projects for wheeling the power within the state.

c. Wheeling charges and T&D losses

Wheeling charges and T&D losses will not be applicable for the Captive Solar generators within the state.

d. Exemption of electricity Duty

The energy generated from the plants under this policy shall be fully exempted from the Electricity duty.

e. Banking facility

Conditional Banking facility shall be available to captive generators after considering system constraints.

f. Facilitating for subsides from MNRE

ANERT being the nodal agency for the non conventional energy in the State, shall act as a facilitator for the developer for making available the subsidy from MNRE or any other central agency.

13. Agencies involved and their role under this policy

a. State Level Empowered Committee (SLEC)

Administration of this policy shall be entrusted with the State Level Empowered Committee (SLEC) constituted for that purpose. The committee shall have the following constitution.

(i) Additional Chief Secretary/Principal Secretary (Power), GoK - Chairman
(ii) Chairman, KSEB
(iii) Member (Generation Projects), KSEB
(iv) Member (Transmission & Generation Operations), KSEB
(v) Member (Distribution), KSEB
(vi) Director, EMC
(vii) Director, ANERT - Convenor
(viii) Exe, Vice President of the Kerala S&Y Council (KSCSTE)
(ix) Director of Industries
(x) Land Revenue Commissioner
(xi) A representative from Law Department
(xii) An expert from Government SPB (nominated)

The Committee shall have the following responsibilities:

a) To suggest necessary amendments to the policy to remove difficulties in implementing the policy;
b) Give approval for the developer requiring land allocation from the government;

c) Approval for utilization of land designated by ANERT for development of renewable energy;
d) Specifying the time schedule of eligible projects for which land had been allocated;
e) Empowered Committee shall do an yearly review and publish a document;
f) Any other function which may found necessary.

b. Agency for Non-conventional Energy and Rural Technology (ANERT)

ANERT is the nodal agency for the non conventional energy in the State. In administering this policy ANERT will have the following responsibilities:

(i) To act as the linking agency between all the stake holders in matters related with this policy;
(ii) To empanel the system providers in solar technology after due process;
(iii) To assess the solar energy potential in the State and prepare area map of renewable energy potential of the State;
(iv) To act as the nodal agency for the Off-grid solar applications in the State;
(v) To facilitate in providing incentives and subsidies to the investor in the off grid application;
(vi) To directly set up solar energy installation manufacturing units as paradigm centres;
(vii) To be part of the joint mechanism with KSEB in the administration of Roof-Top solar installations with grid connectivity;
(viii) To short list and maintain the database on the system provider in the case of solar plants with LT connectivity and prescribe maximum permissible installations under each system provider in proportion to their financial strength and infrastructure capability.

c. System Provider/Integrator

Being new technology and considering safety requirements due to complexity of the system, the assistance from the system provider is essential throughout the life period of the plant. This is necessary to instill confidence among potential small scale investors and roof top owners in the initial phase of technology adoption, which could be reviewed periodically based on the maturity achieved by the technology and the level of deployment. Thus the system provider will have the following responsibilities:

(i) To register itself with the ANERT through their due process to enable itself to provide service in the state.

(ii) On completion of the project, enter into a tri-partite agreement involving also the facility owner of the roof top solar plant and KSEB, ensuring continued technical support to the plant.

(iii) Conduct periodical maintenance to the plant as per the standards and provide report of the same to the investor as well as to KSEB.

(iv) In case investors under him opt for REC mechanism, to play the role of facilitator for the purpose.

d. Kerala State Electricity Board

Being the integrated utility on transmission and distribution in the state, KSEB shall have the following responsibility under this policy:

(i) To mainstream solar applications by pioneering installations in canals, reservoirs (floatovoltaic), public spaces, etc;

(ii) To evolve and update standards of grid-connectivity for the Solar Power Systems at LT and HT level and notify to promote decentralized solar power generation which would also enable the State to gain maximum benefit from the 13 FC allocation and other Financial allocation.

(iii) To assess the feasibility and provide connectivity to grid connected solar projects in a timely manner;

(iv) Resort to tariff based bidding for solar energy in meeting RPO, if required;

(v) To develop necessary transmission infrastructure based on a renewable master plan;

(vi) To provide banking facility for solar energy, incentives in the form of exclusion from open access charges, wheeling charges and T&D loss for solar power;

(vii) To act as single window service provider to all grid connected solar plants in association with other state agencies.

Eram Scientific

EXPRESSION OF INTEREST
Sustainable Initiatives for Smart City Project, Trivandrum

To
The Director,
Smart City,
Trivandrum.

Date: 17/03/17

SUMMARY

Eram Scientific Solutions Pvt Ltd, Kerala, are the manufacturers of India's First Electronic Public Toilet "eToilet" with implementation experience in more than 20 states with over 2000+ eToilets and 600 sewage treatment plants installed to date and 43+ awards to our name including the prestigious Toilet Titan Award from the Hon'ble Prime Minister.

eToilet is an indigenous & innovative product which is India's first automatic, unmanned, electronic public toilet. We have comprehensively addressed the Urban Public Sanitation challenges through a product mix of eToilets for the General Public, eToilets for Schools and She Toilets exclusively for women.

eToilets are unmanned, made of steel enclosures, has inbuilt automatic washing/cleaning using sensors, and has proven itself as a very dependable and viable sanitation solution densely populated areas, schools, colleges, hospitals, busy population centres such as bus stands, railway stations, parks, tourist spots etc. The eToilets features automatic pre-flush and after-flush, automatic platform cleaning, and LED indications and have GPRS-enabled remote monitoring of the functioning and health status of each eToilet unit and online tracking of entry and usage of every user. The plug and play system of eToilet provides easy installation at a low cost and eToilets occupies only 35 sqft. space and very well fit into the urban infrastructure.

Eram has developed a fully integrated solar street lighting system –**an eco friendly and electronically controlled solar integrated street light system** to upgrade the street lights of Municipal bodies and other public places of the State to world class standards and maintain the same.

OUR SOLUTION FOR SMART CITY

1. eToilet for Public

An public saniation solution for urban and upcoming cities to keep in pace with the expansive growth in terms of population and technology. The SS model eToilet has effectively addressed sanitation issues in public places. We have established successful models of connected eToilets infrastructure in over 10 smart cities which include Navi Mumbai,

Bangalore, Chennai, Visakhapatnam, Delhi etc. Chennai City has the most number of installations with 230 e-Toilets which has considerably reduced the open defecation in the city and has raised the levels of hygiene in the city.

2. eToilet with rest room for ladies

Eram has also developed a world class model 'She Toilet with restroom', having exclusive features and functionalities like napkin vending machine, napkin incinerator, baby feeding and diaper changing station etc. These facilities were incorporated to ensure a differentiating unmanned safe and hygiene rest room for women.

3. eToilet with Shower room for beaches

This model is uniquely developed for beaches and backwater tourist spots. Apart from the eToilet unit an additional shower room facility is provided which is accompanied with wall mounted shower system and other necessities.

4. eToilet for Schools

Eram Scientific offers a comprehensive and holistic solution for the school sanitation that consists of a robust superstructure integrated with user-friendly electronic interfaces and self-cleaning mechanisms along with solar/electric gird compatibility, water management and waste management modules. The inbuilt maintenance plans makes our solution a highly desirable and sustainable one for schools.

5. Napkin Incinerator and Vending Machine

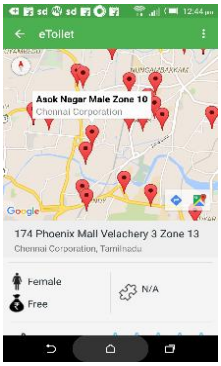
To address the sanitation issues of women Eram supply women and girl friendly hygiene products like Napkin Incinerator and Napkin Vending Machine for Schools and commercial spaces to enhance every woman's health and lifestyle

6. Connected eToilet Infrastructure

eToilets can be connected over a GPRS network, which ensure real-time monitoring of the usage and health status of the eToilets. This can be viewed and managed over a web interface for ensuring minimal downtime and standardised maintenance operations. A dedicated team of Service Engineers attend to technical trouble shooting of the eToilets.

7. Mobile App

eToilet Mobile App for electronic Toilets in India, has been developed as part of establishing a new Connected eToilet Infrastructure (CeTI). The eToilet App is freely downloadable for Android users from the Google Play Store by typing the keyword "etoilets". Its unique features include locating the nearest eToilets via Map & Address Listings, understanding the mode of operations, mode of access and information on facilities such as napkin vending machine, incinerator etc., and sharing feedback on the user experience of eToilet along with image uploading.



Eram Scientific

8. Sewage Management in the city

On-site waste treatment part through Anapackage, an anaerobic treatment system and Bio digester- an anaerobic technology developed by DRDO, Govt. of India. These sewage treatment plants (STPs) are highly reliable and effluents cause no harm to the environment there by offering a comprehensive, sustainable solution for the sanitation sector.

9. Street Lighting System in the city

Eram's solar street lighting system is a fully integrated system with Solar panel, battery, controller, light, sensor and all other accessories integrated in a single cabinet. These street lights are completely automated with minimal manual intervention.

- Easy installation
- Automated ON/OFF mechanism according to natural light /time/web
- Minimizes manual interventions
- Power saving technologies – Intensity of light varies according to motion presence & time.
- IOT based technologies –Web Based remote controlling and monitoring facilities.
- Green- CO2 emission is less

PROPOSED MODEL

1. Comprehensive supply, installation and commissioning of eToilet including 5 year Annual Maintenace Contract.
2. Smart city to identify appropriate advertising agency and ensure generation through advertisement in the eToilet panels

ABOUT ERAM GROUP

Eram Group is a business conglomerate comprising over 40 companies spanning diverse sectors such as Oil and Gas, Power , Construction, Manufacturing, Travel, Healthcare, IT, Media, Logistics , Automotive and Training and Education. With operations in the Middle East, Europe, Asia Pacific and the United States, the group has a large, multi-cultural workforce delivering innovative solutions to varied markets. Eram's presence in Saudi Arabia and India is substantial, while operations in other countries continue to grow.

CONCLUSION

eToilet is an effective sanitation solution and complies with the smart city features and some of the key evaluators like smart solutions to infrastructure, Waste management, Safety conditions for women, energy reduction, efficiency by Internet of Things(IOT) and Comprehensive maintenance support.
In this context ERAM SCIENTIFIC SOLUTION express our interest to partner with Trivandrum Smart City Project for creating a network of intelligent and smart eToilet infrastructure which will effectively address the public sanitation challenges.

Thanking You,

Yours faithfully,

Bincy Baby
Director
+91 9072852244

Proposal & Statement of Work (SOW)

RSR Designs (UAN KL12D0000480)
Varadhanam, Puthumana, Anayara. P. O, TVPM-695029
Mobile No: **9447015349** Email: **rsrdesigns@gmail.com**

Pursuant to the Master Services Agreement dated December 07, 2016 between Thiruvananthapuram Corporation("Client") and Renjith S R(RSR Designs) for Thiruvananthapuram Corporation Councilor's App(TCCA)

Project ID: TCCA-0012-01-00

Project Description:	RSR Designs will develop a mobile approvals application that allows a Corporation Councilor to manage complaints and can communicate with ward members pending approval request on a compatible mobile device. The application for the Mayor will be absolutely free of cost which can be use to communicate with councilors, each councilors can update the status and progress of works to Mayor and Mayor can do the same.
Features:	• Ward members can communicate with councilor via TCCA regarding complaints and update about the same. • Councilor can update the status of complaints. • Councilor can send common message to all ward members through a single click and can send individually. • TCCA will support to send photos along with complaint or message as attachments. • Particular app for the councilor will communicate only with the same ward member or councilor. • Mayor can communicate with all councilors at a time and individually
Scope of Work:	• Requirement gathering and analysis is based on the needs study of councilors in each ward. • Prepare and define the Software Requirements Specification for the mobile client application. • Develop a solution architecture and design for the mobile client application. • Implement the mobile client application using XCode. • Integrate the mobile client application with web services. • Development using iterative methodology (weekly sprints) • Minor branding changes for the release (less than 10% of total effort). • Android mobile client will support version 4.0 to 5.1. **Out-of-Scope** • Hardware and Software procurement. • Install & configure FeedHenry infrastructure for Development, Testing and Production. FeedHenry account and set up will be managed by Thiruvananthapuram Corporation. • Any functionality that are not default in Mobile phones of branded

	contents for different form factors (logos, icons, images, etc) for the mobile application. • System Integration testing (SIT). • User Acceptance testing (UAT).
Deliverables:	• Baselined Software Requirement Specification. • Software Design Document for mobile client that includes o Mobile application flow o Mobile client design o Overview of mobile application flow o Authentication and security flow o Class diagrams • Release notes
Assumptions:	• Implementations will be initiated based on agreements of the signed SOW. • The scope of Approvals solution is limited only to mobile client applications. • The mobile client applications will not support multi-orientation. It will only support Portrait mode. • The mobile client is designed to work on a single or multiple devices per user. • The mobile client application will not work in offline mode, error message will be displayed. • Thiruvananthapuram Corporation will provide RSR Designs team members with appropriate access to tools, software, servers, network connectivity, and project/team artifacts. • The approach and estimates of this proposal. • Based on the formal Business Requirement document, if there is any deviation or additions in features that has a major development work (greater than 10% the total effort), the estimate and work order will have to be revisited. • RSR Designs will be testing the application in the Smartphone devices. • Procurement of any device outside the above list should be Thiruvananthapuram Corporation' responsibility.

	• Thiruvananthapuram Corporation will provide all branded content (e.g. logos, icons). • TCCA will have individual access for each users. • Thiruvananthapuram Corporation will make available SMEs to work with RSR Designs & Team and provide any necessary support to make this engagement successful. • Any changes to scope will be managed through the change control process defined in MSA (Master Services Agreement). • RSR Designs shall comply with all rules and regulations of Thiruvananthapuram Corporation at all times and while on Thiruvananthapuram Corporation' premises. RSR Designs shall be responsible for its employees, contractors and representatives while on Thiruvananthapuram Corporation' premises whether or not any actions fall outside the scope and course of employment or engagement by RSR Designs. RSR Designs employees and contractors will not be considered employees of Thiruvananthapuram Corporation' for any purpose whatsoever, and RSR Designs shall have sole responsibility for their supervision and management. Accordingly, Renjith S R shall be solely responsible for the compensation of its employees and all employment-related taxes and benefits. • Thiruvananthapuram Corporation agrees to provide, at its sole expense, safe facilities, reasonably sufficient equipment, and reasonably necessary supplies for all RSR Designs resources required to perform services on-site at Thiruvananthapuram Corporation facility. RSR Designs is required to purchase software to perform the requisite services under this Statement of work, Thiruvananthapuram Corporation agrees to reimburse RSR Designs for the associated licensing fee(s). Further, if applicable, Client agrees to provide Virtual Private Network (VPN) connectivity between the RSR Designs development center in India and the Thiruvananthapuram Corporation host.
Fixed Bid Fee:	Renjth S R will perform the work stated herein for a fixed fee of **INR 15,000**/Councilors minimum 100 or above members exclusive of change orders. If the number of councilors will be 200 or above can supply the App for **INR 9000**/Councilors
Timeframe:	45 working days

Payment Terms:

Milestone#	Milestone	Acceptance Criteria	Payment Amount
1	SOW signoff	Client delegate Signature on SOW	50% of implementation
2	Mobile Client Beta	Email confirmation	40% of implementation
3	Go Live	Deployment Complete	10% of implementation